Procurement and Contract Management Technology Business Case

THE CITY OF Edmonton

Executive summary

The City of Edmonton's Corporate Procurement and Supply Services (CPSS) Branch managed over **$1.6 billion** in spend in 2016, taking on the responsibility to procure and manage contracts of materials and services across the City. Recently, the CPSS business model was redesigned to address the needs of business partners and staff and is being implemented in 2017 to introduce and develop new focus capabilities. These include strategic sourcing, corporate contract management, account management, transactional center and supplier management. In order to effectively rollout and sustain the new CPSS business model, it is necessary to implement an automated solution with tools that enable strategic sourcing to free-up employee capacity and enable these new capabilities. The City manually processes a large number of **POs (29,000+) and contracts (1,700+)** each year, placing high workloads on City resources from transactional activities and limiting continuous improvement of the City's procurement and contract management processes.

Following the **P2P Transformation** and **CPSS Business Model Design** projects, which have previously addressed the City's challenges in structure, people, and process through restructuring, training, and redesign, this business case explains that the City is now appropriately positioned to address its technology needs. Targeted investment in procurement and contract management technology will better enable the City to execute on its strategic plan, ***The Way Ahead***. The selection of a procurement and contract management technology suite would support adopting leading practices such as spend analysis, proactive contract oversight, and supplier performance management to realize the CPSS vision of procurement service excellence

Current state challenges within CPSS and embedded procurement and contract management staff across the business partners lead to the development of detailed business requirements for the proposed tool. These business requirements (attached as part of the business case package) will prepare the City to develop and release and RFP to competitively procure a best-fit and best-value solution. Current state needs identified through a series of workshops in 2013 and 2015 were validated through a series of workshops and stakeholder interviews to identify gaps and pain points in City processes. Modern procurement technologies combined with leading practice processes are capable of addressing many of these challenges. The proposed technology and process improvements in this business case seek to resolve several **key business issues**:

- Replace manual workflow and approvals with an electronic system;
- Replace paper based documentation management, handling, and retrieval;
- Enhance reporting capabilities on City contract term and pricing information;
- Enhance the City's ability to identify procurement opportunities through spend classification and analysis;
- Increase the profile of competitive procurement and reducing the number single and sole sourcing events;
- Manage risk to the City through visibility into contracts and supplier performance; and
- Provide increased access to supplier information and performance management tools

To more effectively deliver procurement and contract management services, the City is **seeking approval and funding for the implementation of a technology solution to support procurement and contract management activities** across the City. This business case presents a cost-benefit analysis for implementing eProcurement technology solution to support the City in making an informed investment decision.

The recommended solution is designed to address pain points and efficiency gaps across the five in-scope processes: Sourcing, Contract Management,Procure-to-Pay, Supplier Performance Management and Spend Analytics.
To develop a coherent recommendation that aligns with the City's overarching IT strategy, interviews and workshops were held with representatives from the City's IT, SAP, and Enterprise Architecture teams. The proposed technology solution was then considered in the context of the City's **IT Enterprise Architecture guiding principles,** with the outcome that the City should prefer an integrated suite and be open and preferential to Cloud software providers. Software demos with leading vendors were organized to inform the thinking of market capabilities and the variety of functionalities available across.

To reflect the diversity and options in the eProcurement supply market and the desired benefits for the City, **three representative scenarios were analyzed**:

- Scenario 1 considered the City's option to maintain the status quo and implement standalone interim solutions;
- Scenario 2 considered the implementation of the full suite of SAP Ariba tools across the in-scope processes, integrated with the City's SAP ECC; and
- Scenario 3 considered implementation of a representative Non-SAP Best of Breed integrated suite of tools across the in-scope processes, integrated with the City's SAP ECC.

The business case **recommendation is to proceed with the selection of a technology solution that contains a fully integrated suite of modules for Spend Analytics, Sourcing, Procure-to-pay (P2P), Contract Management, and Supplier Management**. This corresponds to Scenario 2 & Scenario 3. Selection between SAP Ariba (Scenario 2) and other providers (Scenario 3) should be done based on detailed business requirements, and as per the City's procurement process. Additionally, the business case recommends the decommissioning of the City's Supplier Performance Application (SPA) system in favour of the City-wide use of the Supplier Management module. This is based on reported challenges with the tools user interface, date quality issues, and lack of integration with SAP ECC. The supplier market has several offerings to fulfill SPA's gaps, and so continued in-house development to improve the tool is not considered to be a prudent investment. The recommendation for the implementation of a new technology is based on an anticipated **internal rate of return (IRR) of 51%**, with a **Net Present Value (NPV) of $7.6 M** (for the highest cost Scenario).

