The procurement function is a cornerstone of the overall value chain and sits right in the middle between engineering, production, supply chain management and finance. Companies who can master the art of procurement are benefiting from faster order cycle times, higher process efficiencies, larger bottom-line savings and lower overall costs. With this, optimizing procurement means improving margins and competitiveness.

In order to achieve these goals companies are striving to improve some key elements of their procurement department: A well-defined procurement strategy, standardized and lean processes, and a strong organization with well-trained individuals. Many corporations spent a significant amount of time in improving these areas.

However, in our modern world these key elements are the foundation, but the true potential lies in enabling the strategy, the processes and the procurement organization and all individuals with digital procurement tools which fits together with the above mentioned.

Procurement efficiency is still one of the top priorities for CPO’s with technology as a key enabler for efficiency gains, so setting up a digitization roadmap is an important milestone to reach. But the global landscape for digital procurement solution providers is complex and diversified, and therefore difficult to navigate for procurement and IT departments. There are global, full-suite solution providers that are covering almost all procurement process steps with standardized solutions. These providers are strong from an end-to-end process perspective, but they often lack the deep abilities of specialized niche solution providers that choose to focus on specific aspects of procurement.

As we share from our observation in the recent years, the trend goes against the best of breed concept, with choosing several niche providers, towards the full-suite providers. This is especially because large full-suite providers are deepening their solution portfolio either through own R&D efforts or through M&A of smaller niche providers. At the same time new market entries of interesting start-ups are increasing vendor competition even further.

Another trend is the increased push towards cloud solutions. For some organizations an on-demand setup is a reality since the early 2000s, but their solutions are outdated by today’s standards. Other organizations have only recently started to embark on the journey from legacy on-premise solutions and are equally overwhelmed by the sheer number of different players and options.

To make things even more complicated new technologies evolve faster than companies can implement them. In recent years many innovative technologies have appeared on the center stage ranging from Artificial Intelligence over Machine Learning to Robotics Process Automation, Autonomous Systems, Natural Language Processing, Process Mining and Blockchain to overcome systematic and functional weak spots. Which of these technologies deliver value already today and which of them are merely promises for the future?

Capgemini has published the Digital Procurement Research for more than a decade to support our clients in achieving a comprehensive overview in this complex technology environment. Capgemini is involved in many global large scale procurement transformation programs, helping its clients to articulate their process and solution requirements, to select the right software vendors based on their individual needs, to implement these solutions in large scale digital transformation programs and to optimize existing installations with pinpointed boost programs.

This study contains some of the best practice learnings from these numerous projects and a comprehensive market overview of more than 30 procurement solution providers around the world. It will support procurement experts to identify the right fit partners for their digitization ambitions and is meant to inspire with additional expert articles covering a variety of interesting topics and trends in the world of procurement.

We hope you will enjoy reading this as much as our team enjoyed creating it.

All the best

Christian Michalak, Abdülkadir Tekin and Sander Gerritse
# Table of Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>02</td>
</tr>
<tr>
<td>Introduction</td>
<td>06</td>
</tr>
<tr>
<td>Research methodology</td>
<td>08</td>
</tr>
<tr>
<td>Supplier management</td>
<td>09</td>
</tr>
<tr>
<td>Research results of supplier management</td>
<td>10</td>
</tr>
<tr>
<td>Building supplier networks</td>
<td>12</td>
</tr>
<tr>
<td>Strategic sourcing</td>
<td>14</td>
</tr>
<tr>
<td>Research results of strategic sourcing</td>
<td>15</td>
</tr>
<tr>
<td>Contracting</td>
<td>17</td>
</tr>
<tr>
<td>Research results of contracting</td>
<td>18</td>
</tr>
<tr>
<td>Purchasing</td>
<td>20</td>
</tr>
<tr>
<td>Research results of purchasing</td>
<td>21</td>
</tr>
<tr>
<td>Buying channel optimization</td>
<td>23</td>
</tr>
<tr>
<td>The buyer journey</td>
<td>25</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>27</td>
</tr>
<tr>
<td>Research results of accounts payable</td>
<td>28</td>
</tr>
<tr>
<td>Procure-to-Pay optimization</td>
<td>30</td>
</tr>
<tr>
<td>Reporting and analytics</td>
<td>32</td>
</tr>
<tr>
<td>Research results of reporting &amp; analytics</td>
<td>33</td>
</tr>
<tr>
<td>Implementation, technical and pricing</td>
<td>35</td>
</tr>
<tr>
<td>Research results of solution implementation</td>
<td>36</td>
</tr>
<tr>
<td>Change management in digital</td>
<td>37</td>
</tr>
<tr>
<td>Research results technical solution aspects</td>
<td>38</td>
</tr>
<tr>
<td>Digital procurement transformation</td>
<td>39</td>
</tr>
<tr>
<td>Research results solution pricing</td>
<td>41</td>
</tr>
<tr>
<td>Trends and innovative features</td>
<td>42</td>
</tr>
<tr>
<td>Start-ups and market trends</td>
<td>43</td>
</tr>
<tr>
<td>Intelligent automation in procurement</td>
<td>45</td>
</tr>
<tr>
<td>Blockchain in digital procurement</td>
<td>47</td>
</tr>
<tr>
<td>Research conclusion</td>
<td>49</td>
</tr>
<tr>
<td>Solution provider summaries</td>
<td>50</td>
</tr>
<tr>
<td>Introduction to the solution provider summaries</td>
<td>51</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>69</td>
</tr>
</tbody>
</table>
The procurement function is ever evolving. The shift continues from a department responsible for cost savings to a department that can realize value improvements for the entire chain. This transformation has been going on for the past years and is rapidly spreading. From spot buys to early supplier involvement, and from competitive bidding to supplier development initiatives, these are the changes that make a procurement department a strategic partner for the business. While the procurement strategy may differ per industry, organization and even category, there is one major linking pin: more focus on strategic tasks.

To be able to focus on strategic tasks, whatever the scope or procurement strategy, the setup of the procurement function must be right. Traditionally, three main aspects are considered in setting up a function in the right way: people, processes and systems. The right people performing the right tasks supported by the right systems. While the obvious focus of this research might be on the systems, it should be clear that the other two, people and processes, are highly interlinked with this. After all, setting up a system without the right processes will not bring any benefits, if not frustrate the procurement function even more. On the other hand, setting up a system that can either not be used well by the users, or does not support the user well in their tasks, could become a lost investment. A good digital procurement setup is adjusted to the process. Alternatively, it may be worthwhile to look at best practices or standard process templates offered by solution providers and try to match this with an organization’s specific requirements. Although this may cost more time, and therefore resources, it will deliver greater value in the end. The greatest value of implementation of a new system can be retrieved if the processes are revised simultaneously.

Solution selection processes are often conducted using a (long) list of functional and technical requirements stating what a solution should be able to do. As mentioned above, it is a critical aspect of assessing a solution to know the requirements and matching this with potential solutions. Often overlooked is a possibly even more important aspect: the look and feel of the solution. Whereas many solutions, large or small, offer in the basis similar functionalities, each solution has a completely different user experience. Besides the fact that a system must support a user in their daily work, user experience is critical to user acceptance, and therefore to the success of implementing a new system. Unfortunately, it is not quantifiable (at least not before implementation), which is probably why it is often overlooked. It is an often subjective, as one user may prefer one system and a second user prefers another. It is therefore highly recommended to ensure that a high regard is taken to user experience of a solution in the process of selecting a new system, for example through demo sessions or allowing future users to ‘play around’ in a test environment for a short while.

Another point that may be overlooked when purely relying on internally listed requirements is the availability of advanced functionalities that may not be part of the initial requirement scope because the team is unaware of the possibilities of a system. It is often argued that these functionalities, when not listed as key requirements initially, are ‘nice-to-haves’. However, they could turn out to be the most value adding functionalities in the system, supporting people with something they did not know they could be supported on, or automating parts they did not know could be automated. Instead of setting up functional requirements too specifically and only stick to those it is advisable to engage in open discussions with potential solutions and learning what they have to offer.

Setting up the right process

Whereas each organization has its own detailed processes, the general procurement process can be summarized by the often-used term ‘Source-to-Pay’. Although it is often spread across the procurement and the finance department, which is fine from an organizational perspective, it should be considered as one process. After all, the same supplier with whom a contract was set up after a thorough sourcing process, would also like to get his payment on time (or early, to leverage any early payment discounts that are negotiated). It is therefore important to follow one end-to-end cycle throughout the procurement process. In 2018, the Capgemini Procurement Wheel was introduced, which is shown in Figure 1, to highlight that the Source-to-Pay process is to be considered as one end-to-end cycle.

This cycle is being used as the main process flow on which this research is built. For each of these process steps, the right decisions must be made in terms of how to set up the process details for a specific organization (or even category). Amongst others this includes the right RFX, Source-to-RFX, Source-to-Contract, Source-to-Order, Source-to-Pay, Order-to-Pay, and Accounts Payable processes.

Selecting the right system

There is not one system that is right for all organizations. One system may not even be the perfect system for all categories within one organization. Although it is generally not a desired situation to have multiple systems performing one process for different categories, it is of utmost importance to really understand what is required of a new system across different categories and business units. To understand this, gathering of requirements should be based on a desired-to-be situation. Procurement processes and policies have often been in place for several years and organizations may tend not to change them. However, a new solution provides the opportunity to critically assess existing processes and simplify them wherever possible. It is often argued that ‘the process should not be adjusted to the system, but the system should be adjusted to the process’. Alternatively, it may be worthwhile to look at best practices or standard process templates offered by solution providers and try to match this with an organization’s specific requirements. Although this may cost more time, and therefore resources, it will deliver greater value in the end. The greatest value of implementation of a new system can be retrieved if the processes are revised simultaneously.

Solution selection processes are often conducted using a (long) list of functional and technical requirements stating what a solution should be able to do. As mentioned above, it is a critical aspect of assessing a solution to know the requirements and matching this with potential solutions. Often overlooked is a possibly even more important aspect: the look and feel of the solution. Whereas many solutions, large or small, offer in the basis similar functionalities, each solution has a completely different user experience. Besides the fact that a system must support a user in their daily work, user experience is critical to user acceptance, and therefore to the success of implementing a new system. Unfortunately, it is not quantifiable (at least not before implementation), which is probably why it is often overlooked. It is an often subjective, as one user may prefer one system and a second user prefers another. It is therefore highly recommended to ensure that a high regard is taken to user experience of a solution in the process of selecting a new system, for example through demo sessions or allowing future users to ‘play around’ in a test environment for a short while.

Another point that may be overlooked when purely relying on internally listed requirements is the availability of advanced functionalities that may not be part of the initial requirement scope because the team is unaware of the possibilities of a system. It is often argued that these functionalities, when not listed as key requirements initially, are ‘nice-to-haves’. However, they could turn out to be the most value adding functionalities in the system, supporting people with something they did not know they could be supported on, or automating parts they did not know could be automated. Instead of setting up functional requirements too specifically and only stick to those it is advisable to engage in open discussions with potential solutions and learning what they have to offer.

Definitions

<table>
<thead>
<tr>
<th>Definitions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement:</td>
<td>Overall process from sourcing to accounts payable, also known as Source-to-Pay.</td>
</tr>
<tr>
<td>Sourcing:</td>
<td>The selection of a supplier, negotiation, contract creation, contract + supplier performance management and supplier information. Also known as Source-to-Contract.</td>
</tr>
<tr>
<td>Purchasing:</td>
<td>Operational activities to place purchase order, including requisition creation, PO creation, goods/services receipt. Also known as Purchase-to-Order.</td>
</tr>
<tr>
<td>Accounts Payable:</td>
<td>Invoice receiving, processing and payment.</td>
</tr>
<tr>
<td>Source-to-Contract:</td>
<td>Strategic sourcing, contract management, supplier information and supplier performance management activities</td>
</tr>
<tr>
<td>Purchase-to-Order:</td>
<td>Operational purchasing activities only</td>
</tr>
<tr>
<td>Purchase-to-Pay:</td>
<td>Operational purchasing + accounts payable activities</td>
</tr>
<tr>
<td>Order-to-Pay:</td>
<td>Accounts payable activities only</td>
</tr>
<tr>
<td>Source-to-Pay:</td>
<td>All sourcing, purchasing and accounts payable activities</td>
</tr>
</tbody>
</table>

Figure 1: Capgemini procurement wheel
The objective of the Capgemini Digital Procurement Research is to identify the key (new) functionalities offered by the major source-to-pay solution providers in the market. The aim is to provide insights in how these functionalities can support the procurement organization in realizing their goals. The report seeks to link the key trends that Capgemini identified in the procurement function to the functionalities that the different digital solutions offer. The focus of this year’s edition of the research lies on discovering new digital technologies being used to solve relevant challenges of the procurement function. Capgemini has not weighted or rated any of the answers provided by solution providers.

Solutions invited to the research

Based on an extensive research of the digital procurement solutions available in the market, a total of 64 pre-selected solution providers were invited to take part in the research. Strict criteria were set up to identify the list of potential solution providers for the research. Participating solution providers must be globally oriented, with large, multinational organizations as their client base. This means they are present (with sales offices and clients) in at least two of the three following regions: North America, Europe, Asia-Pacific. Also, they have a wide client base of multinational organizations in different industries and are therefore suited for a wide range of companies across the globe. The selected solutions do not all offer the entire source-to-pay range as many of the solutions offer only part of that scope, such as source-to-contract.

Out of the invited solution providers, 33 solutions (52%) have responded to the questionnaire of this research. Every one of the 33 solutions offer only part of the scope, such as source-to-contract.

Set-up of the questionnaire

To come to the research results, solution providers were requested to answer an extensive questionnaire. Depending on the scope offered by the different solutions, a maximum of 386 questions had to be answered. The questionnaire has been divided into several sections and underlying sub sections and based on whether the solution offers a certain module (e.g. Strategic sourcing), the questions for that section were shown.

Different question formats have been used throughout the questionnaire. Most of the questions were inquiring on a certain functionality to which the respondent could answer 'Yes', 'No' or 'On roadmap', if necessary supplemented with a free text field requesting additional input. Additionally, some tick boxes questions were used to request on specific options (e.g. types of pricing strategy).

The questionnaire was open to responses from the solution providers from September 4th to October 9th, 2020 and the solution providers were asked to provide their answers based on the current standing of their solution at time of response.

Analysis of the responses

The results sections of this report describe the most interesting findings of the questionnaire responses. This was done on basis of the different ‘elements’ that are part of the research scope:

- Strategic Sourcing
- Contracting
- Supplier management
- Purchasing
- Accounts payable
- Reporting and Analytics
- Implementation, Pricing and Technical

Within each section, the team has identified the most relevant outcomes. Results are described relative to the number of solutions present in that specific section (i.e. not all solutions offer functionality in each ‘element’).

Disclaimer: Not all responses to all questions in the questionnaire are covered in this research report, the questionnaire was simply too extensive for that. The individual answers to the questionnaire are known at Capgemini and will not be published/shared outside of the organization and research team as agreed with the solution providers.
Solutions that offer...

- Identification of supplier risks to suffering orders and inform stakeholders
- Identification of unforeseen supplier risks based on unstructured data
- KPIs to be autoscored based on quantitative data from external resources
- Solutions that offer the functionality
- Solutions that do not offer the functionality

Risk assessments based on the response to qualification questions

Risk management

Organizations that source globally deal with a multitude of challenges such as short product life cycles, just in time delivery and demanding customers. Looking at a pandemic such as COVID-19, business resilience is being challenged around the world. COVID-19 caused supply chain disruption and some suppliers where no longer able to deliver according to pre-defined contractual obligations. Or suppliers were not able to deliver at all. In order to minimize negative impact, solutions offer software driven risk assessments on the entire supplier base. Risks assessments can be customized as unforeseen threats cannot always be part of pre-defined risk assessments. Solutions can use external data to be ahead of supply disruption. An example is using news articles or social media to identify risks in time. Based on the risks identified, some solutions can propose replacement of suppliers, suggest alternative suppliers and advice on improvement plans to boost performance.

Strategic supplier collaboration

To further incorporate improvement throughout the supply chain, working in close collaboration and building stronger relationships with partners can be of great value. When it comes to realizing product improvement, accessing new markets and incorporating sustainability initiatives, buyers are relying on suppliers more than ever before. Suppliers are not to be considered as providers, but as strategic partners that can help create competitive advantage. Effective collaboration requires continuous information sharing. E-mailing is a common way to communicate, but it is manually, not continuously and outside of the procurement system. Therefore, discussions with suppliers would preferably take place on the platform directly. Procurement software ensures that communication lines are always open which enables real-time data sharing with multiple critical stakeholders.

Supplier performance

Companies rely on the performance of suppliers when it comes to timely delivery, service quality and cost reduction. Successful supplier management can drive positive influence on business operations. When it comes to supplier monitoring, 84% of the solutions make it possible to perform supplier monitoring on quantitative aspects (e.g. price, quality, delivery, service). 78% offers to do supplier monitoring on qualitative aspects (e.g. visits, surveys, certifications).

KPIs are frequently used to track and monitor supplier performance. 87% of the solutions can measure supplier performance through KPIs. 68% of the solutions provide default KPIs in the software and 52% offer KPIs from libraries. Besides performance tracking, KPIs can also be used to investigate indicators such as the optimal number of suppliers, to explore alternative suppliers or identify strategic suppliers. These indicators can be company specific. 81% of the solutions of the provider to create customized supplier KPIs to build supplier specific performance management reports. When noticing good performance or, 1% of the solution providers indicate that they can automatically identify and suggest additional categories that a supplier can be extended to when performing well.

Supplier development

To improve procurement operations, solutions can support by automatically suggesting supplier improvement initiatives. 19% of the solution providers indicate they can automatically suggest this based on internal information (such as supplier KPIs or similar suppliers). Only a small part of solutions offer possibility to suggest actions based on external information. 13% of the solutions can suggest supplier improvement initiatives based on external information, such as supplier capabilities on the market. Just 2% of the suppliers indicate that they can automatically suggest supplier improvement initiatives based on unstructured data (using artificial intelligence technology).

However, we can expect an increase of this in the future, since 16% has on their roadmap, as shown in Figure 4.

