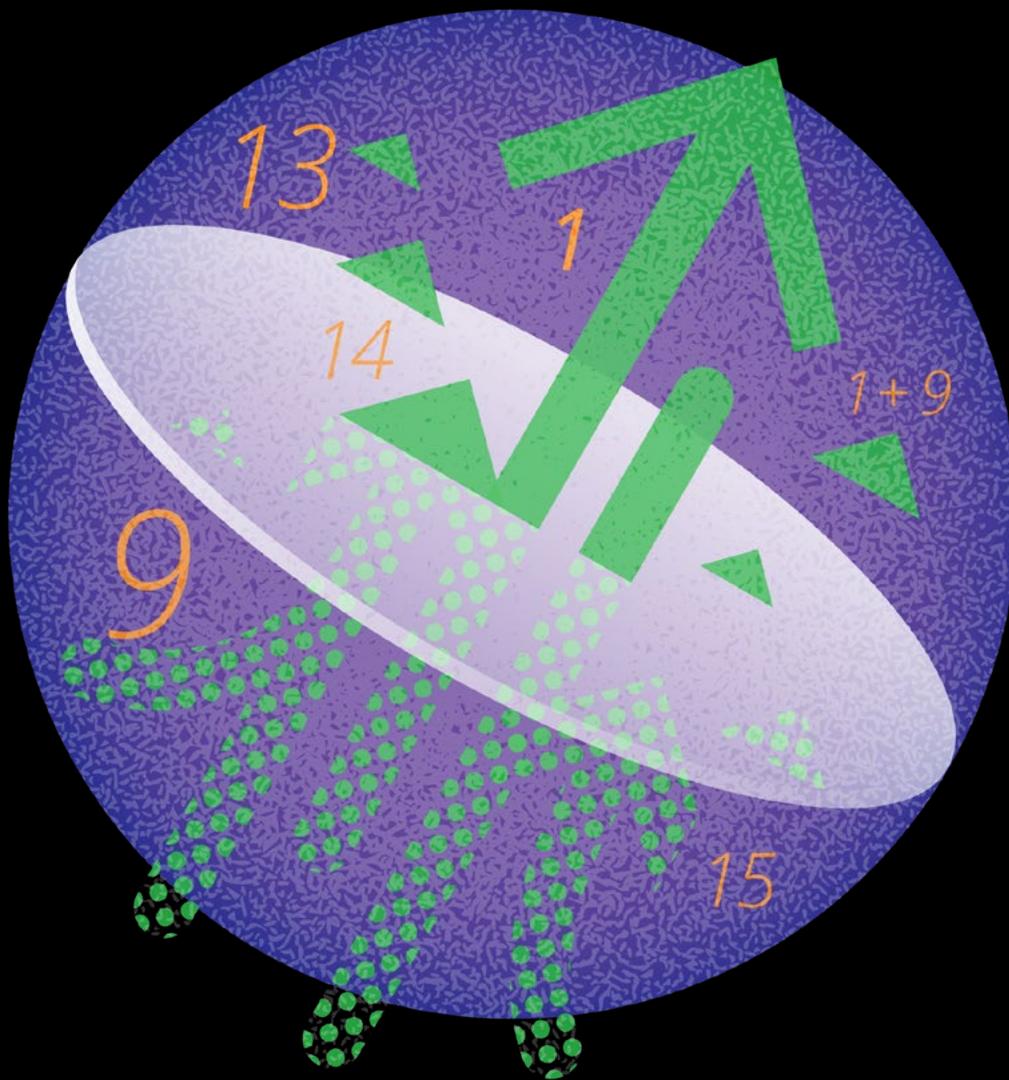


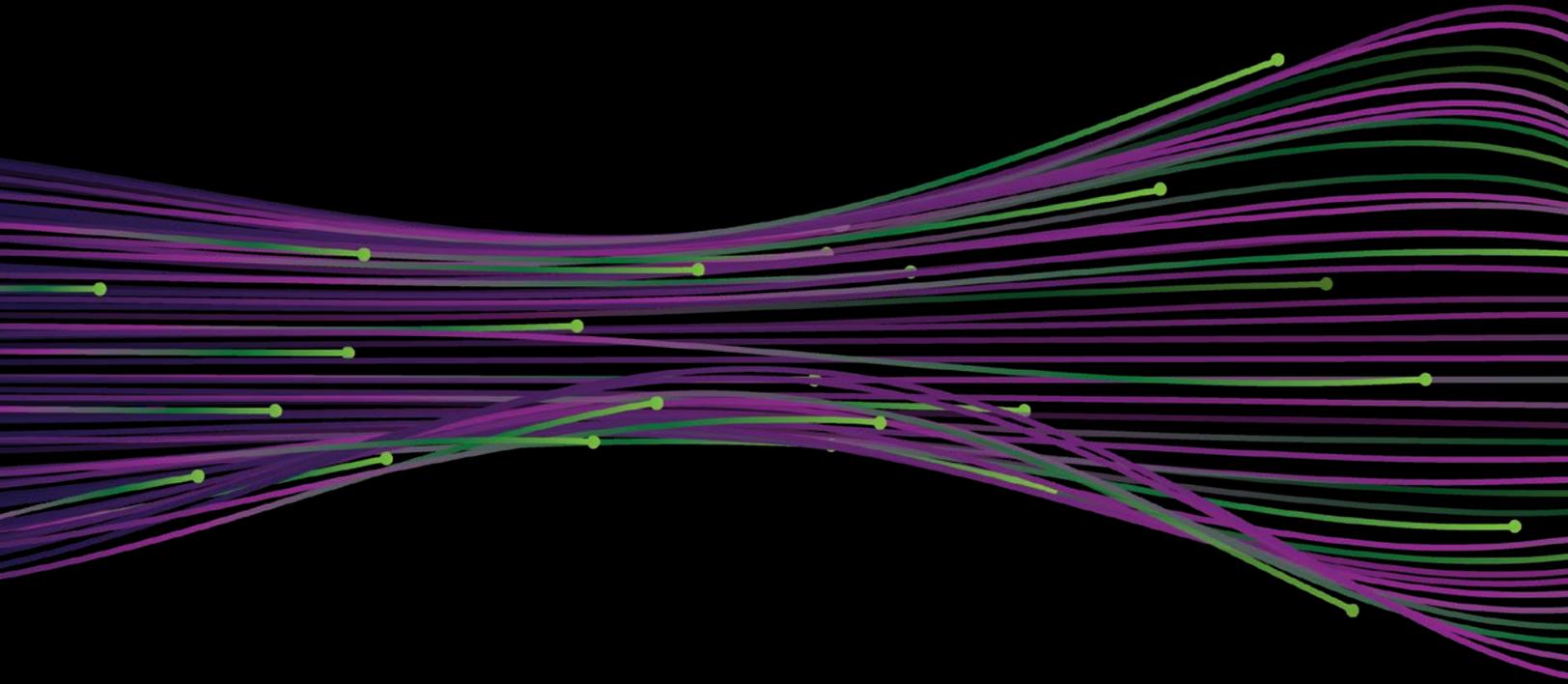
**Deloitte.**



## **OmniaAI**

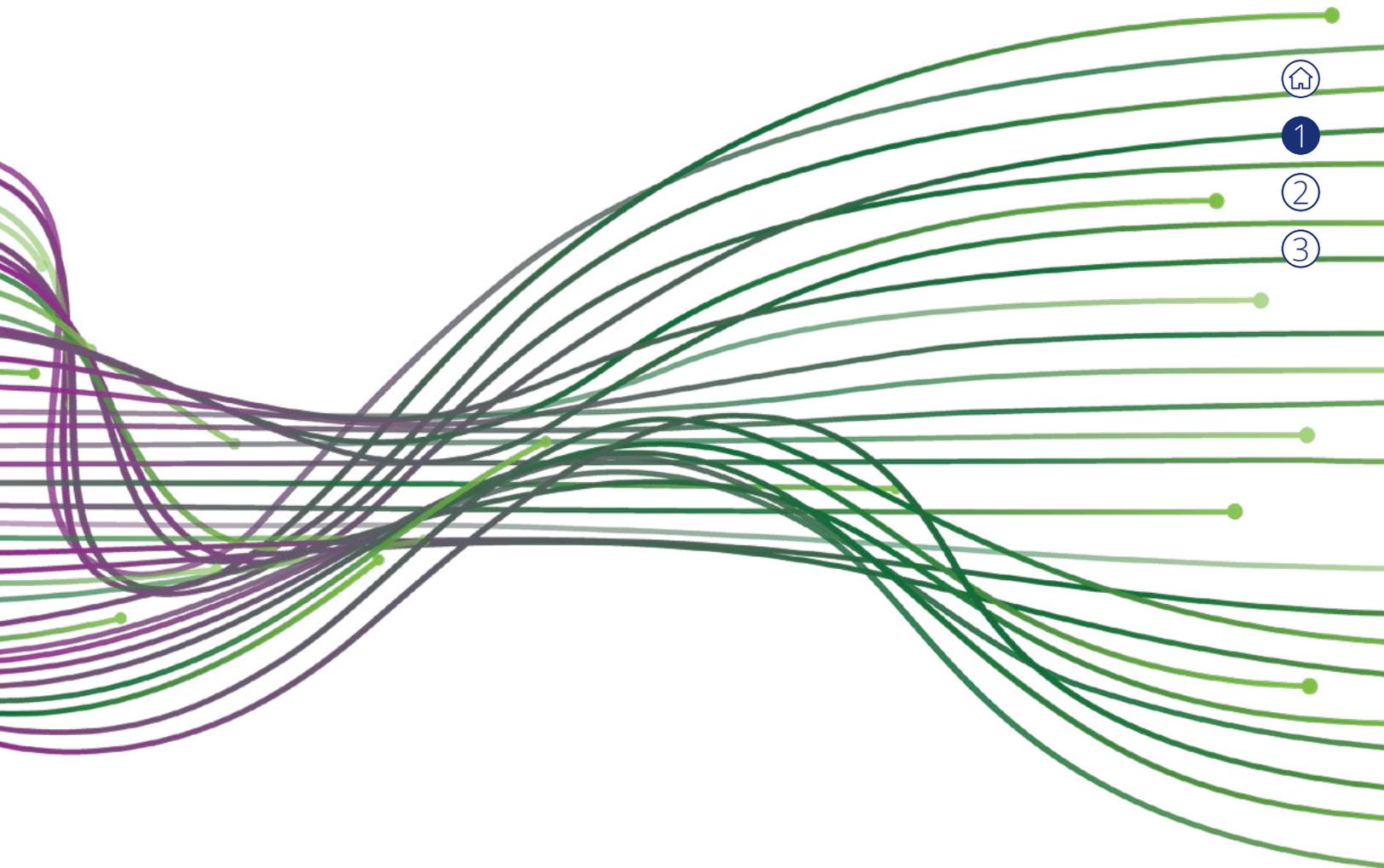
The AI opportunity  
in sourcing and  
procurement

Opportunities in the market today



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## Using data to drive value

**Across Canadian enterprises,** the constant demands for cost reduction and risk mitigation are putting increasing pressure on sourcing and procurement departments to deliver value in new and innovative ways. While the adoption of source-to-settle (S2S) technologies has helped structure the large volumes of data in these processes, many organizations have struggled to use this information fully to drive value for their business. Recent advances in natural language processing (NLP), pattern recognition, and cognitive analytics are opening the door for companies to start using this data to derive insights that could lead to better decision making across their business.



1