This will require an **investment of approximately $10M over a 5 Year period ($6.4M one time and $1.2M recurring from year 3 to 5)** in implementation preparation and technology selection, and implementation activities. **Benefits realization begins in Year 2** and ramping up to full benefits realization in Year 5. Anticipated benefits over the 5 year period include a **combination of harvestable and non-harvestable benefits valued at $20.5M**, with the ability to harvest **$4.0M from the CPSS operating budget over the 5 Year period**. Harvestable benefits will be realized through procurement cost savings through areas including strategic sourcing enablement, PO automation, contract management enablement, while non-harvestable benefits will be realized through reallocation of labour capacity across both CPSS and the business partners. Numerous qualitative benefits arising from the proposed solution are also expected, improving the City's governance and controls, enhancing corporate risk management, and positively impacting employee satisfaction. Summary costs and benefits over the study period can be found below:

Summary Costs & Benefits	Year 1	Year 2	Year 3	Year 4	Year 5	**5 Year Total**
Benefits	$ -	$1.68 M	$5.13 M	$6.63 M	$7.07 M	$20.50 M
Costs	$3.90 M	$2.50 M	$1.21 M	$1.21 M	$1.21 M	$10.02 M
Total	**($3.90 M)**	**($0.82 M)**	**$3.92 M**	**$5.42 M**	**$5.86 M**	**$10.49 M**

The business case implementation roadmap outlines the major activities and timelines that would follow approval of this business case. ***Granting approval of the business case in the current 2016-18 capital budget cycle would accelerate the implementation and thereby, benefits realization***. Pre-implementation activities, including the implementation of a commodity taxonomy and classification system, are recommended to begin immediately while the City releases a competitive RFP to the technology supplier market. Implementation activities would then begin in 2018 and progress for 2 years, with module rollout of Contract Management, Sourcing, and Supplier Performance Management tools occurring in Year 2, while P2P (eProcurement) and Spend Analytics rollout occurring in Year 3. Benefits realization and sustainment activities including change management and supplier enablement would then continue through in later years, supported by an operational excellence program.

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1. Background and Approach for the Business Case

Managing over $1.6 billion in spend in 2016, the City of Edmonton's Corporate Procurement & Supply Services Branch (CPSS) is the main custodian of the City's corporate procurement and contract management activities. In response to the City's growth and evolving procurement profile, CPSS has been undergoing a business model transformation to improve its ability to meet business area service level requirements and position itself as a strategic business partner that supports the realization of the City's goals. To support the successful sustainment and rollout of the City's strategic plan, CPSS is seeking approval of this business case to allocate investment funds for the implementation of a procurement and contract management technology solution. The proposed solution would alleviate manual process pain points negatively impacting the ability of CPSS and business area embedded buying and contract management staff to meet the City's requirements for reduced procurement costs, responsible risk management, and efficient service delivery.

Strategic Context

In 2008, The City of Edmonton released *The Way Ahead* as its strategic plan to achieve its vision for 2040. The 6 key priorities, *The Ways,* define the City's plans to Grow, Move, Live, Green, Finance, and Prosper as a City. The plan is defined by the principles integration, sustainability, livability, and innovation. CPSS is a key enabler that helps deliver on these strategic priorities in a unique way. From procuring the goods and services for major projects like the City's Light Rail Transit (LRT) expansion, to the introduction of a Sustainable Purchasing Policy, and the Branch's mandate to always achieve value for money from its procurements, CPSS directly contributes to the future success of *The Way Ahead*.

P2P Transformation

As the City has grown, so have the demands on the City's various Departments and Branches, creating the need for the review and redesign of the City's structure, processes, and technology infrastructure. The ongoing Procure-to-Pay (P2P) Transformation has altered the structure, processes, and people dimensions of CPSS's operations, with changes being conducted throughout 2017. The City's governing Directives for Procurement and Contract Management have been updated and approved. Processes across Procurement, Contract Management, and Payment have been redesigned, and new Controls Frameworks to support compliance have been introduced in response to P2P challenges in maintaining high service levels and strong risk management.

Structural changes have taken form through the CPSS Business Model Refresh, with the introduction of new functions to support Corporate-wide Contract Management and Continuous Improvement. Employees are being trained and reorganized to develop specialist skills and standardization of key knowledge and skills. All of these changes are contributing to the introduction of a focus on service delivery, however, there remains a need to address technology challenges that are limiting the efficient and effective execution procurement and contract management across the City. While many processes were redesigned and improved throughout the P2P Transformation, the implementation of a technology solution will provide another opportunity for target improvements through process redesign to leverage the full capabilities of the proposed solution.

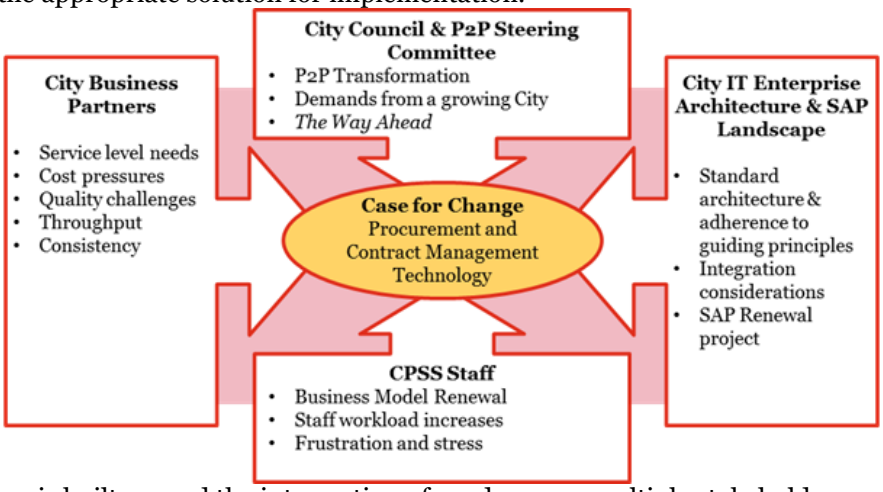
Open City & Digitization

The Open City initiative is the City's method to improve open government and introduce innovation and transparency to City processes. This includes the digitization of processes for improved data capture for reporting and decision making. Digital data collection storage through a procurement and contract management technology will enable numerous benefits both within CPSS and across the City. These include: visibility into supplier and vendor performance through data tracking. Reduced risk through avoidance of unsafe and poor performing suppliers. Creation and storage of approval and audit trails to monitor the effectiveness of City governance.