Research findings supplier management

Out of 33 solution providers, there are 31 that offer functionalities within Supplier management. Of those 31 solution providers, 90% offer supplier performance management. Both supplier vetting/qualification and risk management is offered by 80% of the solution providers. 63% provides supplier development to some extent in their solution. Figure 3 lists the functionalities covered by solution providers.

Supplier vetting/qualification

Supplier development

Supplier risk management

Supplier information

Figure 3: Functionalities offered by solution providers

Supplier information

All of the 31 solution providers offer the functionality supplier information to some extent. Supplier information forms the basis for other procurement functionalities. It is therefore crucial to have the right information stored in the solution. Organizations deal with thousands of suppliers; providing information manually is time consuming and an error prone task. Solution providers find ways to support in entering supplier information onto the system. Supplier self-registration functionality is supported by multiple solutions and can be offered in different ways. For example, 87% of the solutions make it possible to allow suppliers to enter its own details into the supplier database of the buyer. 77% offer automatic validation of existing supplier information in the database. Also, 71% of the solutions make it possible for suppliers to register their interest in doing business and submit information on their capabilities through an integrated web portal.

Supplier performance

All 31 of the solution providers offer the functionality supplier information to some extent. Supplier information forms the basis for other procurement functionalities. It is therefore crucial to have the right information stored in the solution. Organizations deal with thousands of suppliers; providing information manually is time consuming and an error prone task. Solution providers find ways to support in entering supplier information onto the system. Supplier self-registration functionality is supported by multiple solutions and can be offered in different ways. For example, 87% of the solutions make it possible to allow suppliers to enter its own details into the supplier database of the buyer. 77% offer automatic validation of existing supplier information in the database. Also, 71% of the solutions make it possible for suppliers to register their interest in doing business and submit information on their capabilities through an integrated web portal.

Figures 3 and 4 show the functionalities covered by solution providers.

Figure 4: Automatically suggest supplier improvement initiatives based on unstructured data

71% 23% 23% 61% 42%

A program by which suppliers can suggest ideas for relationship development

Risk assessments based on qualification questions

Identification of unforeseen supplier risks based on external information

Identification of supplier risks to suffering orders and inform stakeholders

KPIs to be autoscored based on quantitative data from external resources

Solutions that offer the functionality

Solutions that do not offer the functionality

Figure 5: Automatically identify supplier risks based on news articles in any third-party data source

Risk management

To be ahead of risks, functionalities to identify and monitor risks can be found in 90% of the solutions. These are mainly based on internal data, risks assessments on the entire supplier base. Risks assessments can be customized as unforeseen threats cannot always be part of pre-defined risk assessments. Solutions can use external data to be ahead of supply disruption. An example is using news articles or social media to identify risks in time. Based on the risks identified, some solutions can propose replacement of suppliers, suggest alternative suppliers and advice on improvement plans to boost performance.

Strategic supplier collaboration

To further incorporate improvement throughout the supply chain, working in close collaboration and building stronger relationships with partners can be of great value. When it comes to realizing product improvement, accessing new markets and incorporating sustainability initiatives, buyers are relying on suppliers more than ever before. Suppliers are not to be considered as providers, but as strategic partners that can help create competitive advantage. Effective collaboration requires continuous information sharing. E-mailing is a common way to communicate, but it is manually, not continuously and outside of the procurement system. Therefore, discussions with suppliers would preferably take place on the platform directly. Procurement software ensures that communication lines are always open which enables real-time data sharing with multiple critical stakeholders.

Supplier performance

Companies rely on the performance of suppliers when it comes to timely delivery, service quality and cost reduction. Successful supplier management can drive positive influence on business operations. When it comes to supplier monitoring, 84% of the solutions make it possible to perform supplier monitoring on quantitative aspects (e.g. price, quality, delivery, service). 78% offers to do supplier monitoring on qualitative aspects (e.g. visits, surveys, certifications).

KPIs are frequently used to track and monitor supplier performance. 87% of the solutions can measure supplier performance through KPIs. 68% of the solutions provide default KPIs in the software and 52% offer KPIs from libraries. Besides performance tracking, KPIs can also be used to investigate indicators such as the optimal number of suppliers, to explore alternative suppliers or identify strategic suppliers. These indicators can be company specific. 81% of the solutions of the provider to create customized supplier KPIs to build supplier specific performance management reports. When noticing good performance or, 1% of the solution providers indicate that they can automatically identify and suggest additional categories that a supplier can be extended to when performing well.
When Mark Zuckerberg first built Facebook, he had no idea how extensive his network would become. He did however understand the key ingredient to building a social network – marketing, and a common cause. In the case of Facebook, the common cause to create social connections, a key ingredient to college life. Mark quickly realized the value in extending this across other universities, and eventually the world, with over 2.5 billion users globally. Supplier networks are no different.

Supplier networks must also grow in order to be successful and while some growth will be organic, this alone will not achieve the network coverage required to reach a critical mass of suppliers using the network for sourcing points, purchasing orders and invoices and by that make digital procurement and invoice networks successful. Just like Facebook, there needs to be a constant focus on how to drive adoption through clear processes, an intuitive solution and a continued push, but there is one key advantage over social networks – most organizations already know their supplier base.

We have worked with many organizations who have approached the implementation of digital platforms and supplier portals with a “just build it – and they will come” approach. This might have worked in the famous movie “Field of Dreams” but when it comes to getting traction on supplier networks most organizations struggle to attract a desired number of suppliers and by this can’t reach the outcomes and value for their investments they have made. Amongst the organizations that we collaborated with for implementation of supplier networks there were two where great success was achieved. The first one for a manufacturing client for enabling suppliers to a leading supplier network, the second for a consumer products client enrolling their suppliers to a supply chain financing platform. Our task was to introduce the tools and make it effective.

For these two projects, the onboarding team comprised of a single point of contact (SPoC) from the business, a core vendor technical team and finally our team of procurement consultants. In both cases, our team managed the accounts payable department, and part of the procurement processes. Next to this, we worked closely with the vendor and the client to ensure that we had the knowledge necessary to successfully implement the platform and make it usable. The on-boarding team worked together to develop the solution with the Capgemini team also providing inputs about the relevant business processes.

One of the fundamental factors at the very beginning was to have all the vendor master data updated and executing a clean-up of this data. By doing so, duplicate, incorrect and inactive vendors were filtered out.

We were aware that the change management needed to be planned carefully, with a clear understanding that business operations could not be disrupted. The teams classified each vendor as critical, non-critical, essential or monopoly suppliers. After the vendors were classified, we prioritized the vendors based on above-mentioned criteria and by this prepared a clear list for each phase of the onboarding program. The next step was to ensure a clear and well-prepared communication. It was also important to secure that there were experts able to answer potential questions regarding the tool at any times. Drafts for standard documents and letters were prepared, reviewed and validated.

In arranging proper onboarding communication to vendors, both communicative skills and subject knowledge played a vital role. It was necessary to clearly provide reliable knowledge, but also to convince the vendors that their participation to the program would be beneficial for them – our “common cause”. An example of such benefits would concern the option of dynamic discounting, which enables a trade-off between giving discount to the buyer and then receiving the payment earlier.

Following the initial communication, we gave vendors an initial period to enrol and adopt to the new tool. After the transitional period, our next challenge was to enforce use of the platform and validate the effectiveness. For the supplier network tool which we deployed, one of the early challenges was that some additional manual effort by the vendors was needed to upload their invoices. We worked with these vendors to establish electronic integration to the tool, to avoid any manual effort. Another issue were duplicate invoices caused by change or resubmission. While these were caught by controls in the system, we implemented further changes that would identify these issues at the point of submission and provide immediate feedback to the suppliers.

Once these challenges were addressed, we continued to monitor the process – confirming there are no duplicates, incorrect or no actual submissions – and continue to add new suppliers to the platform. Currently 80% vendors use the supplier network tool with 60% of transactions being processed with no human touch. However, e-invoicing is no magic bullet with some invoices still needing to be manually posted due to price or quantity discrepancy. The focus of the team has now shifted to reducing these kinds of exceptions.

Establishing your digital supplier network is a long-term process. For both projects, the initial program took approximately two years including initial enrolment, moving the vendors to the new practice, monitoring the platform for exceptions, enrolling more vendors and further processes optimization. The success of both these programs was due to good cooperation and strong partnership with the client and the vendor from the inception of the program. In both cases, we leveraged a similar methodology, customized to the individual circumstances of the client, to successfully drive supplier adoption.

Based on our experience in building these networks for both invoicing and Purchasing across many clients, there are five key factors that determine the success of such a program:

- A clear strategy for the adoption of the network, including updating and communicating to the supplier policies, and be prepared to enforce it consistently.
- Processes that have been designed around the specific requirements and challenges of the business.
- Clean vendor data with up-to-date contact details, categorized by the importance of the vendor to the business, and the transaction volume.
- A strong change management approach to address the likely resistance you will get, not only from vendors but also internally.
- Strong governance, including your category management and finance organization to continually review and refine the approach to meet the changing requirements of the business.

Such networks are essential to a successful digital procurement program to provide more visibility to both vendors and customers, improve the efficiency of the supplier performance management and risk processes, reduce the cycle time of the Source-to-Pay process, and improve working capital. However, be aware, that having most of your suppliers digitally enabled will not necessarily deliver proportional savings. Poor data quality or processes in your upstream procurement processes will continue to result in exceptions and negate any benefits achieved from your supplier network.
Strategic sourcing represents the backbone of any successful procurement function regardless of the industry. It is essential to understand supply markets, search and evaluate potential suppliers as well as select the best suppliers after negotiating in alignment with strategic objectives. Strategic sourcing can be understood as the recursive process that is based on results and learnings from previous sourcing iterations as well as contracting, operational purchasing, supplier performance evaluation, reporting and analytics as successive activities. In principle, procurement functions aim at continuous improvement in strategic sourcing. With a constant focus on cost, quality and supply availability, which is all elaborated and refined in the distinct procurement strategy, procurement functions pursue to increase the overall value added through procurement. Digital procurement solution providers build upon this aspiration and provide a wide range of functionalities to lift procurement functions to a long-term value partner in the organization.

Key trends in strategic sourcing

New technological developments in digital procurement bear tremendous potential for strategic sourcing. Given this momentum, procurement functions not only require a digital streamlining of fundamental sourcing activities such as tendering, auctioning and negotiating, but they seek for much more.

Sourcing effectiveness

Procurement solution providers play a vital role and are expected to equip procurement functions with the right tools to perform sourcing activities better and thus, become an essential actor in supply chains. Examples can be found in the utilization of advanced analytics for supply market analyses or electronic tendering as well as auctioning. The latter ensures the availability of relevant data in digital form as well as provides great potential to increase competition and thus, reduce prices with minimum effort.

Sourcing collaboration

Furthermore, digital procurement solution providers aim at smarter, closer and more cooperative supplier collaboration, which sets the foundation for supplier driven innovation. For instance, with access rights to a supplier portal and selected tenders, suppliers can review product specifications and propose re-specifications based on their product knowledge, which can lead to quality improvements and/or cost reductions, respectively.

Sourcing information

Additionally, digital procurement solution providers aim at gathering, structuring and providing information to procurement functions. While internal information is mostly available, but hard to collect e.g. due to unclear roles and responsibilities or a heterogenous IT system landscape, it is particularly difficult to identify valuable external information and transform it into insights. The right utilization of the solution’s functionalities, to transform internal as well as external information into intelligence, enables true data-driven decision making e.g. concerning sustainability in procurement, which receives increasing attention from top management, internal as well as external customers. Consequently, this results in deeper supply market intelligence as well as improved and to some extent even automated execution of the strategic sourcing process. For instance, preconfigured KPI dashboards monitoring supplier performance simply utilize purchasing data and visualize it, so that manual and consequently, time-consuming reporting becomes a task of the past.

Overall, digital procurement solution providers combine deep procurement with technology know-how, which can make strategic sourcing smarter and more efficient.
Electronic tendering and auctions

While 76% of the solution providers indicate the position of a bid in an auction, 52% even show improvement measures to suppliers to improve their position. Furthermore, many providers aim at increasing the automation rate at this point. This can, for example, be achieved with chatbots that automatically answer basic supplier questions and are used by 20% of the providers. Also, 60% of the solutions automatically transfer winning bid information into a contract after evaluation.

Bid evaluation

Important decisions in strategic sourcing rely on profound evaluations. Over 80% of the providers offer weighted total scorings as well as evaluations of non-cost factors of suppliers based on their capabilities. In addition to that, approximately 60% of the providers offer functionalities to calculate total savings, if baseline prices are given. Since even 52% assess total-cost-of-ownership including volume discounts, quality or service level indicators, it can be stated that most of the providers enable procurement functions to perform comprehensive analyses. However, only 16% of the providers utilize advanced technologies such as AI to automatically support procurement functions in the risk evaluation or optimal bid combination, for instance.

Negotiations

During supplier negotiations, many procurement functions seek for operational guidance and support so that resources can focus on strategic tasks. Automatically highlighting bids and other qualitative information as subject to negotiation are offered by 32% of the solutions. While 40% offer a negotiation database, in which target and previous prices as well as the negotiation strategy per supplier are stored, 32% perform updates based on actual evaluations. Selected providers aim at boosting operational efficiency through the automatic generation of target prices on item level, which 28% of the providers offer based on internal information. However, only 12% utilize external information for this purpose.
A common classification and distinction between strategic sourcing and contracting is often unclear and definitions are not necessarily universally accepted. While contracting can be considered as final activity in strategic sourcing, it is placed separately at this point, given its importance within the scope of procurement. It contains contract creation, repository and performance as key activities directly following the strategic sourcing process. The potential of digital enhancements for these key activities is frequently discussed and valued across procurement functions and industries. This particularly stems from first promising experiences, when utilizing digital solutions to a formerly very manual area of procurement. Especially, the essential interrelation between strategic sourcing and contracting emphasizes its relevance for modern procurement functions.

Key trends in contracting
Following the first developments in digital contracting, which included disc drives that solely stored scanned versions of paper-based contracts, recent developments involve functionalities that initiate an era of smart contracts.

Smart contracts
Smart contracts are software-based and can drastically reduce transaction costs, while increasing contractual safety and quality. During the contract period, linked actions can be triggered automatically e.g., regular payments, depending on the underlying contractual terms. These contractual terms are stored in a centralized and continuously updated clause library, which is crucial within the contract creation process. Applicable clauses, terms and conditions are automatically suggested, and often pre-filled, depending on contract-related attributes such as organization, business unit or category. Shape Consequently, there is improvement not only in the overall efficiency of the contract creation process, but also in the quality of the contract itself.

Archiving
Leading procurement functions require a full digitization of contracts through extracting and archiving meta data. Even though it is particularly relevant for old, paper-based contracts, it also applies for new contracts that do not follow a digital creation and signing process. Here, many solutions utilize Artificial Intelligence (AI) to deploy classification algorithms that automatically archive contracts in a contract repository based on organization, category or supplier related information. These contract repositories offer highly configurable search functions, which improve contract related transparency across the organization. Finally, the way of writing, printing, signing, sending and storing contracts changes fast. Digital procurement solutions make themselves indispensable at this point through improving the efficiency and quality within the scope of contracting.

Research findings contracting

Contract creation
Building upon activities and results from the strategic sourcing process, contract creation reflects the primary activity in contracting. This process usually contains many standardized activities and thus, solely requires slight adjustments per contract, regardless if it is a first creation or renewal.

Consequently, solution providers aim at easing the process and increasing the operational efficiency. This research identifies five basic functionalities that set a solid foundation for digital contracting and are each offered by around 60% of the solution providers, as shown in Figure 10. Both the support of standard work software as well as linkages between organizational and commodity levels ensure user acceptance in the organization through a clear structure of contracting processes. In addition, the availability of templates, a clause library containing the most up-to-date terms and conditions as well as pre-filling features increase the automation rate of the contract creation process. Especially, the pre-filling of contract information based on sourcing activities gains increasing attention in this.

Contract repository
Given the fact that a contract repository represents the most basic feature in contracting, it is no surprise that it is offered by all solution providers. Accordingly, standard filtering as well as archiving in relation to other contracts is offered by most solution providers. A very powerful and further developing functionality is a full tekst search in contract attachments to quickly find information without opening the respective contracts and attachments. It is currently offered by 62% solutions, with 21% having it on their roadmap. However, advanced functionalities through the utilization of new technologies such as AI are limited. While only 17% of the providers utilize AI for an efficient storing of contracts, almost one third utilizes AI for sophisticated searching and contract classification purposes. A few selected solution providers utilize AI mostly for meta data extraction and processing, followed by the removal of redundant or false contract information and documents, respectively.

Solutions that offer...

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>88%</td>
<td>Contracting functionalities</td>
</tr>
<tr>
<td>62%</td>
<td>Automatic contract summaries</td>
</tr>
<tr>
<td>69%</td>
<td>Artificial Intelligence</td>
</tr>
</tbody>
</table>

Complementing the basic functionalities above, this research also identifies several advanced functionalities that provide even further potential towards automation, five of which are shown in Figure 11. A little over one third of the solution providers offer these functionalities. Especially, the automatic preparation of internal and external information as well as of the contracting history must be mentioned. In addition, the possibility of signing contracts digitally through electronic signatures as well as simultaneously working in contract related documents without changing or overwriting content, reduces friction within the scope of contract creation.
Purchasing has many dependencies to various systems and processes. Therefore, purchasing has links with the procurement environment outside of its own function. For instance, the agreed prices in contracts (stored in contract management systems) should be reflected in the items in catalogues offered in the purchasing interface. Moreover, preferred status of a supplier and other details (e.g. name, address, contact details) should be correct and therefore require a link to vendor master data (VMD) or separate preferred supplier status systems. For availability of correct financial objects in the purchasing module as well as correct approval flows, close alignment is required with finance and their respective systems.

Key trends in purchasing

Dealing with the vast number of data sources outside of purchasing while still ensuring a proper operating purchasing function has resulted in three key trends. These trends have in common that they all ease the process of making purchases.

Increasing spend categories under catalogues

In purchasing, many data sources outside of purchasing are consolidated and put in an overview in a catalogue. Previously, catalogues were mostly used for simple indirect goods. However, there is an increasing number of spend categories that are put into catalogues, for instance services and direct goods. The benefits are known. For these categories, the requesters can enjoy a streamlined process for making a purchase, and items in the catalogue are always against a contract. This means maverick spend is reduced and organizations obtain improved control on spend. Moreover, some fields can already be prefilled, such as the vendor or the financial objects. This further reduces the time needed to make a purchase and can also steer for cost savings. Of course, the general challenge of catalogues also applies for direct goods: having in place the correct price and maintaining that. An exception should be made here for punch-out catalogues – in this case the maintenance of the catalogue is done by the catalogue provider.