2

3

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15

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9



**In today's technology-driven world, many organizations still view artificial intelligence (AI) with an element of fear and uncertainty.**

As a result, the tangible benefits that it brings to sourcing and procurement are still largely untapped. But buried within the wealth of raw information that exists in both internal and external systems are critical strategic, customer, and operational insights.

AI can help illuminate the insights hidden in this data, enabling sourcing and procurement teams to validate or clarify their assumptions, inform decisions, and chart new paths into the future. In Deloitte's 2019 Global Chief Procurement Officer (CPO) Survey, 51 percent of respondents indicated they are now using advanced analytics and 25 percent have, or are piloting, an AI/cognitive solution—up from 19 percent in 2018.

Of those that implemented an advanced analytics solution, 93 percent claim to be satisfied. This highlights the fact that CPOs who harness machine learning, NLP, and cognitive analytics are seeing benefits that would have been unimaginable only a few years ago.

**Investing in the value of data**

Data is the new frontier that businesses need to explore if they want to remain competitive in the evolving economy. Recent advances in computing power and AI are allowing organizations to derive enhanced insight into their existing structured data sources, as well as previously unstructured data sources like contracts, invoices, and rate tables. The ability to extract information and derive insights from these unstructured sources can help unlock a wealth of value for sourcing and procurement departments.