The 2017 Business Case

In 2008, 2011, and 2013 business cases were developed to support the implementation of Procurement and contract management technology across the City, and the 2013 case was resubmitted in 2015 due to an ongoing need for new tools. These were each tabled, due to the need to address structural and process challenges prior to making a large investment. In 2017, transformations to address these areas are in-flight across the City. The next focus area is addressing the need for modern technology to support procurement and contract management, while Accounts Payable is in the process of implementing the Dolphin DMS Accounts Payable automation solution.

This business case is of similar scope to the 2013 case, differentiated by broadened stakeholder engagement with the City's IT Branch to consider integration requirements with the City's existing systems and ongoing renewal projects. This business case is supported by the IT Enterprise Architecture Team, the SAP Team, CPSS leadership and staff, and Accounts Payable, who have each been engaged and interviewed to develop the business requirements for the proposed solution. If the business case is approved and sufficient capital funding is allocated, inputs from each of these stakeholder groups will form the basis of a competitive RFP process to select the appropriate solution for implementation.

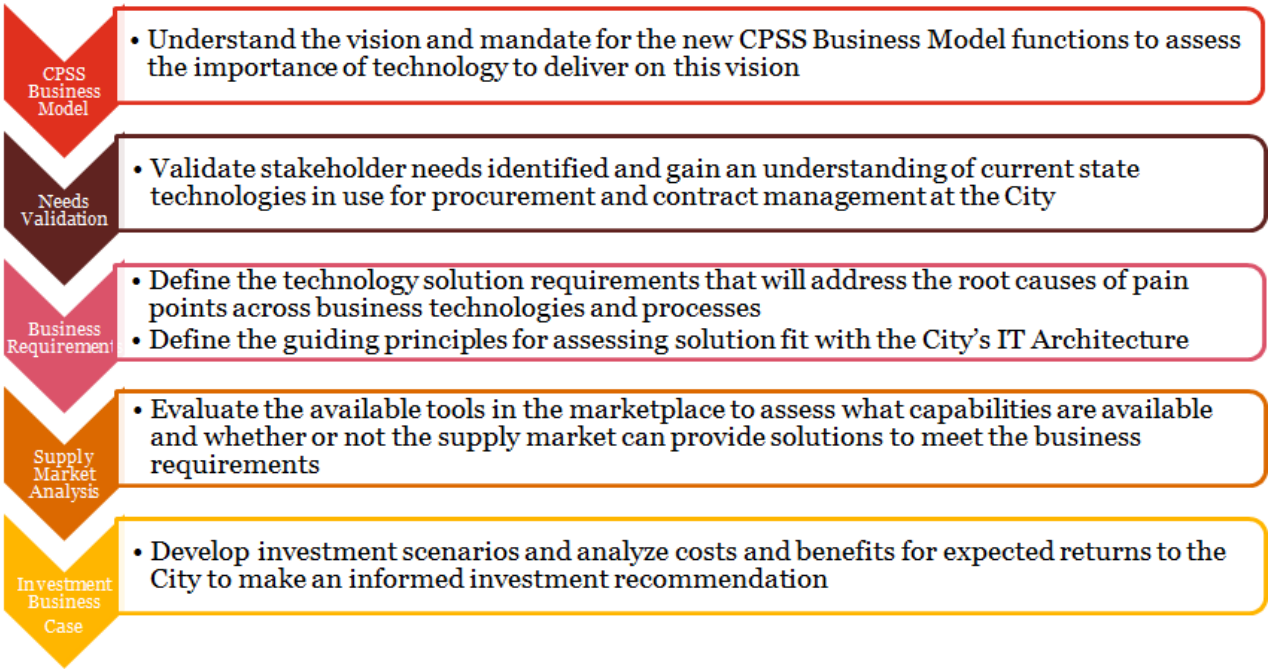


The case for change is built around the intersection of needs across multiple stakeholder groups. Ongoing transformation work around the City has resulted in the need for CPSS to address its aging technology. The opportunity to address multiple business challenges relating to manual work and increasing demand across the City for procurement and contract management positions the City to realize substantial return on investment for capital set aside for implementing new technology.

Business Case Approach

The business case was developed with the intention of tying into the context of the new needs surrounding the implementation of the new CPSS Business Model, while balancing the needs of CPSS with the needs of business partner embedded procurement and contract management staff around the City. The business case works from the redesigned business model to assess which major pain points will remain after the implementation of new P2P process changes and restructuring. The business requirements are then developed to identify what capabilities are required from a new technology to address the root causes of the pain points in procurement and contract management. Business requirements external to procurement and contract management, such as alignment with the City's IT Enterprise Architecture and SAP renewal project

were also considered.



The supply market was analyzed through a combination of research, solution demonstrations, and direct contact with vendors to assess and map the capabilities of shortlisted suppliers. Six demonstrations with solution vendors including SAP Ariba, Coupa, Ivalua, CobbleStone Systems, COOLNet Alberta, and Seal Software were completed throughout the supply market analysis. This provided CPSS leadership and members of the IT team with a view into the available solutions, while also allowing for the capture of implementation roadmap considerations and cost requirements. This information was incorporated into a cost benefit model to determine the anticipated return on investment of the City's major solution options and make a recommendation on whether or not the City should allocate funds for the implementation of a procurement and contract management technology solution.