Finding the right buying channel

Enabling an intuitive process when making a purchase moves beyond just catalogues. Companies also have an increasing desire to ease the process of finding the proper buying channel for requesters. It is about designing the interface for the requesters in such a way that the correct buying channel is identified seamlessly. By doing so, awareness of using the correct channel is increased across requesters, lowering the necessity for providing trainings. Prioritizing on design rather than user training allows for a purchasing tool with a very high level of ease of use, resulting in less non-compliant purchasing behavior as the correct buying channel is used. This results in two benefits. Firstly, maverick spend is reduced as the lowest contracted price is always used. Secondly, a PO is always created for the purchase and therefore suppliers suffer no delay in payment as the invoice can be matched with the PO.

Automation of purchasing

While significant efficiency gains can be obtained from the requester perspective, additional value can be gained from automation. Identifying the right buying channel and subsequently filling in the required fields as much hands-off as possible offers two significant benefits. Firstly, this further reduces the time to purchase, enabling procurement personnel to focus more on strategic and therefore value-adding activities. Secondly, human errors are taken out of the process, speeding up the duration between PR creation and PO creation. The reduced process time also allows to handle urgent requests quicker.

**Solutions that offer…**

- Chatbots in catalogs: 52%
- Functionalities to compare items and recommend the best item: 21%
- Submitting a PR that includes a vendor not in VMD: 52%
- Recording of PO created against contract: 66%
- Automatic review of PO against contract terms: 34%

**Solutions that do not offer the functionality**
Identifying demand

While at times not considered a part of purchasing, it is not surprising that only 48% of solutions cover this topic. Yet, it serves as a trigger to start the rest of the purchasing process and is therefore also important to account for in tooling. There are different ways of identifying demand. This can be done based on remaining funds on a PO or purchase order history, both of which are offered by 14% of solutions only. An explanation could be that such functionalities require significant IT interfacing. Possibly less complex, identifying demand based on contractual agreements or using current inventory levels is offered by 34% of solutions. Solutions that are able to identify demand (one way or another) do show to have incorporated follow-up actions with a high degree of automation. This is shown in Figure 14.

Catalogues

Catalogues ease the process of making a purchase. It is therefore not very surprising that the majority of solutions cover basic catalogue functionalities. Roughly 67% of solutions can connect to third party punch-out catalogues, offer a search option which is cross-catalogue, can include articles from different suppliers in a single catalogue and can also apply different pricing strategies. Less basic, but also a very valuable feature, chatbots are offered by 21% of solutions. Chatbots offer significant benefits to consumers as they improve the guided buying experience by searching (and comparing) goods and answering other questions. It should also be noted that if the chatbot is available, its functionalities are mostly simple as shown in Figure 13. Furthermore 35% of solutions are applying machine learning (ML) to identify comparable and complementary goods. A potential explanation for this gap could be (ML) to identify comparable and complementary goods. In fact, failing to do so may even compromise the envisioned savings from strategic initiatives. Because, where sourcing activities shape the circumstances for value realization, actual value is not delivered unless the contract is being used adequately and compliant during its term. This means minimizing the amount of procurement and business effort involved, disputes, and procedural inefficiencies, while maximizing the value of the agreed terms and payment. In essence, value realization should be achieved largely during the Procure-to-Pay process.

Catalogues

Catalogues ease the process of making a purchase. It is therefore not very surprising that the majority of solutions cover basic catalogue functionalities. Roughly 67% of solutions can connect to third party punch-out catalogues, offer a search option which is cross-catalogue, can include articles from different suppliers in a single catalogue and can also apply different pricing strategies. Less basic, but also a very valuable feature, chatbots are offered by 21% of solutions. Chatbots offer significant benefits to consumers as they improve the guided buying experience by searching (and comparing) goods and answering other questions. It should also be noted that if the chatbot is available, its functionalities are mostly simple as shown in Figure 13. Furthermore 35% of solutions are applying machine learning (ML) to identify comparable and complementary goods. A potential explanation for this gap could be (ML) to identify comparable and complementary goods. In fact, failing to do so may even compromise the envisioned savings from strategic initiatives. Because, where sourcing activities shape the circumstances for value realization, actual value is not delivered unless the contract is being used adequately and compliant during its term. This means minimizing the amount of procurement and business effort involved, disputes, and procedural inefficiencies, while maximizing the value of the agreed terms and payment. In essence, value realization should be achieved largely during the Procure-to-Pay process.

Catalogues

Catalogues ease the process of making a purchase. It is therefore not very surprising that the majority of solutions cover basic catalogue functionalities. Roughly 67% of solutions can connect to third party punch-out catalogues, offer a search option which is cross-catalogue, can include articles from different suppliers in a single catalogue and can also apply different pricing strategies. Less basic, but also a very valuable feature, chatbots are offered by 21% of solutions. Chatbots offer significant benefits to consumers as they improve the guided buying experience by searching (and comparing) goods and answering other questions. It should also be noted that if the chatbot is available, its functionalities are mostly simple as shown in Figure 13. Furthermore 35% of solutions are applying machine learning (ML) to identify comparable and complementary goods. A potential explanation for this gap could be (ML) to identify comparable and complementary goods. In fact, failing to do so may even compromise the envisioned savings from strategic initiatives. Because, where sourcing activities shape the circumstances for value realization, actual value is not delivered unless the contract is being used adequately and compliant during its term. This means minimizing the amount of procurement and business effort involved, disputes, and procedural inefficiencies, while maximizing the value of the agreed terms and payment. In essence, value realization should be achieved largely during the Procure-to-Pay process.

Catalogues

Catalogues ease the process of making a purchase. It is therefore not very surprising that the majority of solutions cover basic catalogue functionalities. Roughly 67% of solutions can connect to third party punch-out catalogues, offer a search option which is cross-catalogue, can include articles from different suppliers in a single catalogue and can also apply different pricing strategies. Less basic, but also a very valuable feature, chatbots are offered by 21% of solutions. Chatbots offer significant benefits to consumers as they improve the guided buying experience by searching (and comparing) goods and answering other questions. It should also be noted that if the chatbot is available, its functionalities are mostly simple as shown in Figure 13. Furthermore 35% of solutions are applying machine learning (ML) to identify comparable and complementary goods. A potential explanation for this gap could be (ML) to identify comparable and complementary goods. In fact, failing to do so may even compromise the envisioned savings from strategic initiatives. Because, where sourcing activities shape the circumstances for value realization, actual value is not delivered unless the contract is being used adequately and compliant during its term. This means minimizing the amount of procurement and business effort involved, disputes, and procedural inefficiencies, while maximizing the value of the agreed terms and payment. In essence, value realization should be achieved largely during the Procure-to-Pay process.

Catalogues

Catalogues ease the process of making a purchase. It is therefore not very surprising that the majority of solutions cover basic catalogue functionalities. Roughly 67% of solutions can connect to third party punch-out catalogues, offer a search option which is cross-catalogue, can include articles from different suppliers in a single catalogue and can also apply different pricing strategies. Less basic, but also a very valuable feature, chatbots are offered by 21% of solutions. Chatbots offer significant benefits to consumers as they improve the guided buying experience by searching (and comparing) goods and answering other questions. It should also be noted that if the chatbot is available, its functionalities are mostly simple as shown in Figure 13. Furthermore 35% of solutions are applying machine learning (ML) to identify comparable and complementary goods. A potential explanation for this gap could be (ML) to identify comparable and complementary goods. In fact, failing to do so may even compromise the envisioned savings from strategic initiatives. Because, where sourcing activities shape the circumstances for value realization, actual value is not delivered unless the contract is being used adequately and compliant during its term. This means minimizing the amount of procurement and business effort involved, disputes, and procedural inefficiencies, while maximizing the value of the agreed terms and payment. In essence, value realization should be achieved largely during the Procure-to-Pay process.

Catalogues

Catalogues ease the process of making a purchase. It is therefore not very surprising that the majority of solutions cover basic catalogue functionalities. Roughly 67% of solutions can connect to third party punch-out catalogues, offer a search option which is cross-catalogue, can include articles from different suppliers in a single catalogue and can also apply different pricing strategies. Less basic, but also a very valuable feature, chatbots are offered by 21% of solutions. Chatbots offer significant benefits to consumers as they improve the guided buying experience by searching (and comparing) goods and answering other questions. It should also be noted that if the chatbot is available, its functionalities are mostly simple as shown in Figure 13. Furthermore 35% of solutions are applying machine learning (ML) to identify comparable and complementary goods. A potential explanation for this gap could be (ML) to identify comparable and complementary goods. In fact, failing to do so may even compromise the envisioned savings from strategic initiatives. Because, where sourcing activities shape the circumstances for value realization, actual value is not delivered unless the contract is being used adequately and compliant during its term. This means minimizing the amount of procurement and business effort involved, disputes, and procedural inefficiencies, while maximizing the value of the agreed terms and payment. In essence, value realization should be achieved largely during the Procure-to-Pay process.

Catalogues

Catalogues ease the process of making a purchase. It is therefore not very surprising that the majority of solutions cover basic catalogue functionalities. Roughly 67% of solutions can connect to third party punch-out catalogues, offer a search option which is cross-catalogue, can include articles from different suppliers in a single catalogue and can also apply different pricing strategies. Less basic, but also a very valuable feature, chatbots are offered by 21% of solutions. Chatbots offer significant benefits to consumers as they improve the guided buying experience by searching (and comparing) goods and answering other questions. It should also be noted that if the chatbot is available, its functionalities are mostly simple as shown in Figure 13. Furthermore 35% of solutions are applying machine learning (ML) to identify comparable and complementary goods. A potential explanation for this gap could be (ML) to identify comparable and complementary goods. In fact, failing to do so may even compromise the envisioned savings from strategic initiatives. Because, where sourcing activities shape the circumstances for value realization, actual value is not delivered unless the contract is being used adequately and compliant during its term. This means minimizing the amount of procurement and business effort involved, disputes, and procedural inefficiencies, while maximizing the value of the agreed terms and payment. In essence, value realization should be achieved largely during the Procure-to-Pay process.

Catalogues

Catalogues ease the process of making a purchase. It is therefore not very surprising that the majority of solutions cover basic catalogue functionalities. Roughly 67% of solutions can connect to third party punch-out catalogues, offer a search option which is cross-catalogue, can include articles from different suppliers in a single catalogue and can also apply different pricing strategies. Less basic, but also a very valuable feature, chatbots are offered by 21% of solutions. Chatbots offer significant benefits to consumers as they improve the guided buying experience by searching (and comparing) goods and answering other questions. It should also be noted that if the chatbot is available, its functionalities are mostly simple as shown in Figure 13. Furthermore 35% of solutions are applying machine learning (ML) to identify comparable and complementary goods. A potential explanation for this gap could be (ML) to identify comparable and complementary goods. In fact, failing to do so may even compromise the envisioned savings from strategic initiatives. Because, where sourcing activities shape the circumstances for value realization, actual value is not delivered unless the contract is being used adequately and compliant during its term. This means minimizing the amount of procurement and business effort involved, disputes, and procedural inefficiencies, while maximizing the value of the agreed terms and payment. In essence, value realization should be achieved largely during the Procure-to-Pay process.

Catalogues

Catalogues ease the process of making a purchase. It is therefore not very surprising that the majority of solutions cover basic catalogue functionalities. Roughly 67% of solutions can connect to third party punch-out catalogues, offer a search option which is cross-catalogue, can include articles from different suppliers in a single catalogue and can also apply different pricing strategies. Less basic, but also a very valuable feature, chatbots are offered by 21% of solutions. Chatbots offer significant benefits to consumers as they improve the guided buying experience by searching (and comparing) goods and answering other questions. It should also be noted that if the chatbot is available, its functionalities are mostly simple as shown in Figure 13. Furthermore 35% of solutions are applying machine learning (ML) to identify comparable and complementary goods. A potential explanation for this gap could be (ML) to identify comparable and complementary goods. In fact, failing to do so may even compromise the envisioned savings from strategic initiatives. Because, where sourcing activities shape the circumstances for value realization, actual value is not delivered unless the contract is being used adequately and compliant during its term. This means minimizing the amount of procurement and business effort involved, disputes, and procedural inefficiencies, while maximizing the value of the agreed terms and payment. In essence, value realization should be achieved largely during the Procure-to-Pay process.
The classification in no-touch, low-touch and high-touch is related to the degree of manual effort during the process. A no-touch transaction is classified as a fully automated catalogue or marketplace order. This is the most preferred automation and guidance of the requisitioner (operational).

The visualized matrix in Figure 15 shows how each type of handling free text purchase requisitions and manually released purchase orders. The core of the buying channel logic answers to receive and process a demand? Therefore, every buying channel approach starts with a transactional analysis to point out the weak spots based on data and facts:

- Which channels can be classified in no-, low- and high-touch?
- What are the transactions behind no-, low- and high-touch?

The classification in no-touch, low-touch and high-touch is related to the degree of manual effort during the process. A no-touch transaction is classified as a fully automated transaction without procurement involvement as with a catalogue or marketplace order. This is the most preferred buying channel, because there is no buyer involvement needed. Requisitions are guided through a negotiated catalogue or marketplace where they can search and order a product themselves.

A low-touch transaction describes the usage of a pre-negotiated contracts, for example for consulting services. Buyer involvement is needed to some degree to make sure that the demand is specified in the right quality and the respective frame contract is chosen. As the frame contract is pre-negotiated, the supplier sourcing and contract do not have to be setup from scratch, which saves a significant amount of time. Another important aspect is that the bundling potential is increased by using these pre-negotiated contracts.

Finally, there is the high-touch transaction, which can consume a significant amount of time and effort, as there is no source or contract in place. For example, this can be a one-time demand like a very specific tax lawyer. A main level of the buying channel approach is the optimization of the ratio between no-touch, low-touch and high-touch transactions. The result of every buying channel optimization project should be a significant reduction of high-touch and increase of no-touch transactions.

Leveraging this logic results in three key benefits: It increases spend under sourcing coverage. It ensures usage and compliance of existing contracts and helps to increase operational efficiency by routing requests (preferably) via automated channels such as catalogues and e-forms. The requisitioner will have a superior, autonomous buying experience by following a clearly defined buying process, while receiving the necessary support from the procurement department when needed. To be able to reap these benefits, three key aspects should be considered before starting the buying channel optimization: Firstly, adequate procurement data quality (e.g. clean category-structure, spend data, reference to existing contracts) needs to be ensured to get a clear picture of the as-is situation and the respective touch levels. Secondly, top management involvement is important to motivate employees to cooperate throughout the project and to jointly identify the improvement potential per supplier. Thirdly, the scope (offers per client) should be clearly defined, e.g. applying the 80/20 principle: focus on the 20% of suppliers, that cause 80% of medium and high effort transactions.

**Conclusion**

Optimization of buying channels and the way they are managed is a critical theme for companies that want to get the most out of their procurement function. They ensure that value from strategic procurement activities is realized, while ensuring a comfortable process for business users and efficient use of procurement resources. In order to start optimization, clear support from the top management and accurate data are a prerequisite. Categories in delivering optimized buying channel structures, that distinguish low-, medium-, and high-touch routes to enable your procurement function to deliver on promises, be a solid business partner and spend its time on the issues that matter.

**Client success story**

The procurement function of a global leader within the oil and gas industry, with a total revenue of 6 billion Euros annually, approached Cargenmi to get support on their buying channel optimization journey. The client had two main goals: Firstly, to increase the automation rate – already being at 75% - within procurement and to re-distribute the procurement activities in a more efficient, head-count reducing way. By analyzing the client’s transactional procurement and finance data, conducting several focus interviews and workshops, multiple improvement measures were identified. Some examples for such improvement measures were the enhancement of current catalogues, the consolidation of spend with suppliers where catalogues already exist and the increase of certain approval thresholds. The identified measures were prioritized according their estimated effort and effect and a detailed implementation roadmap was developed. Through the implementation of all measures, the automation rate has been increased to 86%. In addition, the client’s procurement target operating model was designed, implementing a clear split between strategic and operational activities executed by a leaner procurement function.

**The Buyer Journey**

Greg Bateup

In his only novel – The Picture of Dorian Gray – Oscar Wilde wrote: “I do not want to be at the mercy of my emotions. I want to use them, to enjoy them, and to dominate them”. If only your employees had Dorian’s strength to conquer their emotions in sourcing their day-to-day needs. But what have emotions got to do with procurement? The answer is: everything!

Let us consider for a moment the journey of a buyer, whether this is a young lady who needs a new dress for a party she has been invited to, or a plant maintenance engineer who needs to repair manufacturing plant. In each case there are four key steps the buyer will go through. Before I go into the actual emotions, let us step through this journey.

**Awareness**

The first step of the journey is the point where you become aware you have a “need”. Often, this “need” results from a problem that needs a solution. For example, in the cases above, this would be a party where without the proper dress, or a halted production line.

Sometimes this need is very specific, such as a specification from a bill of materials for a production run. In other cases, it may be as general as need something comfortable to sit on to do my work. To add another dimension to this, some of these needs are predictable. Production demand is a clear example where I can predict based on a sales forecast but expected failure rates on parts or commercial real estate planning can also help with these predictions.

**Research**

The next step for any buyer is deciding how to fill their “need”. In the case of our dress above, this may involve a trip to the high street, or an on-line search. In the case of our faulty machinery, in a well-documented MRO environment, it should be “point, click and order”, but in many cases, it will involve an engineer speaking to suppliers to identify a suitable replacement part, including discussion on lead times and installation requirements.

In organizations where the purchasing processes are clearly defined, employees can waste significant amount of time and energy on this step (time you are paying their salary for), especially for indirect purchases where catalogues do not exist or are hard to find or navigate, or purchasing policies are not clear.

**Consider and buy**

Once the buyer has decided, he or she will then take the appropriate route to make the purchase. In the case of our party taker, it may be as simple as requesting a replacement valve on your gas pipeline than buying a new dress, the principle is the same – how do you make sure emotions are kept in check and it becomes a pleasurable experience?