**51%**

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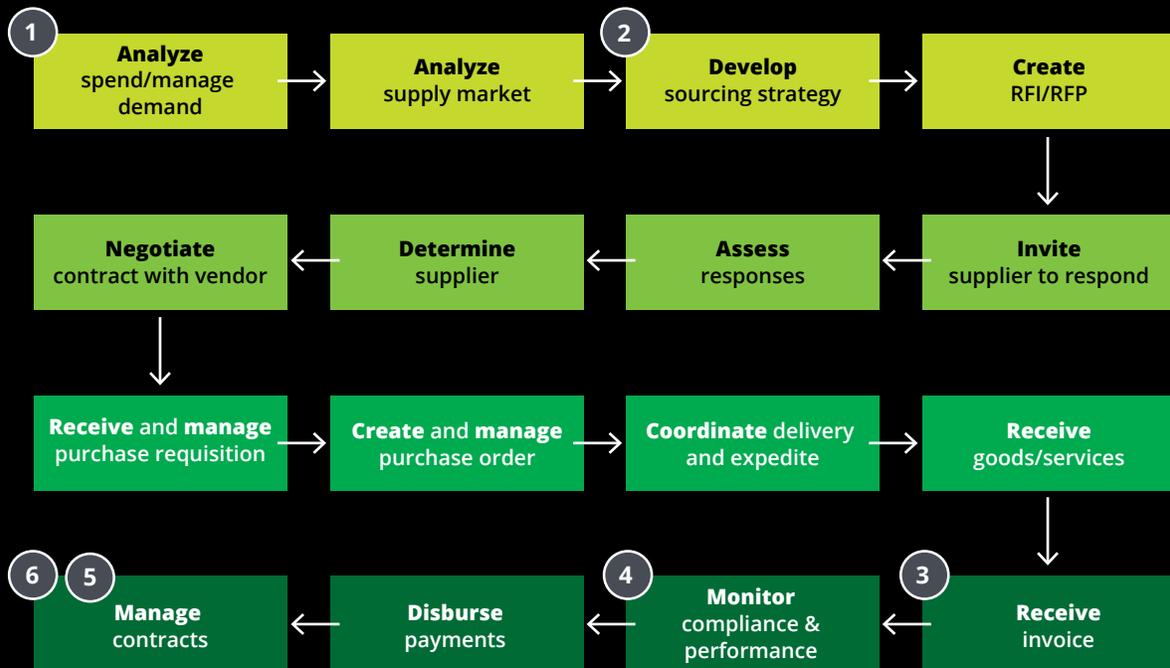


- ①
- ②
- ③

# Opportunities for immediate AI implementation

**Even though AI is often characterized as a tool to drive value,** it can be challenging to determine the specific use cases applicable to a problem. Opportunities exist across all stages of the S2S lifecycle (see Figure 1). These opportunities vary significantly across businesses and industries. Specific to sourcing and procurement, the following section discusses the tangible use cases with adoption in the market today. Each example includes an overview, a high level indication of how AI is used, and an explanation of the potential benefits.

**Figure 1**  
Typical source-to-settle cycle





## 1 Spend classification and enrichment

There is an increasing need to better understand internal spend (the three Ws: *who* spent, on *what*, and with *whom*), along with a need for more robust processes to manage compliance with external contracts and internal policies. Accurate spend data is foundational in the development of effective category, sourcing, and spend management strategies. Spend classification technologies are now allowing even better analysis and in some instances, enriching this data with external information from the web.

### How does it work?

Spend classification algorithms are generally based on several AI techniques. In their simplest form, these tools dynamically search through line item details and flag keywords to tie to spend categories. They do this by linking together input variables, such as account descriptions and supplier names, using NLP. Then machine learning is used to classify the output into specific categories.

### Benefits

Projects that use AI spend classification have typically been able to achieve around 97 percent accuracy in the classification of data. This has led to increased precision in the analysis of spend information, driving more value for an organization. Companies that could benefit the most are the ones struggling to analyze their data, or businesses that are seeking to augment their data with external sources (e.g., to identify products purchased from sustainable suppliers).

## 2 Global sourcing insights

CPOs often run into a web of data when looking to determine their sourcing strategies. New tools are now enabling businesses to use the power of AI to explore high-level sourcing strategies. These enable CPOs to identify where to source specific products and evaluate the savings potential against corresponding risk.

### How does it work?

Tools designed to determine the effectiveness of differing sourcing strategies typically use AI to aggregate and make sense of a myriad of data. This can include data that is third-party licensed or publicly available. By using econometrics, these tools can identify shifts in global supply trends across a wide range of commodities and products, driving insights into the future trends and helping inform the sourcing strategies for different product categories.

### Benefits

Organizations are able to critically evaluate sourcing opportunities through data driven product and supplier insights, allowing them to better understand key industry and macroeconomic trends. This enables businesses to create transparency in the supply chain, identify new sources of supply, and shift category spend to a more optimal allocation.