The approach of having the technology business case completed with detailed consideration of the new CPSS business model and IT Branch plans (including the SAP Renewal project) works to align the business case and recommendations with the specific context in which the technology will be implemented. With a diverse set of future users, multiple points of view were considered to develop a comprehensive set of requirements that lays the foundation for the City to execute on the business case. The business case works to identify the key in-scope processes and capabilities that are essential in equipping CPSS to deliver on the City's strategic plan.

2. Scope and Objectives

The business case scope balances the needs of the new CPSS business model with the practical constraints of developing a set of requirements that can fulfilled by the supplier market with limited customization and expense. Clear objectives were defined in alignment with the renewed vision for the CPSS, including the Branch's shifting focus towards Strategic Sourcing and Corporate Contract Management. This section outlines the focus areas of the business case and highlights the breadth and depth of the study.

Scope

This business case sets out to evaluate the attractiveness of the City investing in an Procurement and Contract Management solution. The potential return on investment, is quantified through a set of investment metrics including undiscounted return on investment (ROI), net present value (NPV), internal rate of return (IRR), and the payback period. The case assess the costs and benefits of a solution implementation impacting the following in-scope processes:

- Spend Analytics
- Sourcing
- Procure-to-pay
- Contract Management
- Supplier Performance Management

Objectives

This business case is intended to provide the necessary technology needs assessment and financial analysis required for the City to make an informed investment decision. The business case report seeks to achieve several objectives:

- evaluate the City's business requirements for a procurement and contract management technology solution;
- discuss how a new technology solution would integrate with the City's existing systems and processes;
- provide a recommendation on whether or not the City should invest in a technology solution supported by an estimated return on investment based on expected costs and benefits;
- show a pragmatic implementation roadmap to reflect key implementation activities; and
- obtain approval for capital budget allocation to the implementation of a procurement and contract management technology solution.

Desired outcomes for the proposed technology implementation:

- enable CPSS to provide consistent and reliable service levels to the business areas and increased procurement and contract management throughput;
- reducing non-value-added work in the procurement and contract management processes by automating manual processes;
- providing a platform for enhancement of Strategic Sourcing and competitive procurement at the City;
- increase value delivered to the City through enhanced visibility and oversight of corporate contracts;
- increase governance, controls, and the transparency of purchases, payments, and commitments made on the City's behalf; and
- increase employee satisfaction through the reallocation of staff effort from transactional work to strategic, value-added work.

The business case seeks to fulfill two purposes: 1) to serve an assessment of the current state of procurement and contract management technology at the City, and 2) to serve as an economic analysis to justify an investment decision. Both areas are covered in complementary detail, as a technology implementation decision should be closely tied to the business challenges and gaps it intends to address.

3. Context Analysis

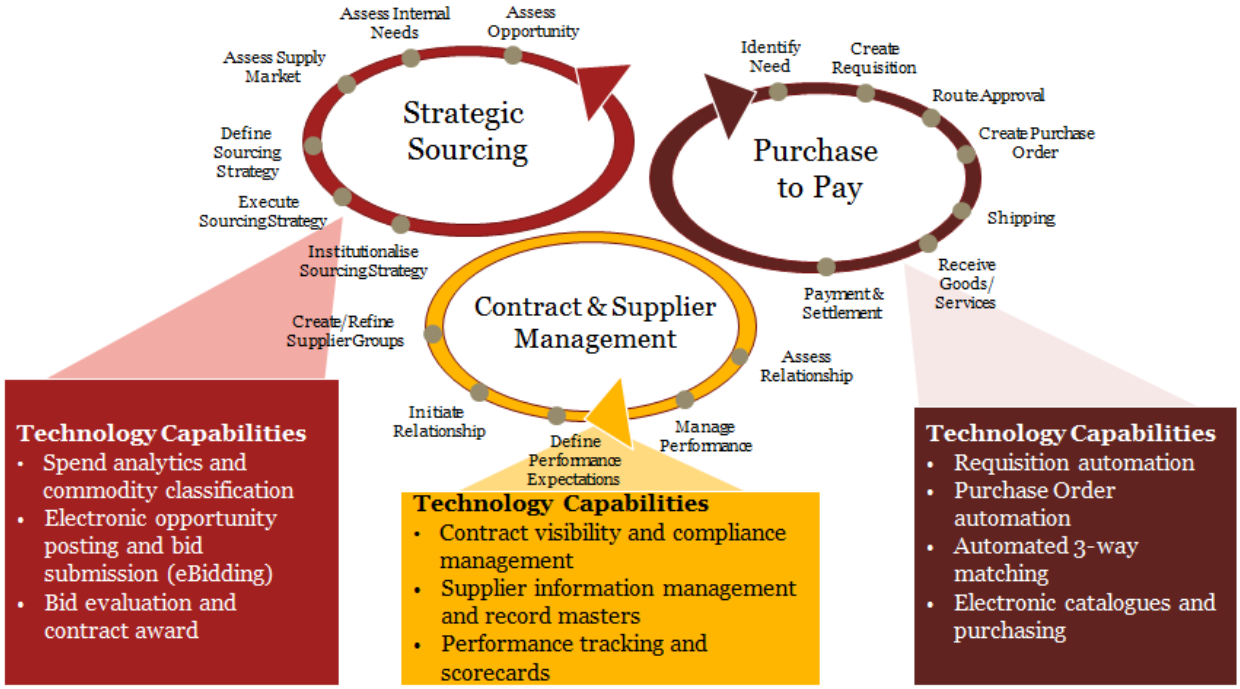
The value derived from the use of a procurement and contract management technology is directly linked to the context of its use. The maturity of the City's processes and operating model are a large determinant of the ability to realize benefits and savings from the technology, as well as the City's ability to integrate the solution with existing systems. This section identifies the current state of the procurement and contract management processes at the City to identify where technology can address existing gaps in the context of the new CPSS business model. It also details the enterprise architecture into which the solution must fit, with an overview of the current tools in place and integration considerations for the proposed system.