As any marketing person will tell you, the customer journey above shows just how much of an emotional rollercoaster a buyer (your employee) needs to go on to satisfy his or her “need.” While the emotions are different for requesting a replacement valve on your gas pipeline than buying a new dress, the principle is the same – how do you make sure emotions are kept in check and it becomes a pleasurable experience?

Just as marketers use emotions to drive buying decisions, in the procurement industry, it is not about just emotions in a similar way. While a simple lack of frustration (good emotion) in the process will go a long way to ensure compliance with the process, using relevant (positive and negative) information to drive social acceptance on a buying decision can also help. Each of these opportunities can help your end users make the decision you want them to make (or even decide they don’t “need” anything).

**Emotions and demand management**

So, coming back to Dorian Grey and emotions - how does one help organizations deliver more value through the procurement function. As any marketing person will tell you, the customer journey above shows just how much of an emotional rollercoaster a buyer (your employee) needs to go on to satisfy his or her “need.” While the emotions are different for requesting a replacement valve on your gas pipeline than buying a new dress, the principle is the same – how do you make sure emotions are kept in check and it becomes a pleasurable experience?

**Predicting Demand**

So far we have got ahead of these emotional decisions - what are the key demand drivers that can be considered? In many cases, it is difficult to predict a specific need for a specific time. Simple steps like tying in with organizational systems, such as capex
Some forward visibility will provide some reduction in cost and complexity, however, there are more and more options available.

Using weather forecasting, for example, to predict when the air-conditioning or heating in your offices, or specific components in a power distribution network, may fail so you can plan to have the correct parts on contract, ordered or on hand as you require them or using break-fix records within your network infrastructure. It will never be perfect, but the more you can plan your demand, the more power you will have to negotiate reduced spend and optimize your inventory, and the less your customer journey is governed by emotion.

Once you have a view on potential demand, the research step can be a key giveaway to understand where specifically your next request may come from, but one that many organizations have limited visibility on. One opportunity may be your help desks (technical or functional). Questions from users such as asking about the life of assets such as laptops, or even searching the procurement catalogues may provide some insight of an impending request.

**Guiding Emotions**

Providing additional resources such as knowledge bases for key assets (e.g. Marketing, MRO, IT or Office Equipment) may be another way of guiding users to a specific choice. This may be an internal product review site, online technical portal for technical parts, research material (of course carefully curated), an online chat service, or even simply improving your internal communication (newsletters). A feature article with solid reviews on the choice of corporate laptop, or ergonomic information on my office chair can help a buyer in his or her research and guide them towards a specific choice.

Obviously, there needs to be the requisite change management to ensure users are aware of these resources, and they need to be maintained and easily linked to the procurement process.

**Making it Easy**

For easy adoption, purchasing needs to be easy to navigate and use. Too many or too few items in a catalogue, unnecessary and complicated approvals and poor user interface will all lead to poor user adoption and compliance, and result in increased maverick buying. The way of buying also needs to be aligned to each user group’s specific circumstances. A field engineer may require additional support and may not have access to the internet to request what they need in an emergency, whereas an office worker can use a catalogue on a PC.

**The Last Mile**

Receiving is critical to closure of the payment process, but not usually a priority for the end user once they have what they want. Control versus convenience needs to be addressed at this point – for example, can I assume something has been received? Also, what support can I provide for users when things go wrong, and what is the supplier performance management process for my tail suppliers to ensure happy buyers?

COVID-19 also presents both an opportunity to re-look at the post receipt processes, with more people expected to work remotely and not able to get to the office for support.

**Conclusion**

For most organizations, customer satisfaction (and managing emotions) is not the main objective of procurement – keeping costs in check is! But, as you better understand the buyers’ journey, you’ll find opportunities to help drive compliance with the process, as well as guiding your employees’ buying decisions to better align with your organization’s strategy.
After purchasing, the procure-to-pay cycle is completed by accounts payable (AP), which can be considered the process of making the purchase. For instance, when using the correct buying channel so that the PO is created and can be matched with the invoice. As such, the efficiency of the AP process depends on processes that are performed in other procurement functions. If company policies require a three-way match, a link is required with the purchase for PO and good/service receipt. If company policies require a four-way match also a link with the contracting module is needed for AP. Therefore, a good AP organization must anticipate on errors in any of these sub processes outside of its own function by having the right processes in place for error handling.

### Key trends in accounts payable

In designing processes to anticipate on errors which go beyond AP, companies can differentiate in the type of process they design: avoid, mitigate or transfer. The trends identified correspond to these three design choices.

#### Change in governance of AP function

In most cases, the AP function is part of the finance department of a company. However, this currently changes as the AP-related activities are increasingly performed by the procurement organization. This change in governance is also understandable, since in case of any errors in invoice processing, it often happens that the AP organization reaches out to the buyer and asks him to get in touch with the supplier to solve the issue. By involving procurement in AP processes the speed of error handling is increased. This of course does not mean that AP should be fully governed by procurement since approving invoices has implications on budgets, which are managed by finance.

Moreover, there is also a risk of non-compliant purchasing behavior going unnoticed. For instance, when a buyer orders goods at a supplier without PO and then approves the incoming invoice himself. This would impact PO compliance significantly cost reduction in AP with suppliers. Therefore, the increasing presence of procurement in AP should be carefully monitored by finance. Processes should also be put in place to safeguard integrity of AP reporting.

#### Dealing with high volumes of invoices with errors

Next to a change in governance of the AP organization, changes in activities within the AP-organization can also be observed. Namely, how organizations deal with the high volumes of invoices that contain errors. These invoices either do not meet invoice submission requirements (e.g. different formats or invoice or missing information) or cannot be matched with a PO. As such, companies are focusing on automation of the AP function and invoice flipping. Especially the latter is still niche but has high potential – the idea behind it, is that as the supplier delivers the goods, they also revert the PO and submit it as an invoice. By doing so, matching the invoice with the corresponding PO is eased as they are identical. These solutions complement each other as companies benefit from less errors (invoice flipping) and a higher speed at which errors are resolved (automation).

#### Supply chain financing in AP

A notable key trend also concerns the increasing investment of companies to incorporate early payment rates and supply chain financing. These functionalities offer the benefit of having more control over the company’s cash management and potentially reducing costs with early payment rates. Moreover, the relationship with the supplier is improved as they are given more flexibility in receiving payment, thereby also improving the supplier’s cash management.

### Research findings accounts payable

Out of 33 solution providers, there are 24 that offer functionalities in AP. From these 24, there is 67% that offer all elements in AP. Figure 16 shows an overview of the functionalities offered by solution providers.

#### Invoice receipt

For invoice receipt, more than 79% of solutions cover basic invoice receipt functionalities. This includes checking the invoice for correctness and compliance, identifying duplicate invoices and receiving invoice data from ERP or third-party systems. Next to this, 71% of solutions make it possible to invoice directly against contracts instead of POs. For some spend categories such as consulting or rentals, invoicing against a contract make more sense since the PO would be of the same value as the contract. Removing the PO from this process would make the P2P flow less document heavy.

Another interesting feature is self-billing, offered by 58% of solutions. When sending out the PO to the supplier, someone from the purchasing company also immediately formulates the invoice. By doing so, there is a high certainty that the invoice will be matched with the PO. The supplier does benefit from not having to formulate the invoice anymore but is required to trust the buyer formulating the invoice which fits the PO. A potential downside is that arranging payment on an overbooked PO will become difficult: the PO and invoice are in sync, but not the good receipt. Finally, 67% of solutions leverage intelligent character recognition technologies (OCR) for deriving information from different invoice formats.

#### Invoice processing

An interesting finding in invoice processing is the high level of automation, which corresponds well with the second key trend described earlier. More than 90% of solutions provide workflows for non-PO invoices, even when the invoice is not matched. When this is the case, 71% of solutions can automatically determine the root cause and communicate this back to the supplier. In doing so, 29% of solutions leverage AI in this process, whereas 21% of solutions have this on their roadmap additionally. When the invoice is fully compliant, 79% of solutions can attach the invoice to the PO in the ERP. The high level of automation is understandable, as performing these activities manually is very time consuming and error prone due to its repetitiveness. A feature where a lower level of coverage can be observed concerns the assignment of priority to invoices, offered by 63% of solutions. This is a feature which helps the AP organization in dealing with urgent matters, but also ensures that invoices are paid on time. When looking at the different ways in which priority can be assigned, simple features are mostly offered such as invoice amount and due date, while more sophisticated features are lacking behind as shown in Figure 17.

#### Payment

In the final AP process, we see that 67% of solutions offer functionalities in payment. The payment process within AP represents the transaction from buyer to supplier for the delivered service or good. In executing payments, cost savings can be achieved by early payment discounts. Most solution providers do not yet offer all functionalities to achieve these cost savings. Only 41% of solutions offer the functionality of dynamic discounting and early payment discount, as shown in Figure 18. This functionality is leveraged by 41% of solutions to also identify cost saving opportunities. Payment terms can also exceed, in which case there are late payment fines. There is 63% of solutions can record the number late payments. This could serve well as KPI for AP and further stress the relevance of PO compliance. Interestingly, the fines related to these late payments cannot be captured by most solutions (33%). This could be explained as late payment fines are often excluded from the contract between supplier and buyer. This reduces the business need to have such functionalities in their tool. A surprising finding is that only 5% can record and forecast available working capital. This could be explained by the fact that obtaining (real time) insights into working capital is often complex in large companies. However, when achieved it would be possible to make more accurate decisions in opting for early payments while maintaining a healthy cash flow.

While the number of solutions that cover automation functionalities in invoice processing is quite high, it is significantly lower in payment processes. There is 67% of solutions that can send an ‘ok-to-pay’ message to the ERP with details to proceed with payment. As a matter of fact, payment of invoices can be fully automated by 50% of solutions. The same number of solutions is also able to scan for duplicate payments. Especially in large complex organizations or M&A contexts where an overview of invoices can be lost easily, this is a very useful feature. Finally, 38% of solutions offer functionalities within Supply Chain Financing (SCF). The functionalities often comprise a full SCF module, covered by the solution itself or provided by the solution via a partnered third party.

---

**Research results of accounts payable**

29% Automation of paying invoices

66% Identification of cost savings via early payment discounts

50% Artificial intelligence to determine root cause of non-compliant invoices

41% Intelligent character recognition (OCR) in scanning invoices

38% Functionalities in supply chain financing (SCF)

---

**Solutions that offer...**

- Functions that do not offer the functionality
- Functions that do offer the functionality

---

**Figure 16: Width of accounts payable functionalities**

**Figure 17: Different ways of assigning priority to invoice**

**Figure 18: Solutions that support dynamic discounting**
Late or misplaced deliveries, lost invoices, suppliers threatening to stop supply, accruals made on gut feel basis ... sounds familiar? You are not alone. The good news is that it can be done better and there are best practices to learn from.

What is the Procure-to-Pay process - What does "good" look like in P2P

The commonly accepted definition for Procure-to-Pay (P2P) is that it is an end-to-end process that begins with identification of the need to purchase goods and/or services, through requisitioning and order creation, up to the payment to the supplier.

The Procure-to-Pay process could be complex and often create frustration amongst company's large employee population as well as the unnecessary friction between some departments, like Procurement and Accounts Payable. On top of this, mixed formats, poor compliance and adoption have been barriers to efficient capture, processing and analytics of the P2P data, to turn them into useful information and insights.

However, a well-designed P2P process should resolve above issues, it can do so by positive user experience, providing high-level compliance, enabling reliable data analysis and production of insights. And eventually becoming a source of cost savings.

User experience
The end user can easily define and select the right product, material or services from the right supplier for the best overall value with delivery to the right place at the right time. The requests can be done anytime on any device and the experience should be like the use of the B2C platforms.

There are means for effective and efficient collaboration between the requester, the buyer, and the suppliers for the goods and services purchased.

Risk and compliance
The expenses are properly authorized prior to making a commitment towards the supplier. The process balances risk vs. efficiency, so the low-value and low-risk items are automated, whilst the high-value and high-risk items follow rigorous review and approval process.

The solution provides a high-level of data integrity to be able to track the effectiveness of the process. It ensures that invoices are accurate and approved prior to being released for payment. There is an effective process to make sure to take advantage of any discounts and quick payment options that are offered.

Data and insights
The solution provides buyers with the information they need to effectively create or refine category strategies and run sourcing projects to negotiate improved terms & conditions for the company.

Value
Acknowledging all the above, the optimal P2P process may become a source of value for its participating stakeholders. For the company, through becoming a key contributor to its financial success. For P2P employees, by making their jobs less clerical, more interesting and meaningful. And for suppliers, by higher integration into client's operations, more reliable payments and better visibility into transaction, information and financial flows.

What's the 'recipe' for successful deployment of the best-in-class P2P solution

The answer has several facets. First, it's difficult to imagine nowadays running a best-in-class process without an appropriate supporting technology. Yet, it's not always given that technology is built the way that makes life easier or, that it perfectly matches your company business needs. A lot depends on how you configure and deploy it, not forgetting about proper organizational change management and supplier onboarding programs.

So, which way to go? Align process to technology? Or the other way around, tailor the technology to the process? The answer is neither of the above. In our experience only a holistic approach will deliver expected outcomes. While the individual approaches will vary, you need to consider several factors, including:

• The business sector you are in.
• The type of purchasing needs will vary, depending on your business, so the processes and tools should reflect that. For example, if your company falls into manufacturing sector, you will likely purchase more materials, whereas companies in the banking industry, will be much more focused on services. Your system selection should address these various needs.
• What type of organization you are in. Are you looking for a 'turn-key' solution, or (for whatever reason) you believe in heavy customization of the solution? Platforms will differ in the degree you can "play" with the design and configuration.
• Understanding the technology market and particular tools' strengths and weaknesses.
• If you have the internal know-how and resources to deploy and run the solution on your own, or you need to hire external experts to support you?

Knowing the answers to the above, you can move to the execution phase of a process improvement program. In execution, there are five principles to consider:

• Don't be too quick to automate or robotize processes. Instead, start with asking yourself what non-value-adding activities can be eliminated, standardized or optimized. Capgemini's ESCAR (Eliminate, Standardize, Optimize, Automate, Robotize) methodology can be a great reference in doing so, for example making sure you don't robotize the processes that you don't even have to perform.
• While selecting the technology that fits your business, think about the aligned process design that will run smoothly with this technology. If you follow the agile methodology, you'd expect to see such alignment already during the first sprint sessions.
• If not done by your implementation partner before, invest enough time into system configuration to follow your best-in-class process, but make process alterations where system can't be customized. It should be an iterative process to find the optimum balance between the two, to ensure the best outcomes.
• Test the solution properly before launching – otherwise the initial hick-ups will create perception for a long time and will impact negatively your change management efforts.
• Communicate, communicate, communicate - the organizational change management program is often underestimated a key success factor in a P2P transformation program. As it impacts such a vast population of the company workforce, it can derail even well-designed processes, if not done effectively. The importance of change management is further outlined in the article about Change Management.

Successful launch of the solution is definitely the beginning of the journey. To deliver on the expectations, the company needs to assure proper maintenance and development of it, including the content (e.g. catalogues, contracts, users, suppliers), training of newcomers, analytics and continuous improvement.

It all takes time and effort, but the reward at stake is significant, if enough attention is being paid to it. Given that a big share of the company expenses goes through this process and it can be either the source of the competitive advantage (if managed well) or the opposite.

Conclusion
Whereas there are many factors to consider and it takes an effort when transforming the P2P process, the good news is that it can be done and the result being that quite a few companies have succeeded in this field. There are tools and providers on the market which possess required capabilities to guide their clients through this journey and deploy it successfully.

Once the P2P program has been properly launched, it will benefit your company in many ways, such as increased savings delivery, better compliance to negotiated contracts or buying channels, as well as simplified processes that drive the end-user satisfaction.
From its basis, organizations mostly look at analytics in procurement from a cost savings perspective, focusing solely on spend analysis. During recent years, data has become increasingly important across the entire Source-to-Pay scope. Data analytics includes the process of collecting, preparing and structuring data to support decision making across the procurement department. This ranges from simple excel-based spend analyses to enhanced analytics based on both internal- and external data. Procurement solution providers support decisions based on data by offering functionalities for reporting & analytics, including KPIs and dashboards.

Key trends in reporting and analytics

Depending on the business type, internal company data is stored across multiple tools and software. Integrating the data provides insights such as stock levels and ordering information. With new technologies, data collection from across the supply chain provides a better insight into a company’s performance. As external factors have impact on the performance, for example supply disruption due to a pandemic such as COVID-19, data should be shared across the supply chain to get more accurate supply information. Not within the supply chain, but data coming from external sources, such as news articles, can be used for predictions in a dynamic competitive environment.

Technology

Analysing large data sets is a complex, time-consuming and an error prone task. Procurement solutions can support in solving complex problems, such as Machine Learning (ML) (being an application of Artificial Intelligence (AI)) to support in speeding up the data cleansing and analysis process more accurately. For example, spend data analysis might have been performed manually at first. Since there are higher quantities of data available, technology-based solutions can run the analysis in a quicker way. Machines can learn based on previous records within a specific spend category to continuously improve procurement processes. Machine Learning can also be used for price development. In order to accurately predict prices of components in an early stage, ML uses data from previous years in a certain time period to combine this with other semi-structured data to provide accurate insight in a component’s price level that increases or decreases. It can thereby have a direct impact on the product margin. Furthermore, technologies such as process mining providers in analysing whether procurement processes are performing well, or which part of the PSP process shows bottlenecks. When it comes to contract management, metadata can play a valuable role. Metadata is automatically structured data about contracts. It makes a large contract database searchable by coding (paper) contracts and it provides real time dashboards on multiple metadata types.

Data analysis

With an overload of procurement data, it gets harder for data analysts to process the right data, which could lead to a reduction of decision quality. Therefore, procurement solutions often provide standard dashboards to process and visualise the bulk of data. However, companies need insights specifically for their industry, their company and their procurement strategy (often different per category). Whereas one strategy may be to minimize the supplier base in order to get scale advantage, another strategy looks for setting up multi-sourcing. Each strategy needs its own data analysis. Also, people within the organization need to have the right skills to interpret the data correctly, as in the end actions need to be taken upon analysis outcomes that impact the business.
All 33 solution providers offer the functionality reporting and analytics. Although some solution providers offer more advanced functionalities (39% indicate they can perform process mining analysis based on workflows), all the solution providers indicate they cover reporting and dashboard functionality to some extent. As shown in Figure 19, 91% of the providers offer spend analysis functionality and 53% have benchmarking functionality in place. The paragraphs below further elaborate on these functionalities.