# 3

## Invoice data extraction

One of the more established uses of AI in accounts payable teams today is in the extraction of invoice data. These systems generally consist of a data extractor with an AI component for automated extraction, a document manager controlling the workflow, and a verification interface for operator-based data capture. For those who don't have source-to-pay systems with e-invoicing in place, this can be a valuable solution, and it's fast to implement.

### How does it work?

Different providers offer various options but generally this technology can be integrated into existing systems or accessed by sending an invoice as an email attachment which can extract all relevant fields within 30 to 60 seconds. The technology uses a combination of computer vision and NLP to enable data extraction from invoices.

### Benefits

The implementation of invoice data extraction can reduce both fraud and manual processing times. In instances where spend data has not been captured at a granular level of detail, these tools can also be used to process historic invoices to provide more insight into an organization's spend patterns.

# 4

## Automated compliance monitoring

Where organizations haven't adopted a source-to-pay system such as Coupa or Ariba, compliance can be a manual, time-consuming process. Even for organizations that have embraced these solutions, there are likely a large number of suppliers that are not enabled within the system. For these situations, AI can be used to help structure the contract, invoice, and PO data to identify and highlight non-compliance.

### How does it work?

Using the techniques described under headings 1, 2 and 3, these tools are able to automatically compare payment terms, determine non-compliance in rates between a contract and invoice, or identify duplicate invoices.

While AI solutions provide transformation opportunities, experience has shown that the current market solutions have not fully matured into concrete products. As a result, the benefits of these solutions are generally greater when applied to a specific business problem. Examples include the auditing of expense receipts for compliance to policy and the auditing of service provider invoices against contracts.

### Benefits

Organizations that adopt these solutions can see a reduction in spend due to fraudulent or erroneous transactions and a reduction in processing times for the auditing of transactions. By helping clients limit leakage and preventing inaccurate payments across third-parties, they are able to capture maximum value from their contracts.



# 5

## Contract data extraction

Using a similar technique to invoice data extraction, contract data extraction allows an organization to structure large volumes of unstructured contract data. At a basic level, this allows organizations to upload large volumes of contracts that may be in PDF, image, or Word file format and then extract key information such as start dates, end dates, payment terms, and references to master agreements.

### How does it work?

An organization first needs to collect all of its contracts in an electronic format. Where necessary, optical character recognition can be used to convert images of the document into a text format. This text is then analyzed using NLP.

In general, the contracts analyzed using this technology are in unique formats and templates based on an organization's procurement practices. Users therefore need to train the models by annotating example documents in a user interface before running them on other contracts.

### Benefits

For procurement departments without structured contract databases, using NLP to extract key information and terms can help in compliance and accelerate the transition to systems such as Ariba or Coupa. In addition, advanced solutions can help determine the risks within a contract, highlighting specific areas for review.

# 6

## Contract lifecycle management

Despite the fact that contract lifecycle management (CLM) has been around for decades, AI is now beginning to make an impact in this area. CLM tools that use AI have the ability to support contract generation, contract negotiation, and the identification of risks within contract language.

### How does it work?

The most successful solutions reduce cycle time and streamline the contract management process by standardizing templates, automating first drafts of agreements, and managing the workflow of the full negotiation process. This can be achieved by consolidating all executed contracts in one place and providing a full audit trail, including the appropriate escalations and approvals. Using NLP, these tools can help identify contract language that deviates from a company's policies and allow contract managers and legal to review the most pertinent clauses in the document.

### Benefits

Organizations using an AI powered CLM system are able to significantly reduce the time required to generate and negotiate with counterparties, as well as more easily identify discrepancies in contracts.

In the context of procurement teams, these technologies are also able to support and facilitate large change projects such as mergers and acquisitions; specifically, the identification of assignment or termination rights and the negotiation of corresponding consents.



## The bottom line

**Artificial intelligence is here now, and it's already having a profound impact on how we live, work, and do business.** Companies, governments, and organizations must embrace innovation in order to reach the places inaccessible through current technologies and processes. AI can and will transform organizational decision-making and drive efficiencies, as well as build new business capabilities with more power sustainable, value-driving activities. But like all revolutions in technology, capturing maximum value and minimizing risk will require an in-depth understanding of what AI is and how it aligns with your core business.

Recognizing the growing importance of artificial intelligence is the first step. Organizations must then understand how to move from theory to meaningful business impact if they are to create a sustainable AI transformation.





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