Needs Validation & Gap Analysis

A detailed current state needs validation and assessment of the in-scope processes at the City involved a series of workshops and interviews with stakeholders. This assessment leveraged findings from the 2013 eProcurement business case and validated unresolved needs with CPSS leadership, management, and staff. The Needs Validation focused on the following key procure-to-pay processes:

- Spend Analysis;
- Sourcing;
- Procure to Pay (P2P);
- Contract Management; and
- Supplier Performance Management.

The in-scope processes are shown below at a high level, with Strategic Sourcing constituting both spend analytics and sourcing activities. Across each process, there are multiple capabilities available in the supply market.



Pain points across each process are summarized below.

Spend Analysis

Current State Summary: The spend analysis process at the City is relatively immature, as the City continues to use an outdated North Atlantic Treaty Organization (NATO) taxonomy code as opposed to the more common UNSPSC (United Nations Standard Products and Services Code),

preventing granular analysis of spend to the category level. The City has adopted Tableau as a dashboarding tool, but is limited in its spend analysis and dashboarding capabilities based on inadequate spend classification and manual data extraction, cleansing, and manipulation from SAP.

Key Gaps: The City's spend analytics capabilities are held back by lack of a spend taxonomy for classifying spend into categories and subcategories, as well as the absence of a spend analytics tool with the ability to cleanse, enrich, and manipulate data into dashboards and visualizations. The presence of inconsistent master data is another gap area for the City, with disparate data sources such as SPA occasionally providing conflicting data to SAP and inhibiting business intelligence.

Business Impacts: The absence of category level spend data limits the City's ability to identify consolidation opportunities and mature its procurement processes through the adoption and execution of category strategies and obtain cost savings and value added benefits such as lead time reductions from City suppliers. Inconsistent master data requiring validation and compilation from multiple sources reduces the City's ability to develop new procurement strategies and report on its performance.

Sourcing

Current State Summary: The City does not currently use a purpose-built sourcing tool other than complying with its obligation to post its purchasing opportunities (i.e. requests for information, qualification, proposal, etc.) on the Alberta Purchasing Connection (the APC). The APC requires manual and paper based processes to develop sourcing documents, receive, distribute, and evaluate supplier responses. Workshops have revealed a lack of consistent template usage, and sourcing event documentation (RFx documents) are often repurposed for new procurements. The City requires that suppliers to submit a large number of paper copies for most bid submissions, which are then manually delivered for evaluation and filing.

Key Gaps: The City does not currently use a purpose-built sourcing tool to leverage electronic bidding (eBidding), and relies upon manual processes and workflow to generate RFx documentation, post opportunities, and receive and evaluate supplier responses. The City also requires hard copy submission of most supplier responses, instead of accepting (and preferring) electronic submission. Other key gaps include account management capabilities including procurement planning, workload and milestone visibility and tracking.

Business Impact: The labour intensive nature of the City's processes and the absence of a an electronic sourcing tool results in extended procurement timelines, employee frustration, and a reduction in the City's abilities to receive bids from qualified suppliers. The manual processes result in inefficiencies in document drafting and Law review while increasing the likelihood of errors. This could be addressed through implementation of a sourcing content library and collaborative authoring tool. The City's inability to notify suppliers of opportunities through an online network limits the City's likelihood of receiving bids from all qualified suppliers in the marketplace. Back end evaluation processes are slowed due to the need to distribute and review hardcopy proposal documents. The cumbersome bid submission process at the City may be reflected in higher than necessary pricing from suppliers, to compensate for the time required to meet the City's proposal requirements.

Procure to Pay (P2P)

Current State Summary: The current state of P2P at the corporate level is still developing. Purchase requisition and purchase order (PO) processing is a manual process, often involving printing to approve and communicate POs. Purchase orders are issued by fax and email. The City is not using a supplier network or other digital methods of issuing purchase orders. There is no consistent practice around the printing of the email or the facsimile transmission record and including it into the PO file to document the communication of the PO. City business partners interested in obtaining items from Central Stores must place reservations in SAP, with limited product information available. Low value orders are also transacted using two other methods: (i) using a Corporate Credit Card (CCC); and by (ii) placing an order, which will be invoiced, without issuing a purchase order (or CCC).

Key Gaps: There is no dedicated P2P tool that allows for electronic PR and PO approval and communication. No dedicated electronic catalogue hosted by Central Stores for business partner use. No supplier self-service capabilities exist for registering on an online portal to view opportunities. Suppliers cannot provide the City with access to online Punch-out

catalogues that allow for purchasing through a City eProcurement system. No system exists to allow for order tracking with suppliers as well as linkage from internal procurement system to suppliers' external catalogue and directly updating the cost code accounting.