**Reporting and dashboards**

In the Digital Procurement Research of 2018, 89% of the participating solution providers had the reporting- and 86% had the dashboard functionality in place. In 2020 - 2021, all solution providers offer these functionalities. Solution providers have made improvements in the functionality. Almost all solutions can create graphical dashboards using real-time data (97%). Also, as many companies have KPIs in place to measure performance and support decision making, 85% of the solutions can provide dashboards based on these KPIs.

The standard types of dashboards that solutions have in place are easy to use and give, in general, good insight in performance of standard KPI's. However, more valuable to a company is information relevant to the company strategy. Solution providers become aware of the value of customization since 82% can configure users’ dashboards in the solution and 9% have it on the roadmap. However, providing custom dashboards visible in the app is a newer feature, since only 46% cover this feature and 21% have it on the roadmap. Also, not many solution providers (58%) currently provide the ability to suggest KPI thresholds based on internal information, 15% have it on their roadmap.

**Spend analysis**

From the 33 solution providers that offer reporting and analytics to some extent, 91% cover the spend analysis functionality. Most solutions can consolidate spend data from multiple sources (82%), can show spend data on different levels (88%) and are able to classify spend analysis reports (76%). However, machine learning to automatically categorize spend data into the right categories is less often covered by solutions (42%). Also, automatic savings tracking based on previous contracts (same commodity) is less often provided (46%), as shown in Figure 20.

**Benchmarking**

Internal benchmarking compares the performance of different categories or business units within the organization. It is common to perform a fit gap analysis to get insight into the specific points of improvement, to develop a plan and take action to close the gap. Most of the procurement solutions offer benchmarking on simple procurement figures, such as the average payment terms, number of active suppliers, percentage spend managed by procurement and purchasing process/ cycle times, this is shown in Figure 21.

The availability of external benchmarking creates the opportunity to improve performance insights based on comparisons with best practises in the market. 39% of the solutions offer benchmarking against industry and/or market averages and 9% has it on the. To make more in-depth comparisons, only 24% of the solutions offer benchmarking against other clients of the solution across industries. As 15% has the functionality on the roadmap, there is a chance this to be covered more often in the future by other solutions.

**Sustainability**

There is also a chance to have more sustainability related features covered by solutions in the future. 79% of the solutions can maintain and display sustainability data, such as supplier’s level of environmental, social and economic compliance. 36% offers out of the box links to databases recording sustainability ratings of suppliers, and 24% have it on their roadmap.

---

**Figure 19: Functionalities offered in Reporting & Analytics**

- Benchmarking
- Dashboard
- Reporting
- Spend analysis

**Figure 20: Automatic savings tracking based on previous contracts (same commodity)**

- Yes
- No
- On Roadmap

**Figure 21: Internal benchmarking supported by Procurement solutions**

- Average payment terms
- Average time per PO
- Cash to cash
- Number of active...
- Sourcing events per FTE
- % spend management
- Purchasing cycle times

---

Digital Procurement Research 2020-2021
The implementation of a solution comprehends design, configuration, testing and roll-out. Every organization has different processes and requirements. A customized approach is always necessary. Agile, characterized by its iterative approach, has found its way in procurement IT and is nowadays a popular method to develop a solution towards specific business needs.

To accelerate upon the implementation process, 58% of providers offer default templates for specific markets and industries (Figure 22). These templates offer a starting point but often need to be configured to the specific needs of an organization. Depending on the requirements configuration can become more technically complex than initially planned.

Companies invest a lot of time and money in implementing new tools and solutions. However, maximizing the advantage without a proper change management will degrade the benefits available from these investments. While change management during the implementation of new technology is essential, the infrastructure to continually enforce the changes in people’s approach is even more important.

There is no doubt that a strong change management program should be a fundamental part of a technology change program. These programs, focused on breaking old habits and establishing new for more effective operations with new technologies and processes, certainly help realise the initial benefits on any project.

But how do you ensure that once the program teams have finished that the changes you made continue to be enforced. Organizations change with new team members, mergers and acquisitions, varying business conditions. And the roles of the people within the organization change – at one point an employee might use procurement often, but with a promotion or role change, it may be rarely. These are not considerations of the upfront change management program but must be addressed to ensure the value of the digital platforms are being realised.

To take as an example, a software implementation for a financial services organization. After a careful evaluation, it was clear that the software in case had the features required to deliver value, but while the change management effort dealt with the initial onboarding, it didn’t address the ongoing user change requirements. As a result, there was still a significant part of work being performed manually, resulting in additional effort and increased cycle time.

As part of the service delivered for our client, we were supporting users with issues encountered when using the platform. It was recognised early that if we did not work together with the solution implementation, the support requirements would continue to remain high, and we would find it difficult to drive compliance and ultimately value from the implementation, thus impacting the client business case.

We worked closely with the implementation team to develop processes and a support function that performed three functions:

- Provided support for end users to use the newly implemented software platform
- Drove compliance by pushing back on non-catalogue requests that are available in a catalogue
- Identified training needs for users and notified the training team within the client.

This approach helped to enhance Purchase Order compliance to over 90%. Requestors are more familiar with the process, more aware of both their responsibilities and system’s capabilities. Thanks to higher awareness and close cooperation between our delivery team and the client stakeholders, the whole process encounters less friction. In addition, there is more transparency in the process. Before the implementation of the new software, there were many ambiguities in systems. It was very difficult to track a Purchase Requisition or Purchase Order. The software in case enables higher visibility and easier data retrieval. Reporting is also much easier.

So, what are the key factors for successful change management? First, the process needs to be well designed. We need to carefully plan the implementation to meet the objectives of the program. This needs to consider not only the system implementation but the end user adoption of these processes. Processes that are poorly designed or do not meet the end user requirements will make it difficult to gain adoption.

Secondly, it is necessary to decide on suitable communication channels. Ongoing collaboration with communication teams will help to find the best ways of reaching the target group. Interactive content like videos or newsletters are common and important in keeping users focused on these issues. At the same time, there are no rules for this – much depends on a team, and there is huge responsibility on managers and communication teams to find the most effective channels.

Standardization of processes is also an important factor. In helping to drive adoption, it is necessary to adopt the existing rules to a new technology or provide new procedures, suitable for the introduced tool. Otherwise, old habits will be transferred to the new tool and preclude deriving maximum profit from the innovation. Lastly, and most importantly, the change management process should not stop at the end of the project. It needs to be continually reinforced by the end user support functions, providing proper training and reinforcement, as well as driving process compliance.

Change is a long-term process – an evolution rather than a revolution. Digitalization offers lots of opportunities. Nevertheless, it is worth remembering that progress itself is not only about investing in the latest technological solutions, but also in people who use them. Well-planned and properly conducted tool implementation is the only start to get the maximum value from digital transformation. A robust support function and compliance management is equally as important. Employees must be well-trained and aware of the benefits to them of new technology. Project teams should not underestimate the value of the extension of change management beyond the initial implementation.
The technical aspects of a procurement solution can make or break the perceived user friendliness and therefore the adoption by the business. Although many organizations are aware of the importance of the technical set-up and architecture of a procurement solution, this part tends to be neglected in the selection process.

Integration
A modern business user does not accept to repeat work in multiple systems to provide the required data. A clear trend has emerged to downscale the number of systems in organizations, whereby only a few systems accommodate for the business needs. If this is not possible, for example in a scattered IT landscape, organizations integrate the systems to facilitate a seamless flow for the end-user. The integration aspect of a solution implementation must not be underestimated. Integrations tend to add complexity to a project and, if not managed properly, can lead to exceeding the project timeline. In the selection phase of a new procurement solution, it is therefore wise to assess if the provider and implementation resources have experience with building the specific integrations to the same systems of your organization at other clients. Integrations are not necessary for a procurement solution: 97% of the solutions can function stand-alone without an integration to a back-end system.

Master data management
With every new functionality implemented, new data points emerge. Before, during and after implementation it is of high importance to define and maintain a strategy for Master Data Management (MDM). Often and traditionally, procurement solution users are faced with the need to aggregate and consolidate information of multiple (ERP and sourcing) systems to form a 360 overview of a supplier. The right procurement solution set-up combined with the right master data governance leads to automated insights per supplier, including overviews of overall spend, placed orders, price developments, KPIs and performance. This single source of supplier truth can be achieved by having dedicated policies in place to maintain the master data in the architectural domain of the procurement solution. 64% of the solutions can be used as the primary source for material or service master data.

User experience
The user friendliness of the tool has a direct influence on the adoption rate, since users are far more likely to use a tool that has a fast response, clean interface and logical flow. Modern solutions are tailored to the end-end-user, with the help of customized notification messages and personal dashboards. A feature that is on the roadmap of 30% of the solutions is active personal guidance via intuitive questioning that leads users through workflow steps, depending on answers provided. All solutions can be accessed by a mobile web browser and 55% offer a dedicated Android and/or iOS app (Figure 23). Single sign-on is nowadays no longer a nice to have feature but a pre-requisite; 100% of the solution are supporting this functionality.

Digital procurement has come a long way, and in general, organizations now recognize the benefits of robust procurement platforms and are willing to embrace them. The implementation of new procurement processes along with Software-as-a-Solution (SaaS) based technology platforms requires well-through approaches. It takes a lot of coordination and effort from people, both internal and external (e.g. suppliers) from the organization and demands for a substantial change in existing practices. Whether an organization is making incremental improvements in existing landscapes or implementing a brand-new procurement platform, several areas consistently derail technology led transformations.

Here are six critical factors that ensure successful digital procurement tool implementation:

Stakeholder identification and key project sponsorship
While most Procurement projects start with a client business case that centers around cost savings for the company, as well as process improvements, it is paramount to get the right stakeholder team aligned to the objective. Champions to the project enhance the message of importance and overall company-wide objectives. It is important to have strong stakeholders at the leadership level to drive the project objectives and mission to completion, not only with the implementation team, but with the overall organization. Key stakeholders are essential to the change management team being successful, with key messaging and communications to the wider audience affected. They garner stability to the resources whose job responsibilities are evolving and give direction to the wider company resources on what is changing in the enterprise roadmap. Stakeholders in CSuite, Procurement and Finance are critical as core processes are touched in these areas and are the baseline for recommended stakeholders on the project. Other groups with interest could include warehouse for receiving and/or plant maintenance if MRO materials are in scope.

Data quality and master data management
Organizations can make sure the depth of data management needed for a digital procurement transformation. Master Data Management (MDM) can have project wide impacts which range from standard integrations to complex customization considerations. Not understanding the data implications of key design decisions and requirements may lead to going over budget, overtime, or scope reduction in MDM i.e., commodity alignment, contract hierarchy, supplier normalization. Underestimating the importance of master data can also cause the inability to reach goals for Supplier Enablement and PO automation due to capacity and scope. For a successful procurement transformation there needs to be a focus on master data, the earlier in the project timeline the better. While all data elements are important, we tend to focus on two major categories based on their impact to the overall project: Vendor master and material master.

Vendors master identification and harmonization is critical to project success. A digital procurement system will require a clean vendor master for implementation as it impacts ease of use for an end user choosing a supplier, preferred supplier lists, catalogue maintenance, contract maintenance, and supplier ease of use and integration among other factors. Understanding your critical vendors, typically identified as most spend or most PO’s generated, allows you to have a centered focus on which suppliers are critical for the implementation. Identifying duplicate vendors, reasoning and processing for vendors, and creation and deletion are other elements that impact the digital procurement project and should be addressed in the vendor master stream.

Material master harmonization starts with identifying categories bought through the digital procurement tool. We also promote asking key questions about the material purchasing process: Is the requisition generated in the source ERP system or in the new tool? Are there special restrictions or settings on what materials need to be available for purchase via a catalogue or item master number noted on the catalogue? Are there any special intricacies with the material on how it is bought and/or received and/or invoiced? Understanding the answers and requirements around these critical questions helps a client understand what next steps need to be taken for implementation. For instance, where the material master will be used in the digital procurement tool, understanding how the materials are classified (i.e., if a material is created based on different attributes like color or size), and how best to match those material creation requirements to the end users’ ability to search and buy the item in the tool are key aspects for material data management.

Supplier enablement
Understanding lessons learned and implementation experience throughout project delivery in the digital procurement tool space. It is more apparent that Supplier Enablement is a critical stream for any successful digital procurement transformation. Supplier enablement typically deals with identifying which vendors are critical, how they will interact with your system, communicating with the suppliers, and partnering with the master data team to make sure you have a supplier contact and existing record for key...
suppliers to start the enablement process. Contacting the suppliers, confirming how they will transact – over a platform, through email, in an integrated fashion like cXML or eXtensible Markup Language, manual through paper – if they have catalogue abilities and how that catalogue will be implemented on the procurement platform, are critical aspects of supplier enablement.

A successful supplier enablement strategy usually encompasses a wave roadmap, with the go live date coinciding with the implementation go live of the procurement tool. Typically, suppliers are broken out into highest spend and/or PO count and can range in number of suppliers per wave, but typically are broken out to 500 suppliers. Contacting the supplier, working with them on an integration strategy, and ensuring your requirements to do business takes effort and manpower. A properly resourced team is critical for the success of Supplier enablement.

Supplier enablement has a direct impact on user adoption and user experience. The stream addresses if the user has their suppliers, they purchase from on day one, the tool release, if a catalogue is maintained (for a streamlined purchase process while adhering to policy or contract pricing), how quickly the end user can receive their product and how that user is communicated to on the product's status (i.e., ASN or Order confirmation).

Best practices driven process transformation
It is important when undertaking a digital procurement transformation that an emphasis is put on transforming current business processes to fit best practices. If a system is not currently in place, a client's current business practice may not be ideal for future state. Therefore, best practices help you understand where to get the most efficiency with resources, can enable a touchless process for PO processing to pay, and essentially set guidelines for the system implementation to use out of the box configurations, avoiding costly customizations that provide no real value to the organization. As a transformation embark, it is important to encourage the mission of transformation by reminding the implementation team to avoid lift and shift, or thoughts of "we've always done it this way." Providing the team with a plan to stay focused on transformation and to build the right system will allow an environment of transformation to best practice for realizing the total value of the digital procurement project.

Procurement policy
Digital transformation projects have key foundational pillars that drive success of the overall project, one being procurement policy. A clear, specific policy is paramount to success of the transformation of any organization. It brings about rules and guidelines for end users and business units to follow. Policy allows the organization to set forth ways to save costs through contract purchasing compliance, approval and spend limits to assist with separation of duties, and supplier policy for pay to ensure user adoption and a seamless process for procurement. The policy also brings about awareness to users on who to reach out to for assistance, creating a streamlined process for the procurement team to assist their business partners while understanding key gap areas to improve process and communication. It is always recommended that a procurement policy is reviewed or created to align with the new digital transformation project and has the key elements of how to buy what and where to buy it, when there is an exception process and what steps to follow, how to garner appropriate approvals, how to support the suppliers in sending goods and receiving payment, and where to gain assistance for business scenarios that may not be covered in the general procedures. It is critical that the procurement policy is released in correlation with the transformation project so that the rules and guidelines set forth in the document allow for the transformation to take place among the organization.

Communication
Organizations that are successful with their digital procurement transformation have a well-focused program for communication. Key groups are identified for who the most effective person or group is to send communication. Which groups or areas are targeted for communication, and how the communication differs between these groups. To achieve a successful communication culture of the organization is also considered for timing and frequency. Too little or too much can have negative affect for the overall project. The effectiveness of the communication is also key – understanding which groups need to know about which aspects of the project that are important to them. Overall, good communication helps the project team stay on track and focused, the affected business resources feel a sense of stability and awareness for the changes coming, and the organization is informed on important initiatives and changes that affect the company. When communicating effectively to all these groups, your transformation is into a new business model, and overall transformation is more streamlined and met with less fear and challenge as the organization knows what to expect, when and why. Focus on using effective communication and methods to garner the best contract pricing based on a company's spend. When a system is hard to use or not clear and concise to guide the end user to the right product and supplier, this is where cost savings are lost, and risk for low user adoption is high. Therefore, importance should be placed on the users' experience, not only the tool, but with the business processes and the policy to purchase effectively in the organization.

Conclusion
There are several other factors that also have an impact on success of a procurement technology implementation including having a business case with clearly defined metrics, selecting the right tool based on requirements, setting up basic time and deployment strategy (phased approach vs big bang). The factors highlighted in this article are the ones which are often overlooked for various reasons, by paying close attention to these and correctly applying them during the program, achieving success is more certain than an elusive aspiration.

At the start of a digital procurement transformation the cost models are often perceived as unpredictable. Providers calculate their prices in different ways and are at first sight not easy to compare. Many characteristics could affect the price of a solution such as scope, project timeline, required resources, number of users, number of integrations, and more. Figure 24 highlights some common elements affecting the price of a solution. And, although solution providers often have a list of characteristics on which they base the price, the negotiation process generally has significant impact on the landed cost.

Since the price can change based on many different factors, the recommendation of Capgemini is to always start with a thorough business case stating the benefits and costs per scenario. This business case must be supported by a clear implementation timeline, specifying the required time, resources and the defined deliverables. It is important to get a grip on costs already in the sourcing phase of a new solution. The more time invested in the set-up phase of the project, the easier it will get to maintain the control of cost in the implementation phase.

The most common used licensing models for procurement solutions are pay-per-use and module based. Pay-per-use models are defined by how much the procurement system is used, measured in for example the number of contracts, users, invoices or sourcing rounds. This licensing model is offered by 68% of the providers and is attractive when there is a predictable usage of the platform. The module-based pricing model is based on the functionalities that have been purchased and on the module used. 91% of the providers can offer a module-based pricing model. What pricing model is used often depends on the functionalities that the solution offer. Most commonly, a Source-to-Pay solution is module based and a Purchase-to-Pay system is based on pay-per-use.

Another aspect to consider is the cost of implementation. 58% of the providers charge additional cost for basic implementation support in their pricing models. Often, basic technical support is included, but integrations, advanced configuration, business process transformation and change management come with additional cost. If organizations do not have the required resources and skillsets in-house, it is possible to work with an implementation partner. Capgemini is one of several implementation partners that guides a wide portfolio of procurement solution implementations across all industries and can therefore offer the right support to manage scope, timeline and costs.

### Research results of solution pricing

#### Figure 24 Most common elements affecting the price of a solution

<table>
<thead>
<tr>
<th>Implemented modules</th>
<th>Number of users/types of users</th>
<th>Number of licenses</th>
<th>Number of interfaces</th>
<th>Spent through the system</th>
<th>Number of purchase orders</th>
<th>Use of interfaces</th>
<th>Number of contracts</th>
<th>Number of punch-out catalogs</th>
<th>Number of sourcing/bidding catalogs</th>
<th>Number of e-signatures</th>
<th>Number of advanced shipping notifications</th>
<th>Number of receipts</th>
<th>Number of service entry sheets</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>10%</td>
<td>15%</td>
<td>20%</td>
<td>25%</td>
<td>30%</td>
<td>35%</td>
<td>40%</td>
<td>45%</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
</tr>
<tr>
<td>10%</td>
<td>20%</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td>100%</td>
<td>110%</td>
<td>120%</td>
<td>130%</td>
<td>140%</td>
<td>150%</td>
</tr>
<tr>
<td>15%</td>
<td>30%</td>
<td>45%</td>
<td>60%</td>
<td>75%</td>
<td>90%</td>
<td>105%</td>
<td>120%</td>
<td>135%</td>
<td>150%</td>
<td>165%</td>
<td>180%</td>
<td>200%</td>
<td>220%</td>
<td>240%</td>
</tr>
<tr>
<td>20%</td>
<td>40%</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
<td>120%</td>
<td>140%</td>
<td>160%</td>
<td>180%</td>
<td>200%</td>
<td>220%</td>
<td>240%</td>
<td>260%</td>
<td>280%</td>
<td>300%</td>
</tr>
<tr>
<td>25%</td>
<td>50%</td>
<td>75%</td>
<td>100%</td>
<td>125%</td>
<td>150%</td>
<td>175%</td>
<td>200%</td>
<td>225%</td>
<td>250%</td>
<td>275%</td>
<td>300%</td>
<td>325%</td>
<td>350%</td>
<td>375%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solutions that offer...</th>
<th>Extra charges for the e-signature functionality in their solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>79%</td>
<td>49%</td>
</tr>
</tbody>
</table>

An all-inclusive pricing option (incl. hosting, licensing and implementation)
There are several general benefits compared to on-premise Tradeshift, having reeled in a $250mln investment in 2018, technology trends hyped as fields like ‘FinTech’, it seems to be riding the same wave of potential. Nevertheless, procurement technology might not be as leveraged technology to bring all kinds of improvements to the procurement function, well-known solution providers but also very promising start-ups have introduced and this does not leave the procurement function untouched. Over the past years, both security and coverage. But as new technologies keep arising in ever increasing speed, clearly it seems that there is still space for further growth within the procurement start-up landscape. Some key investments uncover part of the potential that lies in emerging procurement technology companies. Last year, Scout RFP was acquired by Workday for €487mln and TradeCom, having reeled in a $250mln investment in 2018, announced another $240mln round in early 2020.

So, how big exactly is the potential for procurement technology start-ups? And what new technological trends do they bring? This article will outline some of the trends that are currently observed by Capgemini’s procurement experts. What do we see happening and where do we think procurement technology will bring us in the upcoming years?

**Technology trends**

Looking at the start-up and innovation landscape, one will recognize a lot of new companies dealing with topics all along the Source-to-Pay process. Besides some big players offering complete procurement suites, there are plenty niche companies focusing on a specific topic, such as spend analytics, smart contracting or payment in B2B. Nevertheless, our procurement experts across the Capgemini Group have indicated some key technological developments, which seem to have a significant impact on the future of procurement: cloud computing, intelligent automation and advanced analytics.

The first trend might seem like an obvious one. Even if cloud computing has been core to solution provider offerings for quite a while, a large part of the user base has not yet fully leveraged the technology in their procurement landscape. There are several general benefits compared to on-premise solutions such as lower total cost of ownership, scalability, mobility and security. The provided software, platform or infrastructure is accessible from everywhere with internet connection and the customers only pay for what they use.

In terms of procurement the usage of cloud services allows the procurement function to work more efficiently with the supply base and the cross-functional businesses together. The Source-to-Pay process and all related documents can be managed within the cloud. Some major benefits for procurements include digitized documents that are centrally available, smoother approval workflows and improvement of process cycle times and compliance.

The second major trend, intelligent automation, empowers the procurement function to have fully automated end-to-end business processes. The first stage is robotic process automation (RPA), the second stage is artificial intelligence (AI) RPA concerning minute repetitive human actions and process steps, it is often utilized to automate steps which are not covered by the system or to bridge parts between different systems. Typical use cases are automated updates of order confirmations in the ERP system. Another use case is a robot, which automatically places purchase orders for low value goods under a specific threshold. The major benefit lies in the reduction of transactional costs and improved process cycle time.

The next expansion stage is AI, which is defined as an algorithm that is considered as “smart” by imitating intelligent human behavior. A typical procurement use case is best price detection for specific categories. The algorithm performs the market research and connects the buyer with the best suppliers based on the searching criteria. It can also automate and support the category classification process. Advanced analytics, entailing amongst others predictive and prescriptive analytics, enable the procurement function to improve transparency, decision making processes and increase efficiency. Advanced analytics automatically analyze patterns within large amounts of data from different sources, to eventually propose actions to users. It answers both the questions of what will happen (predictive analytics) and what the buyer should do (prescriptive analytics). For example, it can create spend insights and advise on cost reduction opportunities from multiple unstructured data sources. Another typical procurement use case is price prediction of raw material or labor costs.

**MARKET TRENDS**

Procurement has long been supported by technology of different levels of sophistication and coverage. But as new technologies keep arising in ever increasing speed, clearly this does not leave the procurement function untouched. Over the past years, both well-known solution providers but also very promising start-ups have introduced and leveraged technology to bring all kinds of improvements to the procurement function, buyers and management alike. Even though procurement technology might not be as hyped as fields like ‘FinTech’, it seems to be riding the same wave of potential.
Future of Procurement

All these technologies are in continuous development and it is difficult to assess the complete scope of their contribution to procurement functions. Some technology providers are already leveraging these developments to deliver solid use cases for procurement functions, taking a closer look at what new technological advances could mean for current procurement practice, as well as changes they may ignite in the years to come. Cloud-technology is already something seen and leveraged in a wide variety of procurement technology, regardless of industry or part of the Source-to-Pay process. Given the clear benefits of cloud over on-premise hosting in many use cases, from parts like contracts management to complete SAP suites, it is safe to say we may expect procurement functions to mostly adopt cloud-based solutions in the future. They will enable greater flexibility & technological performance as well as improved collaboration between procurement departments, business stakeholders & external parties. Automation is currently most common within the P2P & payment has led to a lot of procurement functions striving for automated purchasing, invoicing & payment processes, for which automation technology is being selected. However, several procurement technology companies have started to develop use cases that move more towards the -traditionally more complex- sourcing process. These are, for example, automation of negotiations and sourcing tasks. Therefore, we may expect the usage of automation to expand more and more towards complex tasks and support buyers in tasks like supplier discovery, sourcing & negotiation.

Outlook

In all different technological fields that deliver value for procurement organizations, more and more complex tasks have either been simplified or taken over by technology that enables procurement professionals to cope with traditionally challenging or cumbersome tasks like purchasing and invoicing optimization, spend analytics, supplier performance and contract management. We are likely going to see procurement technology take a more pro-active role in the daily work of buyers, contract managers and other procurement professionals by providing prescriptive or even autonomous actions. These developments will lead to a shift in required competences by procurement professionals. The competencies and buyer profiles will shift into the direction of more data and tech-savvy to be able to work and manage the new tools, to deliver procurement value to businesses in new ways.

INTELLIGENT AUTOMATION IN PROCUREMENT

Move beyond buzzwords and start with intelligent automation in procurement

Nina Leibel and Dario Kühlig

Why should your procurement function focus on intelligent automation?

We understand intelligent automation as the utilization of smart technologies that successfully address business process challenges and represent the source of continuous value added and improvement. In this regard, Robotic Process Automation (RPA) and Artificial Intelligence (AI) as digital technologies have proven their value in procurement through significant benefits in the field of spend, visibility and productivity, among others. The value stems from the change of the way business is done. When all governance, implementation and risk management requirements are met, RPA and AI have a revolutionary impact on businesses, from delivering operational efficiency with higher productivity to an increased understanding of suppliers, end-users and markets. Intelligent automation reflects the start of a new era in procurement, where untapped potential will be realized through the right development and utilization of RPA and AI.

What is intelligent automation anyway?

While intelligent automation is the successful interaction between RPA, AI and Analytics with interrelated elements, we will focus on RPA and AI as digital technologies. RPA can be described as a set of technologies that uses software as a virtual workforce/robot to interpret information in existing software applications and to execute repetitive rule-based processes and tasks. RPA realizes its full potential, when other process criteria such as repetitive, manual, structured and machine-readable input and a consistently high volume are met as well. In contrast to other digital technologies, RPA has a minimal impact on the existing IT landscape, since it acts like a human intelligence between existing systems. Thus, it ensures a technological transformation without heavy investments. While RPA accelerates operative processes with a consistent quality and dedication, regardless of the time or external factors, people are responsible for more complex aspects of the business as well as exception handling. To summarize, RPA provides the skills of people with the speed and reliability of robots.

Leading procurement functions, however, extend of RPA as rule-based automation leveraging AI. AI is a collective term for capabilities of learning algorithms/methods that are perceived by humans as intelligence. These capabilities own attributes that have a corresponding human sense: Communication – interacting, monitoring – seeing, knowledge – remembering, analysis – thinking and service – acting. AI applications exist across various areas with many being relevant for procurement including speech, image and document recognition, natural language understanding and generation, prescriptive modelling as well as complex analytics and predictions among others. As a collective term, AI spans over different learning algorithms/methods such as machine learning, neural networks, deep/enrichment learning and is enabled by technologies that include big data systems.

Finally, both RPA and AI bear tremendous value potential for procurement functions. First, the procurement staff can effectively be freed up from repetitive time-consuming tasks e.g., processing of order confirmations, updating master data or identifying bundling opportunities. Second, the procurement staff can better work on complex tasks augmented and not replaced by virtual counterparts e.g., AI-based recommendation systems through a faster understanding of complex interrelations. Hence, the procurement function can position itself as a true value partner for customers, suppliers and within the organization. But where exactly can intelligent automation be utilized?
Where can your procurement function utilize intelligent automation?
It is clear there are many possibilities to leverage RPA and AI in Procurement. However, it will be best if both RPA and AI as well as between learning algorithms/methods are blurry. They strongly depend on the respective use case as well as the organizational and technological environment. All in all, while RPA is utilized best for repetitive rule-based processes, AI fits best for more complex processes with large volumes and semi/un-structured data (Figure 13).

Since RPA is a maturing digital technology, there is already an extensive and steadily growing list of use cases in procurement, from the creation of a purchase requisition to the actual payment. Among other use cases at the beginning of the procurement process itself, the importance of procurement expertise becomes evident e.g., determining the scope of operational buyers and accounting payable accountants in the Purchase-to-Pay process. Third, governance elements and RACIs must be defined for the IDEA-Automate Lifecycle, which covers the iterative software development process. Using the IDEA-Automate Lifecycle as reference, concepts for automation use cases are developed. Fourth, the role concept as well as the IDEA-Automate Lifecycle must be presented and discussed with the automation project team as well as enhanced based on respective feedback. Fifth, all results must be aligned and concepts for automation use cases must be approved by the automation project team. Finally, existing automation use cases must be reviewed and adjusted according to new roles and responsibilities. All this leads to building new automation use cases that can be developed to drive further automation initiatives guided and streamlined by the IDA TOM.

What’s next?
Increasingly, procurement transformation is being driven by intelligent automation, with an impact on operational efficiency, improved decision support, visibility and trust, the business value added by procurement functions. However, integrating intelligent automation into procurement processes requires a change in mindset. As much as intelligent automation is being used to replace existing systems, it is also being used to augment human decision making, and not necessarily replace it. The level of trust in automation must be measured, and it must be ensured that relevant feedback is provided so that both machines and humans can collaborate and work together. In this way, the full potential from intelligent automation is still some way off, as organizations and technologies continue to mature. In the meantime, the human factor will remain the biggest challenge in the evolution.

How can your procurement function further improve automation and sustain benefits?
All successful use cases in procurement regardless of the digital technology that is utilized, is a sophisticated Intelligent Automation Target Operating Model (IA TOM), visualized in Figure 14. The IA TOM avoids major impediments that many automation initiatives face due to various automation initiatives. They often run simultaneously, all aiming at automation but lack shared measures and streamlining. The IA TOM is a vital requirement for digital transformation projects in procurement. It is non-negotiable, it is a starting point for resources due to the elimination of double work and inefficient governance elements and can be approached through the following six steps.

First, an IA TOM gap analysis must be performed. Collaborative workshops are conducted to walk through the dimensions of the existing TOM, whereas the number of different TOMs may vary given the setup of existing automation initiatives. The focus is each dimension is compared to the Capgemini Reference IA TOM. Second, a role concept and detailed role specifications must be developed based on the identified gaps. In the perspective of procurement expertise becomes evident e.g., determining the scope of operational buyers and accounting payable accountants in the Purchase-to-Pay process. Third, governance elements and RACIs must be defined for the IDEA-Automate Lifecycle, which covers the iterative software development process. Using the IDEA-Automate Lifecycle as reference, concepts for automation use cases are developed. Fourth, the role concept as well as the IDEA-Automate Lifecycle must be presented and discussed with the automation project team as well as enhanced based on respective feedback. Fifth, all results must be aligned and concepts for automation use cases must be approved by the automation project team. Finally, existing automation use cases must be reviewed and adjusted according to new roles and responsibilities. All this leads to building new automation use cases that can be developed to drive further automation initiatives guided and streamlined by the IA TOM.

**BLOCKCHAIN IN DIGITAL PROCUREMENT**

The Next Wave in Digital Procurement: Blockchain

Swarnim Pant and Pankaj Mahur

How we buy and pay has changed. Organizations have transitioned from maintaining dockets of ledger entries and array of filing cabinets to data management in cloud. Most companies today use enterprise resource planning (ERP) and/or bolt-on supply chain software to run business. From connected manufacturing devices to RF-based receiving and storing, electronic shipping notices and delivery confirmations, products can be tracked from origin through end-of-life. Yet, supply chain agents struggle to pin-point the exact quantity and location of their products. Inventory is duplicated or lost, and Accounts Receivable teams struggle to realize revenue within 45 days of delivery.

In most cases, disparate systems across the value chain cause gaps in how we track, manage and execute our supply chain. The challenge is how and when siloed systems communicate with each other. These systems use Electronic data interchange (EDI) and extensible markup language (XML) messaging to communicate with central systems for procurement moved beyond pilots and proof of concept. Especially strategic procurement activities can be supported by AI. At the very beginning, AI can bring deep market intelligence. For instance, it is possible to analyze risk in the supply chain or supply market through the combination of historical and real-time data with external and internal information to detect anomalous behavior. As most intuitive use case, AI can bring deep market intelligence and category data with flexible aggregation levels and can be activated during payment, ensuring compliance visible across the value chain. Likewise, the pre-contract and bidding process can be made more tamper- and corruption-proof with government’s e-market place (GeM). This government agency platform streamlines smart contract creation. GeM uses blockchain during vendor registration through awarding the bid.

**Authenticity & Traceability is critical to procurement**
The problem of counterfeit goods and parts costs the global economy billions of dollars each year, almost as much as 2.2% of the world trade; this has huge industry implications. Sectors such as pharmaceuticals, food, and agriculture have procurement regulations that make it vital to track provenance of all parts, assets, components and any modifications made to them. Also referred as both traceability in an industry. Blockchain establishes product ownership across its journey. From supplier to manufacturer, OEMs, distributor, retailer and customer. This ensures traceability and transparency across partners who may be globally dispersed. While blockchain has found its way in the social sector with the Akshaya Patra Foundation, a non-profit organization that operates a mid-day meal scheme for over 5 million children in India. The foundation uses blockchain that helps perform accurate audit across its service provisioning chain thereby ensuring transparency. The Akshaya Patra Foundation has found its way in the social sector with the Akshaya Patra Foundation, a non-profit organization that operates a mid-day meal scheme for over 5 million children in India. The foundation uses blockchain that helps perform accurate audit across its service provisioning chain thereby ensuring transparency. The Akshaya Patra Foundation has found its way in the social sector with the Akshaya Patra Foundation, a non-profit organization that operates a mid-day meal scheme for over 5 million children in India. The foundation uses blockchain that helps perform accurate audit across its service provisioning chain thereby ensuring transparency.
The procurement function is seeing a shift from the reactive (carbon footprint, sustainable materials management, life cycle assessment) to proactive mode through continuous monitoring and evaluation. Additionally, with the rise of the conscious consumer, blockchain can act as a medium of record keeping with a secure and trusted history of the product, providing assurance about ethical sourcing of raw materials and fair trade practices. A business's sustainability is not just a one-off show but requires close collaboration. Blockchain allows for that inclusion and multilateralism in problem solving and achieving a unified vision. De Beers (diamond mining trading company) has initiated a pilot project – TractrM, that tracks stones right after they are mined to the time they are sold to the consumer. Apart from other benefits, this ensures fair trade by tracking stone’s provenance hence avoiding conflict diamonds in trade.

**Connected ecosystems with process and data integrity**

The procurement function is seeing a shift from the reactive mode to a data-driven, proactive digital mode where the narrative is about creating shared value that requires process standardization and connectivity across systems. Blockchain would become a game-changer in strategic sourcing and supplier network management by connecting systems across the chain through a shared ledger and allow organizations to move from linear way of working to continuous feedback loop. It works in conjunction with legacy ERPs as well as new-age disruptive technology like advanced analytics and IoT. This makes blockchain an integrative technology enabling disparate, siloed systems talk as one. The results are greater process synchronization that allows an organization to have a complete view; be it of supplier compliance or inventory levels at a distributor or factory asset maintenance. In the digital maturity journey, transition to blockchain becomes a necessary step for multi-tier supply chains with global distribution.