Business Impacts: Corporate users have limited ability to see items available in Central Stores, resulting in increased time to search for and research products. Corporate business partners may be purchasing outside the Central Stores system due to their inability to search easily in a hosted catalogue, resulting in increased costs and reducing the City's leverage with its suppliers. The absence of Punch-out catalogues requires buyers and purchasing staff across the City to conduct time consuming research to verify product details, pricing, and availability, and manually enter these to release a PO. Suppliers not being able to provide insight into order tracking increases the City's level of uncertainty and hinders project planning.

Contract Management

Current State Summary: The City's contract management process is largely a manual, paper based process, and reactively addresses the contract management lifecycle. The City's existing digital contract library in Supplier Performance Application (SPA) has data quality issues. Important contract details such as pricing information for goods and services contained with Master Service Agreements (MSAs) are not always available to buying staff when buying against contracts. Contract drafting and negotiation does not use a standardized and locked library of clauses or collaborative authoring tool. The City's IT Vendor Management Office (VMO), does use CobbleStone Systems's Contract Insight as contract management technology, but this is limited to the IT Branch and is not in place across the City. While contract templates can be found through the City's OneCity workplace and Google Apps, content control is not assigned to specific users (i.e. Law for terms and conditions).

Key Gaps: There is no contract management tool in place at CPSS and across the business partners to support execution of contract lifecycle activities including contract drafting, issuance, management, amendment, or closeout. The City relies upon manual workflow and cannot assign content privileges and contract version control for review and approvals. The City does not apply a full lifecycle approach to contract management, and does not have a tool to provide notifications of approaching contract expiries or possible contract violations, or provide functionality to support contract change orders. No collaborative portal is supported to allow for contract version control and redlining with suppliers and internal business partners when developing, reviewing, or amending contracts.

Business Impacts: Manual contract oversight and inadequate availability of contract data results in reduced contract compliance and requires non-value added time from contract management staff. The manual nature of contract management limits the City's ability to detect purchases that are outside of existing negotiated contracts, opening the City to risk of value leakage. Inadequate visibility into contract milestones results in reactive and last-minute renewals and extensions, limiting the City's ability to negotiate for additional value or identify other opportunities before extending or renewing contracts. This impact is effectively that of a single source procurement, and exposes the City to the risk of achieving sub optimal value for money. Review of legal terms for each contract, due to the lack of a standardized clause library, is a time consuming and therefore expensive process for City resources from Law Branch.

Supplier Performance Management

Current State Summary: The City does not have a streamlined supplier performance management process for suppliers beyond Design & Construction (D&C) suppliers. While supplier information is stored within SPA for D&C suppliers, scorecards must be manually updated with metrics data and are not configurable to the specific contract or supplier. The SPA tool stores limited supplier compliance information related to health and safety, insurance, and sustainability, but can become outdated throughout the duration of a contract as suppliers cannot access and update their information as required.

Key gaps: There is not widespread adoption or usage of a dedicated supplier performance management tool with customizable supplier scorecards. No technology exists to allow for suppliers to maintain up to date profiles with compliance information (i.e. Proof of Insurance, Certificates of Recognition, Health and Safety performance, etc.), as SPA must be updated manually throughout the duration of a contract. There is no electronic method for the City to obtain feedback from its suppliers.

Business Impacts: Supplier information and compliance documentation may become outdated, exposing the City to the possibility of conducting business with non-compliant suppliers that may have an elevated risk of a liability or safety event occurring while engaged in business with the City. The limited capture and storage of supplier performance data increases the risk of the City awarding contracts to poorly performing suppliers and pending claims, litigation and disputes. This puts projects at risk of suffering from quality issues and budget and schedule overruns, reducing the City's value for money on its procurements.

Technology use at the City

Current Systems in Procurement & Contract Management

The current state of the procurement and contract management technology landscape at the City is summarized in the table below with a high level description of their usage and level of customization.

Technology Name	Description & Usage for in Procurement & Contract Management Processes	Level of Customization
Tools currently in place		
SAP ECC (6.04) (Renewal in progress)	Enterprise resource planning technology used across the corporation for: • Finance & Controlling • Materials Management • Project Systems • Sales & Distribution • Plant Maintenance • Human Resources SAP ECC is an installable unit that supports a common corporate database that supports execution of business processes. SAP makes master data available across the City and allows for report generation for the key functions above. SAP ECC supports procurement processes by allowing for the creation and management of purchase requisitions, purchase orders. SAP facilitates payments as part of the procure-to-pay process, registering important information such as goods receipt.	The primary usage of SAP for procurement and contract management involves the Finance (FI) and Materials Management (MM) modules. Numerous reporting customizations in MM include 220 customized transactions and reports Current integrations or interfaces: • MSDS Online Viewer • Supplier Performance Application (SPA) • Alberta Purchasing Connection (APC) • RightFax • M5 Fleet Information System • FRS Asset Management (Adobe Forms) • Rapid Mart & BI Reporting • e-Builder • AP Dolphin DMS • COOLNet Alberta
Supplier Performance Application (SPA)	City developed tool for supplier management: • Supplier bid history information and procurement files (approximately 4,000) • Contract information • Performance evaluation tools for Design & Construction	• SPA receives 1-way updates from SAP • Customized performance evaluation scorecards based on • Pending 150+ pending improvements awaiting funding and approval