**How realizable is blockchain: The ROI**

Is blockchain just an exciting concept or could it be practically implemented? Although it depends on the scope of implementation but blockchain could prove beneficial just by ensuring the authenticity of the final product and its ingredients or just by eliminating the audit spend. If technical intricacies put organizations on the back foot, blockchain-as-a-service (BaaS) is also an option. Needless to say, there is no one size fits all solution, and a pre-implementation analysis could determine the apt blockchain approach for an organization or none there off.

**Connected ecosystems with process and data integrity**

The procurement function is seeing a shift from the reactive mode to a data-driven, proactive digital mode where the narrative is about creating shared value that requires process standardization and connectivity across systems. Blockchain would become a game-changer in strategic sourcing and supplier network management by connecting systems across the chain through a shared ledger and allow organizations to move from linear way of working to continuous feedback loop. It works in conjunction with legacy ERPs as well as new-age disruptive technology like advanced analytics and IoT. This makes blockchain an integrative technology enabling disparate, siloed systems talk as one. The results are greater process synchronization that allows an organization to have a complete view; be it of supplier compliance or inventory levels at a distributor or factory asset maintenance. In the digital maturity journey, transition to blockchain becomes a necessary step for multi-tier supply chains with global distribution.

**How realizable is blockchain: The ROI**

Is blockchain just an exciting concept or could it be practically implemented? Although it depends on the scope of implementation but blockchain could prove beneficial just by ensuring the authenticity of the final product and its ingredients or just by eliminating the audit spend. If technical intricacies put organizations on the back foot, blockchain-as-a-service (BaaS) is also an option. Needless to say, there is no one size fits all solution, and a pre-implementation analysis could determine the apt blockchain approach for an organization or none there off.

**Functionalities in Digital Procurement**

The Digital Procurement Research 2020-2021 marked the leading providers and the latest trends and developments within their solutions. Common for most of the solutions is that the 'procurement end-user' is placed at the center of the solution, with intuitiveness and a high level of automation as the guiding principles. New technologies that have not been remarkably present in previous versions of the research, such as Machine Learning and Artificial Intelligence capabilities, are now (to some extend) applied as core functionality. It is also visible that Source-to-Pay processes are becoming more digitally integrated. There have been several large acquisitions in the digital procurement market. The research results show that several of these recently merged solutions offer a lead-of-the-SOURCE-to-PAY suite than when they were stand-alone specialist solutions. The merged solutions facilitate upon a broader set of business requirements by combining multiple procurement processes into one dedicated solution.

In Supplier management, the core functionality contains supplier registration, end-to-end supplier lifecycle management and risk- and performance management. Amongst others, the element of supplier management enables digital collaboration between the procurement function and their suppliers. Functionality within Strategic sourcing comprehends the definition of sourcing strategies, sourcing rounds, evaluation of bids and negotiations. Expanded functionalities are seen within automation of RFX sourcing rounds and e-Auctions. In Contracting, new emerging technologies are smart contracts and AI-driven contract metadata enrichment. The core functionality of this element focuses on the creation and storage of contracts in a repository and shaping insights on performance and obligations across the entire lifecycle of a contract.

**Selection and Implementing the solution the right way**

A digital procurement solution can work as an accelerator for the procurement function by enabling automation, data insights and structure. The research describes that implementation of merely a new fitting solution is not the full recipe for success. Evenly important is the change management process. The people within a procurement organization must adopt and utilize the new opportunities the solution can bring, otherwise the full potential cannot be achieved. Digitalization of procurement has a direct impact on the existing governance model and corresponding people and processes. Implementing a new solution should therefore always be approached as an end-to-end business transformation.

The research shows that all participating providers have different focus and capabilities around industries, functionality, geography, implementation methods and more. Besides this, every organization has different requirements, standards, budgets and priorities. There are many providers that offer good functionalities in the procurement area, but this does not mean that this is the right functionality for your organization. To find the fitting solution, Capgemini recommends a thorough selection process considering all aspects impacting the decision. An excellent starting point for the Digital Procurement journey is the dashboard overview of participating solution providers, located in the final chapter of this research. Considering the broad range of available functionalities that is continuously being improved and expanded, there is a fitting solution for every organization that can drive their specific future of procurement.
Introduction to the solution provider summaries

The following section provides a summary for each of the participating solution providers of this research. Each solution provider is highlighted on a half-page dashboard, outlining general company details and its solution characteristics.

The dashboard is directly populated based on the data that has been provided by the solution provider in the questionnaire, without any scoring or interpretation to it. The dashboard contains the following information:

**General solution provider details**

- Key information about the company behind the solution; employees, clients and mission statement.
- A map outlining the location of the company’s headquarters (specific country) and regional sales offices (distinction between Asia, Europe, North America, South America).
- The most distinctive feature of the solution, as stated by the solution provider.
- An overview of the industries the company currently serves with this solution, indicated by the icons as explained in Table 2.
- The functionalities and sub-functionalities that are covered by the provider in their solution. Sub-sections marked in blue are covered within the solution. Sub-sections marked in grey are not covered. The sub-functionalities are divided under the following functionalities, all within the scope of Source-to-Pay:
  - Supplier management
  - Sourcing
  - Contracting
  - Purchasing
  - Accounts payable
  - Reporting and analytics

| Automotive | Pharma and life sciences |
| Consumer products | Utilities |
| Distribution and logistics | Public |
| Finance | Retail |
| Manufacturing | Travel |
We provide flexible business solutions that help clients scale and adapt quickly.

**MISSION STATEMENT**
We are a leader in self-service data analytics with a platform that can capture, prepare, and analyse all your data and insights faster than you ever thought possible. AnyDATA delivers Innovative Digital Transformation Solutions, seamlessly integrating data capture, preparation, automation, OCR, AI modelling & machine learning, analytics and smarter insights faster than you ever thought possible. A leader in data integration, analytics, contract management, and on-boarding.

**MOST DISTINCTIVE FEATURE**
AnyDATA is built for the no-code platform, Agiloft’s flagship contract lifecycle management suite (CLM) comes with fully customizable best practice functionality for buy and sell-side contract management, including repository and templates, clause library, flexible approval workflows, built-in AI, security and compliance safeguards, automated notifications and seamless integration with existing systems.

**Industries served**

<table>
<thead>
<tr>
<th>Employees</th>
<th>Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-50</td>
<td>101-250</td>
</tr>
</tbody>
</table>

---

**MISSION STATEMENT**
At Basware, we believe that a world of transparent exchange of money, goods, and services, enabled by the ready availability of data, empowers people to make more effective and more ethical business decisions.

**MOST DISTINCTIVE FEATURE**
Basware delivers 100% spend visibility: 100% of your users adopting our procurement solution, 100% of your suppliers connecting through the largest open commerce network and 100% of your invoices. What separates our AP functionality is that we can achieve the highest levels of automation through a combination of flexible matching, payment plans and automated coding.

**Industries served**

<table>
<thead>
<tr>
<th>Employees</th>
<th>Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-250</td>
<td>500+</td>
</tr>
</tbody>
</table>

---

**MISSION STATEMENT**
BuyerQuest combines the power of cognitive computing with the discipline of enterprise procurement, offering an agile solution that empowers companies to solve their complex procurement problems.

**MOST DISTINCTIVE FEATURE**
BuyerQuest, the global leader in Procure-to-Pay, is best known for their Amazon-like user experience, reducing the change management effort and lowering the total cost of ownership. Buyers, Suppliers, and even the Accounts Payable team have a single solution that is as simple to use as any B2C eCommerce website.

**Industries served**

<table>
<thead>
<tr>
<th>Employees</th>
<th>Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>51-75</td>
<td>76-100</td>
</tr>
</tbody>
</table>
Corcentric delivers technology, managed services, and strategic advisory focused on reducing costs, optimizing working capital, and unlocking revenue. Since 1996, thousands of companies have trusted Corcentric’s expert team and its suite of world-class solutions.

Corcentric Digital Procurement Research

**251-500**

*Employees*

**1000+**

*Clients*

**Industries served**

- [ ] Strategic Sourcing
- [ ] Contract Management
- [ ] Purchasing
- [ ] Accounts Payable
- [ ] Reporting & Analytics

**MISSION STATEMENT**

Corcentric exists to provide our customers with the most creative, most effective and highest value end-to-end procurement and supply chain solutions.

**MOST DISTINCTIVE FEATURE**

Corcentric is a global provider of market-leading source-to-pay, order-to-cash, and fleet solutions. From the mid-market to Fortune 1000, Corcentric delivers technology, consulting, and financial services focused on reducing costs, optimizing working capital, and unlocking revenue.

DocuSign has been on a mission to accelerate business and simplify life for companies and people around the world.

DocuSign Digital Procurement Research

**500+**

*Employees*

**1,000+**

*Clients*

**Industries served**

- [ ] Strategic Sourcing
- [ ] Contract Management
- [ ] Purchasing
- [ ] Accounts Payable
- [ ] Reporting & Analytics

**MISSION STATEMENT**

DocuSign exists to provide best practice workflow solutions in the area of corporate procurement with special focus on ease of use, transparency, auditability and world class customer support that surprises and delights our customers.

**MOST DISTINCTIVE FEATURE**

DocuSign CLM+ adds AI-driven analytics to DocuSign’s market-leading CLM product. This combination helps organizations automate workflows intelligently across the entire contract lifecycle. The result is greater visibility into risks and opportunities at radically less cost than reliance on manual analysis of inbound and stored contracts.

Eryo exists to provide best practice workflow solutions in the area of corporate procurement with special focus on ease of use, transparency, auditability and world class customer support that surprises and delights our customers.

Eyro Digital Procurement Research

**11-50**

*Employees*

**51-75**

*Clients*

**Industries served**

- [ ] Strategic Sourcing
- [ ] Contract Management
- [ ] Purchasing
- [ ] Accounts Payable
- [ ] Reporting & Analytics

**MISSION STATEMENT**

Eryo’s ‘eBuyerAssist’ procurement platform is a user friendly yet powerful workflow tool that emphasizes a modern user interface in front of a feature rich, modular package. Modules include requisitions, purchase orders, RFx, receiving, inventory, assets, OCR invoice matching, vendor portal, catalog management, risk management, integrations to accounts/ERP - All with full customization options.

**MOST DISTINCTIVE FEATURE**

Eyro’s eBuyerAssist procurement platform is a user friendly yet powerful workflow tool that emphasizes a modern user interface in front of a feature rich, modular package. Modules include requisitions, purchase orders, RFx, receiving, inventory, assets, OCR invoice matching, vendor portal, catalog management, risk management, integrations to accounts/ERP - All with full customization options.

GEP SMART is source-to-pay software, built with user-first design, on a data-centric foundation, and powered by AI. GEP SMART is a complete platform for direct and indirect procurement, built for optimum performance, easily handling the heaviest, most complex requirements and delivering the very highest levels of performance, scalability and resilience of any digital business platform anywhere.

**MISSION STATEMENT**

Our commitment is to provide our customers with the most creative, most effective and highest value end-to-end procurement and supply chain solutions.

**MOST DISTINCTIVE FEATURE**

GEP SMART is a complete platform for direct and indirect procurement, built for optimum performance, easily handling the heaviest, most complex requirements and delivering the very highest levels of performance, scalability and resilience of any digital business platform anywhere.

GEP SMART Digital Procurement Research

**500+**

*Employees*

**250-1,000**

*Clients*

**Industries served**

- [ ] Strategic Sourcing
- [ ] Contract Management
- [ ] Purchasing
- [ ] Accounts Payable
- [ ] Reporting & Analytics

**MISSION STATEMENT**

GEP SMART is a complete platform for direct and indirect procurement, built for optimum performance, easily handling the heaviest, most complex requirements and delivering the very highest levels of performance, scalability and resilience of any digital business platform anywhere.

**MOST DISTINCTIVE FEATURE**

GEP SMART is source-to-pay software, built with user-first design, on a data-centric foundation, and powered by AI. GEP SMART is a complete platform for direct and indirect procurement, built for optimum performance, easily handling the heaviest, most complex requirements and delivering the very highest levels of performance, scalability and resilience of any digital business platform anywhere.
Empower procurement and supply chain leaders to transform their business and beyond by better managing their spend and suppliers.

MISSION STATEMENT

Empower procurement and supply chain leaders to transform their business and beyond by better managing their spend and suppliers.

Most distinctive feature

Ability to manage all spend and all suppliers, without compromise. Single integrated and unified S2P solution but with best of breed capabilities in major areas such as S2C, P2P, SRPM. Single supplier record and true 360 degree view of all supplier information and activity.

Missions

1. Drive value for buyers and sellers
2. Capgemini Digital Procurement Research
3. 11-50 employees
4. 101-250 clients
5. 500+ employees
6. 250-1,000 clients
7. 500+ employees
8. 1,000+ clients
9. 16-50 employees
10. 251-1,000 clients
11. 76-100 employees

Industries served

- Manufacturing
- Technology
- Healthcare
- Retail
- Energy
- Financial Services
- Consumer Goods
- Government

Most distinctive feature

The JAGGAER ONE platform provides intuitive, intelligent source to pay solutions that enable our customers to optimize all spend and all processes through one solution suite. Covering all spend management processes for indirect, services and direct material spend categories, JAGGAER ONE delivers global visibility into all purchases, suppliers, risks and more in a common workflow.

Missions

1. Drive value for buyers and sellers
2. Negometrix is the First Choice of Procurement Professionals in the markets it chooses to operate. It offers a broad and deep web-based solution for tendering, contract, supplier, and spend management.
3. 11-50 employees
4. 101-250 clients
5. 500+ employees
6. 250-1,000 clients
7. 76-100 employees
8. 251-1,000 clients
9. 16-50 employees
10. 251-1,000 clients
11. 76-100 employees

Industries served

- Manufacturing
- Technology
- Healthcare
- Retail
- Energy
- Financial Services
- Consumer Goods
- Government

Most distinctive feature

Negometrix is the First Choice of Procurement Professionals in the markets it chooses to operate. It offers a broad and deep web-based solution for tendering, contract, supplier, and spend management.

Missions

1. Drive value for buyers and sellers
2. Capgemini Digital Procurement Research
3. 11-50 employees
4. 101-250 clients
5. 500+ employees
6. 250-1,000 clients
7. 76-100 employees
8. 251-1,000 clients
9. 16-50 employees
10. 251-1,000 clients
11. 76-100 employees

Industries served

- Manufacturing
- Technology
- Healthcare
- Retail
- Energy
- Financial Services
- Consumer Goods
- Government

Most distinctive feature

Negometrix is the First Choice of Procurement Professionals in the markets it chooses to operate. It offers a broad and deep web-based solution for tendering, contract, supplier, and spend management.

Missions

1. Drive value for buyers and sellers
2. Capgemini Digital Procurement Research
3. 11-50 employees
4. 101-250 clients
5. 500+ employees
6. 250-1,000 clients
7. 76-100 employees
8. 251-1,000 clients
9. 16-50 employees
10. 251-1,000 clients
11. 76-100 employees

Industries served

- Manufacturing
- Technology
- Healthcare
- Retail
- Energy
- Financial Services
- Consumer Goods
- Government
Our mission is to help people see data in new ways, discover insights, unlock endless possibilities.

Help organizations around the globe quickly transition from inadequate procurement processes to an easy to implement, enterprise class, cloud-based e-procurement suite. An easy to use interface provides a powerful workspace to automate tasks such as requisitions, managing BPR-BP1-BP2, hosting reverse auctions, managing contracts, P.O.-invoice-payments, spend analysis and more.

Per Angusta is reinventing Procurement Performance Accelerator. The Procurement Performance Accelerator is part of the only complete, single cloud ERP that is enterprise grade and recognised a leader by industry analysts for several years in a row.

Capgemini Digital Procurement Research

500+ Employees
1,000+ Clients

Industries served

Headquarters & sales offices

MOST DISTINCTIVE FEATURE
Oracle Fusion Cloud Procurement is a modern standards based solution with embedded analytics, and collaboration to simplify supplier management and contracting, reduce risk, increase cost savings, and enforce compliant spend. It is part of the only complete, single cloud ERP that is enterprise grade and recognised a leader by industry analysts for several years in a row.

MISSION STATEMENT
To partner with and challenge organisations to realise the benefits of digital business processes using our innovative technology and our team’s expertise.

ProcurePort helps organizations around the globe quickly transition from inadequate procurement processes to an easy to implement, enterprise-class, cloud-based e-procurement suite. The cloud-based platform is a modular, fully integrated solution that continually benefits customers with regular updates and access to new features. The solution’s flexibility suits many different sized organisations and sectors.

ProcurePort provides an easy to use, intuitive consumer-style interface allowing users to automate all their Source-to-Pay processes and control 100% of their spend. The cloud-based platform is a modular, fully integrated solution that continually benefits customers with regular updates and access to new features. The solution’s flexibility suits many different sized organisations and sectors.

ProcurePort helps organizations around the globe quickly transition from inadequate procurement processes to an easy to implement, enterprise class, cloud-based e-procurement suite.

MISSION STATEMENT
The Procurement Performance Accelerator.

Most distinctive feature

ProcurePort helps organizations around the globe quickly transition from inadequate procurement processes to an easy to implement, enterprise-class, cloud-based e-procurement suite. An easy to use interface provides a powerful workspace to automate tasks such as requisitions, managing BPR-BP1-BP2, hosting reverse auctions, managing contracts, P.O.-invoice-payments, spend analysis and more.

ProcurePort helps organizations around the globe quickly transition from inadequate procurement processes to an easy to implement, enterprise class, cloud-based e-procurement suite.

MISSION STATEMENT
The Procurement Performance Accelerator.

Most distinctive feature

ProcurePort helps organizations around the globe quickly transition from inadequate procurement processes to an easy to implement, enterprise-class, cloud-based e-procurement suite. An easy to use interface provides a powerful workspace to automate tasks such as requisitions, managing BPR-BP1-BP2, hosting reverse auctions, managing contracts, P.O.-invoice-payments, spend analysis and more.

ProcurePort helps organizations around the globe quickly transition from inadequate procurement processes to an easy to implement, enterprise class, cloud-based e-procurement suite.

MISSION STATEMENT
The Procurement Performance Accelerator.