CobbleStone Systems	End-to-end contract management tool in use with City IT: • Contract drafting & versioning • Contract Issue & administration • Notifications, extensions, & closeout	• Integrations to AP systems and linkage to SAP.
OneCity Workplace & Google Tools	Stores Professional Services Toolbox (Buyer's Toolbox is under construction) • Access to document drafting guidance • Access to forms and templates	• Online toolboxes contain document templates. No integrations with SAP & others.
Oracle PeopleSoft	Human Capital management tool for recruitment, payroll, benefits, and other HC administration tasks	• Provides delegation of authority for the City
Tools currently being implemented		
AP Dolphin DMS (Implementation in progress)	Accounts Payable tool handling back-end payment functions: • automated invoice workflow and approvals • invoice processing through mail and email • optical character recognition and invoice scanning	• Complete integration with SAP ECC (SAP certified tool)
Technologies being considered		
CoolNET Alberta	An eBidding tool to support connecting suppliers with Construction opportunities within Alberta	• City is planning a pilot of CoolNET for an RFP in Summer 2017

Integration Considerations

The new system will require several data linkages and integrations with other technologies at the City. Integrating the tool adds complexity to the implementation, but also enhances the value that can be obtained by providing full cycle visibility across the City to enhance planning and budgeting through increased usage of available data.

Existing Technology	Integration Considerations
SAP ECC (Renewal throughout 2017-2018)	Requires full integration with all modules of selected system to record procure to pay transactions completed through the proposed technology's online catalogues, contract management module, and P2P module.

Supplier Performance Application (SPA)	SPA will be decommissioned and will not require integration. The associated bid response, contract, and supplier performance data stored within SPA will be migrated into the respective modules of the selected solution.
AP Dolphin DMS (Implementation with expected May 2017 go-live)	Requires integration with P2P module to allow for three-way matching of purchase requisitions, purchase orders, and invoices. Dolphin AP resides inside the SAP system, so integration with SAP ECC will address integration with Dolphin AP. Accounts Payable will benefit from visibility in the system to original purchase requisitions and purchase orders.
CobbleStone Systems Contract Management	CobbleStone systems will be replaced by the contract management module of the proposed technology solution, so no integration will be required. Contracts and associated metadata will be migrated during the implementation process.
Oracle PeopleSoft	Integration to PeopleSoft is not recommended. Linkage of delegation of authority, role profiles and organization chart. PeopleSoft integration could be necessary if the City would like to track benefits, accruals, or time entries through PeopleSoft from contractors paid through Accounts Payable. If the City decides to continue to pay contractors through SAP without benefits or accruals, no integration will be necessary.

Perspective on Supplier Performance Application (SPA)

This business case involved an assessment of the SPA tool to understand the tool's use and capabilities and make a recommendation on whether or not the tool should remain in continued use or be replaced with a supplier performance management tool available in the marketplace. This assessment was conducted on the basis of interviews within CPSS and the IT teams, as well as a tool demonstration provided by CPSS to demonstrate its functionality and user interface. The results of the assessment recommend that SPA be decommissioned and replaced by the supplier management module of an available solution in the market. This is based on the presence of capability gaps present in the existing tool compared to marketplace offerings.

The SPA tool runs on the .Net platform and is one of about 50 applications supported by the IT development team. SPA has about 200 users distributed throughout the City's buying staff and Design & Construction users. SPA was developed as the City's response to audit findings that its processes and systems did not adequately prevent the award of repeat work to poorly performing suppliers. SPA is in use at the City to store procurement file information (from around 4000 files) regarding the bid history and performance of suppliers in executing their contracts with the City. The tool also features a performance questionnaire that is in use for Design & Construction to assess and report on the performance history of suppliers. This information is retained for later use in evaluating new supplier proposals to the City.

Interviews with SPA users revealed challenges in using the tool due to slow data entry and a challenging user interface. The overall sentiment is negative from both buying staff and IT users, largely due to complaints with poor user experience and data quality. A list of 155 improvements for SPA has been proposed to address capability gaps, with additional user experience changes through use of Telerik. The root cause for these challenges is that the tool development began before completion of solution design as part of a fast-tracked implementation. Additionally, the in-house development of the tool exposes a risk to business continuity from lack of adequate knowledge capture: if the original developers of the tool leave the City, the City will have challenges in continuing to modify and improve the tool. Offerings supported in the marketplace mitigate this risk.

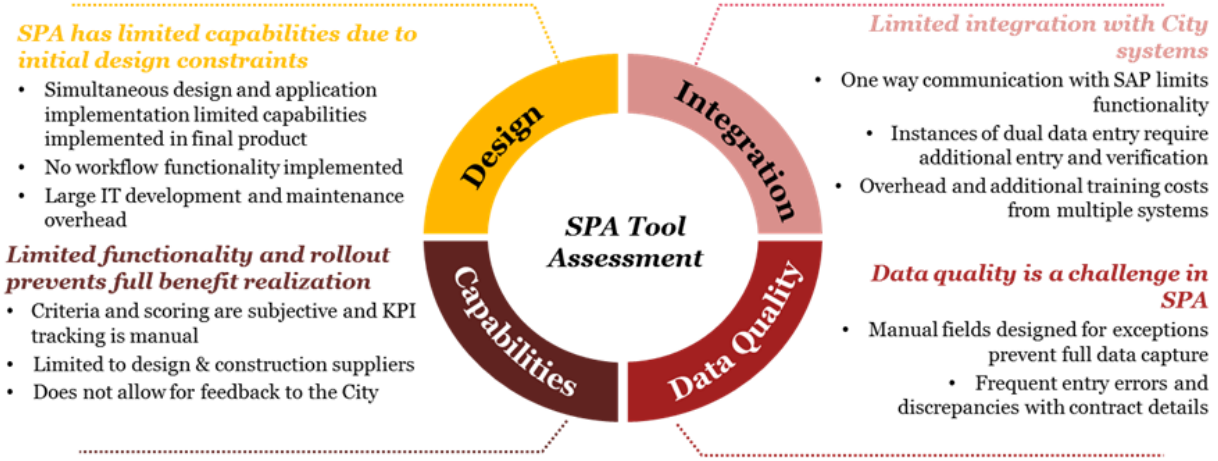
"It takes us hours to perform tasks that should only take minutes"