Most distinctive feature

ProcurePort helps organizations around the globe quickly transition from inadequate procurement processes to an easy to implement, enterprise-class, cloud-based e-procurement suite. An easy to use interface provides a powerful workspace to automate tasks such as requisitions, managing BPR-BP1-BP2, hosting reverse auctions, managing contracts, P.O.-invoice-payments, spend analysis and more.

ProcurePort helps organizations around the globe quickly transition from inadequate procurement processes to an easy to implement, enterprise class, cloud-based e-procurement suite.

MISSION STATEMENT
The Procurement Performance Accelerator.

Most distinctive feature
Capgemini Digital Procurement Research

101-250 Employees
251-1.000 Clients

Industries served

MISSION STATEMENT
Make business spending smart and simple

MOST DISTINCTIVE FEATURE
Procurify is a spend management software platform that helps organizations proactively drive operational efficiencies and business growth. Companies around the world request, approve and track the resources they need to move the business forward through real-time budget data, remote-optimized procurement workflows and spend insights.

Capgemini Digital Procurement Research

51-75 Employees
11-50 Clients

Industries served

MISSION STATEMENT
Source better.

MOST DISTINCTIVE FEATURE
We’re helping forward-thinking procurement, treasury and finance teams all over the world make dynamic changes to their businesses, by providing trusted and impactful insights and recommendations across a variety of customizable domains. Robobai provides a choice of tailored areas to focus on to understand your spend and to minimise your risk, all visible on an easy-to-use intuitive dashboards.

Capgemini Digital Procurement Research

101-250 Employees
101-250 Clients

Industries served

MISSION STATEMENT
To provide a fair, transparent and innovative purchasing service and to create value and commitment for all our stakeholders by adapting technological developments in line with our current needs to our services, with working principles in accordance with Koç Group values.

Promena

101-250 Employees
101-250 Clients

Industries served

MISSION STATEMENT
We are serving tailor made managed service function in sourcing modules with an advanced operational support. Our clients need little guidance to set up and running by the help of Promena’s intuitive user interface and granular configuration. Our modular approach is helping our clients to reach such kind of an experience with low budgets and fast implementation processes.

Scanmarket

76-100 Employees
251-1.000 Clients

Industries served

MISSION STATEMENT
Understanding technology, techniques and processes associated with building and sustaining successful eSourcing programs is our core strength. Our Scanmarket Mission is to share our expertise by coaching and helping our customers be successful.

Scanmarket is an industry leading strategic sourcing software platform that delivers superior results in savings, transparency and efficiency to hundreds of organizations globally. Known for its ease of use and expert support, Scanmarket increases user adoption by more than 300% on average. Whether it is Spend Analysis, eRFx, eAuction, CM, PM, SBM or Consultancy Services, we help you get results.
Sievo helps transform procurement data into dollars by providing the leading procurement analytics solution combining software, services & content.

Information • Qualification • Performance management • Risk management • Development

MISSION STATEMENT
Sievo is a leading procurement analytics SaaS company. Known for our deep procurement expertise and our AI-powered source-to-screen process with out-of-the-box integrations to 100+ ERPs & source systems, data extraction, cleansing, classification and 3rd party data enrichment, we go way beyond spend visibility and also offer savings program, contract analytics, forecasting & benchmarking solutions.

Capgemini Digital Procurement Research

101-250 Employees
101-250 Clients

Industries served

Capgemini Digital Procurement Research

251-500 Employees
76-100 Clients

Industries served

SirionLabs is transforming the contracting engagement between enterprises by bringing buyers and suppliers closer together across the full lifecycle of the contract – from authoring to performance to closure.

MISSION STATEMENT
SirionLabs is the SaaS leader in enterprise CLM, leverages advanced AI technology to enable effective management of all types of enterprise contracts including buy-side and sell-side. Sirion goes beyond legacy CLM solutions to automate the complete contracting lifecycle on a single platform – from authoring to contract analytics to ongoing governance of contracts.

Missouri State University

Symfact

11-50 Employees
101-250 Clients

Industries served

MISSION STATEMENT
Symfact product all the authoring/editing of the contract template is done completely through MS Word, so you are using the same tools as you are currently using. The application also offers the ability to automatically embed contract meta-data into the document so that the system will automatically fill in the associated data in the correct location within the Word document.

Capgemini Digital Procurement Research

251-500 Employees
76-100 Clients

Industries served

MISSION STATEMENT
We provide flexible business solutions that help clients scale and adapt quickly.

Capgemini Digital Procurement Research

101-250 Employees
101-250 Clients

Industries served
We build technologies that help companies grow by giving them access to cheaper capital, increased efficiency, and digital global trade. Tradeshift’s goal is to connect every company in the world, creating economic opportunity for all.

**MOST DISTINCTIVE FEATURE**

Tradeshift helps companies digitize trade transactions across a global networked marketplace solution. Our unique seller value products include pre-approved early payments and supplier-facing analytics. We leverage embedded native machine learning to help businesses digitize all their trade transactions, collaborate on every process, and connect with any supply chain app. That’s digital trade at scale. That’s Tradeshift.

**MISSION STATEMENT**

We make it easy for people to find and buy everything they need to do their best work, by providing simple, open and easy-to-use procurement technology. We champion procurement professionals and support the vital role they play in helping the people in their organizations to fulfill their purpose and do their best work.

**Unimarket**

500+ Employees

51-75 Clients

**MISSION STATEMENT**

To be the most trusted global transaction network.

**MOST DISTINCTIVE FEATURE**

Unimarket offers simple and easy-to-use software that brings all your procurement into one place. Our cloud-based solution brings together purchasing, invoicing, payments, contracts, sourcing, expenses, and an integrated supplier marketplace—all in one unified platform.
Medius’ mission is to enable organizations to simply manage their spend by delivering the world’s favorite spend management solutions for all employees across enterprise and SMB organizations.

Medius has a strong following in direct materials heavy industries such as retail, consumer goods, manufacturing and distribution due to its rich functionality in line level invoice matching and ability to truly automate complex AP processes. Medius also differentiates through its integration offering that accelerates speed to value and through its user experience that is modern and intuitive.

Vroozi’s modern, mobile and modular procurement and AP automation platform combines a consumer-like experience with enterprise-grade financial controls. Vroozi digitizes the entire procure-to-pay process – purchasing, invoices and payments – to deliver better margins and stronger financial controls. It connects seamlessly with financial systems to fuse the power of ERP with digital procurement.

Zahara Purchase Management Platform is designed to bring significant efficiencies to an organization’s finance team; providing visibility of spend; controlling expenditure; streamlining processes; automating common tasks; etc. All delivered via a SaaS cloud based system to fully enable remote working, with automated workflows, allowing staff to focus on the business and the real issues that matter.

Zahara has a strong following in direct materials heavy industries such as retail, consumer goods, manufacturing and distribution. Zahara’s modern, mobile and modular procurement and AP automation platform combines a consumer-like experience with enterprise-grade financial controls. Zahara digitizes the entire procure-to-pay process – purchasing, invoices and payments – to deliver better margins and stronger financial controls. It connects seamlessly with financial systems to fuse the power of ERP with digital procurement.

MEDIUS

MISSION STATEMENT
Medius’ mission is to enable organization to simply manage their spend by delivering the world’s favorite spend management solutions for all employees across enterprise and SMB organizations.

ZAHARA

MISSION STATEMENT
Zahara has a strong following in direct materials heavy industries such as retail, consumer goods, manufacturing and distribution. Zahara’s modern, mobile and modular procurement and AP automation platform combines a consumer-like experience with enterprise-grade financial controls. Zahara digitizes the entire procure-to-pay process – purchasing, invoices and payments – to deliver better margins and stronger financial controls. It connects seamlessly with financial systems to fuse the power of ERP with digital procurement.

VROOZI

MISSION STATEMENT
Vroozi’s modern, mobile and modular procurement and AP automation platform combines a consumer-like experience with enterprise-grade financial controls. Vroozi digitizes the entire procure-to-pay process – purchasing, invoices and payments – to deliver better margins and stronger financial controls. It connects seamlessly with financial systems to fuse the power of ERP with digital procurement.

Capgemini Digital Procurement Research 2020-2021
MISSION STATEMENT
To inspire the procurement and sourcing teams of the world’s leading organizations to realize their full intellectual and strategic potential by providing them with the best technology solutions and by raising awareness of the enormous contributions they can make to business performance.

MOST DISTINCTIVE FEATURE
AI-led autonomous procurement. Intuitive solution. Integrat-ed processes. Zycus is the world’s leading provider of AI-led comprehensive, seamlessly integrated and easy-to-use source-to-pay solution suite. It enables autonomous procurement with its Merlin AI Suite—a unique platform consisting of intelligent BOTS to automate tactical procurement and AP tasks & optimize strategic resource allocation.

ACKNOWLEDGEMENTS
Capgemini would like to thank everybody who has contributed to the realization of the Digital Procurement Research 2020-2021. A special thank you to the solution providers for taking the time to answer our extensive questionnaire. Also, a special thank you to all our authors who have contributed with their articles and point of views.

Research development
The following people contributed to the creation of the Digital Procurement Research 2020-2021:

Research leads / project managers
Abdulkadir Tekin
Director
Capgemini Invent Germany
Procurement Transformation
abduelkadir.tekin@capgemini.com

Sander Gerritse
Senior Consultant
Capgemini Invent The Netherlands
Procurement Transformation
sander.gerritse@capgemini.com

Donald Janssen
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
donald.janssen@capgemini.com

Colette Droppers
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
colette.droppers@capgemini.com

Dario Kühl
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dario.kuehl@capgemini.com

Dominik Knotte
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dominik.knotte@capgemini.com

Marketing & communication stream
Nina Leibl (stream lead)
Senior Manager
Capgemini Invent Germany
Procurement Transformation
nina.leibl@capgemini.com

Luxmy Parkunantharan
Managing Consultant
Capgemini Invent Germany
Procurement Transformation
luxmy.parkunantharan@capgemini.com

Dico van Dijk (stream lead)
Managing Consultant
Capgemini Invent The Netherlands
Procurement Transformation
dico.van.dijk@capgemini.com

Research development & analysis stream
Robin Heijkoop (Stream Lead)
Senior Consultant
Capgemini Invent The Netherlands
Procurement Transformation
robin.heijkoop@capgemini.com

Donald Janssen
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
donald.janssen@capgemini.com

Dominik Knotte
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dominik.knotte@capgemini.com

Research development
The following people contributed to the creation of the Digital Procurement Research 2020-2021:

Research leads / project managers
Abdulkadir Tekin
Director
Capgemini Invent Germany
Procurement Transformation
abduelkadir.tekin@capgemini.com

Sander Gerritse
Senior Consultant
Capgemini Invent The Netherlands
Procurement Transformation
sander.gerritse@capgemini.com

Donald Janssen
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
donald.janssen@capgemini.com

Colette Droppers
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
colette.droppers@capgemini.com

Dario Kühl
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dario.kuehl@capgemini.com

Dominik Knotte
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dominik.knotte@capgemini.com

Marketing & communication stream
Nina Leibl (stream lead)
Senior Manager
Capgemini Invent Germany
Procurement Transformation
nina.leibl@capgemini.com

Luxmy Parkunantharan
Managing Consultant
Capgemini Invent Germany
Procurement Transformation
luxmy.parkunantharan@capgemini.com

Dico van Dijk (stream lead)
Managing Consultant
Capgemini Invent The Netherlands
Procurement Transformation
dico.van.dijk@capgemini.com

Research development & analysis stream
Robin Heijkoop (Stream Lead)
Senior Consultant
Capgemini Invent The Netherlands
Procurement Transformation
robin.heijkoop@capgemini.com

Donald Janssen
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
donald.janssen@capgemini.com

Colette Droppers
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
colette.droppers@capgemini.com

Dario Kühl
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dario.kuehl@capgemini.com

Dominik Knotte
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dominik.knotte@capgemini.com

Marketing & communication stream
Nina Leibl (stream lead)
Senior Manager
Capgemini Invent Germany
Procurement Transformation
nina.leibl@capgemini.com

Luxmy Parkunantharan
Managing Consultant
Capgemini Invent Germany
Procurement Transformation
luxmy.parkunantharan@capgemini.com

Dico van Dijk (stream lead)
Managing Consultant
Capgemini Invent The Netherlands
Procurement Transformation
dico.van.dijk@capgemini.com

Research development
The following people contributed to the creation of the Digital Procurement Research 2020-2021:

Research leads / project managers
Abdulkadir Tekin
Director
Capgemini Invent Germany
Procurement Transformation
abduelkadir.tekin@capgemini.com

Sander Gerritse
Senior Consultant
Capgemini Invent The Netherlands
Procurement Transformation
sander.gerritse@capgemini.com

Donald Janssen
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
donald.janssen@capgemini.com

Colette Droppers
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
colette.droppers@capgemini.com

Dario Kühl
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dario.kuehl@capgemini.com

Dominik Knotte
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dominik.knotte@capgemini.com

Marketing & communication stream
Nina Leibl (stream lead)
Senior Manager
Capgemini Invent Germany
Procurement Transformation
nina.leibl@capgemini.com

Luxmy Parkunantharan
Managing Consultant
Capgemini Invent Germany
Procurement Transformation
luxmy.parkunantharan@capgemini.com

Dico van Dijk (stream lead)
Managing Consultant
Capgemini Invent The Netherlands
Procurement Transformation
dico.van.dijk@capgemini.com

Research development & analysis stream
Robin Heijkoop (Stream Lead)
Senior Consultant
Capgemini Invent The Netherlands
Procurement Transformation
robin.heijkoop@capgemini.com

Donald Janssen
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
donald.janssen@capgemini.com

Colette Droppers
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
colette.droppers@capgemini.com

Dario Kühl
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dario.kuehl@capgemini.com

Dominik Knotte
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
dominik.knotte@capgemini.com

Marketing & communication stream
Nina Leibl (stream lead)
Senior Manager
Capgemini Invent Germany
Procurement Transformation
nina.leibl@capgemini.com

Luxmy Parkunantharan
Managing Consultant
Capgemini Invent Germany
Procurement Transformation
luxmy.parkunantharan@capgemini.com

Dico van Dijk (stream lead)
Managing Consultant
Capgemini Invent The Netherlands
Procurement Transformation
dico.van.dijk@capgemini.com
Authors
Special thanks to our global network of authors who contributed with additional Point of Views of digital procurement:

Maciej Zebrok
Senior Engagement Manager
Capgemini Business Services Poland
Digital Procurement Practice
maciej.zebrok@capgemini.com

Rens Schoorlemmer
Consultant
Capgemini Invent The Netherlands
Procurement Transformation
rens.schoorlemmer@capgemini.com

Adrian Penka
Vice President
Capgemini Invent North America
Head of Operations Transformation NA
adrian.penka@capgemini.com

Philippe Bruneteau
Managing Consultant
Capgemini Invent North America
Operations Transformation
philippe bruneteau@capgemini.com

Elisa Senger
Senior Consultant
Capgemini Invent Germany
Procurement Transformation
elisa.senger@capgemini.com

Sanjeev Singh
Engagement Director
Capgemini Application Services North America
Digital Procurement Transformation
sanjeev.a.singh@capgemini.com

David Wheten
Managing Application Consultant
Capgemini Application Services Europe
Digital Procurement Transformation
david.wheten@capgemini.com

Sourabheya Kumar Vikram
Senior Consultant
Capgemini Invent India
Procurement Transformation
sourabheya-kumar.vikram@capgemini.com

Olivier Bideault
Vice President
Capgemini Invent France
Head of Procurement Transformation France
olivier.bideault@capgemini.com

Guilhem Peaucelle
Principal
Capgemini France
Head of Procurement Excellence COE PBS
France
guilhem.peaucelle@capgemini.com

Swarnim Pant
Senior Engagement Manager
Capgemini Business Services India
Procurement Transformation
swarnim.pant@capgemini.com

Giuseppe Parisi
Account Manager
Automotive Capgemini Italia
Procurement Transformation
giuseppe.parisi@capgemini.com

Ewa Schramel
Senior Manager
Capgemini Business Services Poland
Finance & Accounting, Supplier Enablement
ewa.schramel@capgemini.com

Padmashri SR
Senior Engagement Manager
Capgemini Business Services India
Procure to Pay Operations
padmashri.sr@capgemini.com

Joakim Knagge
Director
Capgemini Invent Sweden/Finland
Head of Procurement Transformation Sweden/Finland
joakim.knagge@capgemini.com

Hareshkumar Panjavani
Director
Capgemini Invent India
Operations Transformation
hareshkumar.panjavani@capgemini.com

Rik van der Velden
Managing Application Consultant
Capgemini The Netherlands
SAP CoE – Sourcing & Procurement
The Netherlands
rik.vander.velden@capgemini.com

Ali Valadez
Senior Applications Consultant
Capgemini Application Services North America
Procure to Pay
ali.valadez@capgemini.com

Greg Bateup
Source to Pay Global Process Owner
Capgemini Business Services Poland
Procurement Practice Lead
greg.a.bateup@capgemini.com

Global Procurement Transformation Leads
The following leads are responsible for the global Capgemini Procurement Transformation Teams:

Adrian Penka
Vice President
Capgemini Invent North America
Head of Operations Transformation NA
adrian.penka@capgemini.com

Sanjeev Singh
Engagement Director
Capgemini Application Services North America
Digital Procurement Transformation
sanjeev.a.singh@capgemini.com

David Wheten
Managing Application Consultant
Capgemini Application Services Europe
Digital Procurement Transformation
david.wheten@capgemini.com

Hareshkumar Panjavani
Director
Capgemini Invent India
Operations Transformation
hareshkumar.panjavani@capgemini.com
ABOUT CAPGEMINI INVENT

As the digital innovation, consulting and transformation brand of the Capgemini Group, Capgemini Invent helps CxOs envision and build what’s next for their organizations. Located in more than 30 offices and 25 creative studios around the world, its 7,000+ strong team combines strategy, technology, data science and creative design with deep industry expertise and insights, to develop new digital solutions and business models of the future.

Capgemini Invent is an integral part of Capgemini, a global leader in consulting, digital transformation, technology, and engineering services. The Group is at the forefront of innovation to address the entire breadth of clients’ opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year+ heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. A responsible and multicultural company of 265,000 people in nearly 50 countries, Capgemini’s purpose is to unleash human energy through technology for an inclusive and sustainable future. With Altran, the Group reported 2019 combined global revenues of €17 billion.

Visit us at www.capgemini.com/invent.