- SPA User

The large SPA user base resulted in a reduction in the number of mandatory entry fields as a way to address different needs and exceptions from a diverse group of stakeholders. This has caused the tool to

be plagued by data quality issues, as users do not have to input all of the necessary information that may be used in downstream reporting. SPA has a one way integration with SAP to receive regular updates of the vendor master. These factors make dashboarding and reporting difficult despite the inclusion of a Business Intelligence tool with SPA.

The supplier performance and scorecard functionality in the tool has found success since being implemented for Design & Construction in Fall 2016. The scorecard allows for suppliers to be rated across multiple categories of project performance, such as quality, scheduling, and safety against a set of rating descriptions. There is no automatic updating of supplier performance metrics (for example, on-time delivery), but the tool does allow for manual entry of supplier performance KPIs at the discretion of the evaluator. SPA's performance evaluation only allows for one-way communication with suppliers, and does have functionality for suppliers to provide feedback to the City, limiting its ability to enable collaboration.



The current SPA tool is not adequate for addressing the pain points identified in the Needs Validation. In alignment with the City's IT guiding principle, "Reuse before Buy, Buy before Build", it is recommended that the City decommission the SPA tool in favour of purchasing a replacement from the supply market. This will reduce the development overhead required to build tool improvements in-house. Market solutions are undergoing rapid improvement and frequent updates which cannot be efficiently matched by the City's IT team, given their broader scope and mandate to the City.

Procurement IT Architecture and Technology Landscape

Consideration of the City's guiding principles for enterprise architecture should guide the selection of an appropriate technology solution. The table below summarizes the impact of each guiding principle on the selection and implementation of a procurement and contract management technology solution.

Enterprise Architecture Guiding Principle	Impact on Procurement & Contract Management Technology Selection
One City	• Consider involvement and needs of all business areas and future users of the software, and ability to address broad stakeholder needs throughout selection and implementation

Balance Corporate & Branch Needs	• The span of procurement and contract management extends beyond single business areas, specifically due to business area embedded purchasing and contract management in addition to CPSS • There is a need for business area functionality across Departments, and so ownership decisions must be decided at the Corporate level
IT Solutions are Functionally & Technically Scalable	• Solution should be able to be rolled out across multiple business areas and demonstrate flexibility to varying levels of usage through cloud-platform and ability to obtain increased numbers of licenses/subscriptions (depending on fee model) • Indicates that a cloud-based SaaS solution is a strong candidate for implementation
Ease of use	• User experience among identified end-user groups will be evaluated as part of the technology selection process and must be evaluated based on City standards and guidelines
Reuse Before Buy, Buy Before Build	• Requires confirmation that the technology needs in existing business areas cannot be satisfied by using or modifying an existing automated process, or purchasing a tool available in the market before considering in-house development. • Market scan shows limited capabilities in existing tools can be addressed by purchasing purpose-built technology, while upgrading SPA would require substantial development work.
Data is Provided by Authoritative Source	• Data will be stored and managed through two way integrations to prevent conflicting data across disparate sources.

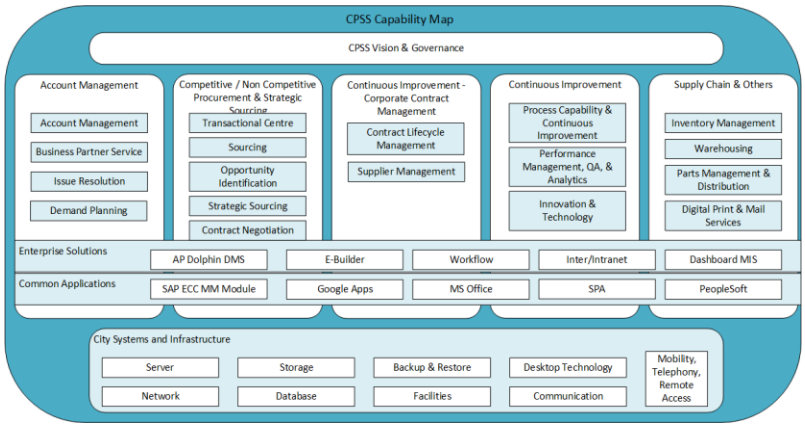
Routine Tasks are Automated Where Appropriate	• The proposed tool offers numerous automation opportunities through:
	  ◦ Contract Management
	  ◦ Supplier Performance Management
	  ◦ Workflow and approvals automation
	  ◦ Sourcing document drafting, bidding, and bid evaluation
	  ◦ Procure to Pay automation of purchase requisitions and purchase orders

Data is Captured Once and Exchanged	• Integration with existing SAP ERP and the AP Dolphin tools will be essential to the eligibility of a technology solution. • Minimizing the requirement for dual entry of information is a priority, creating a preference for integrated solutions.
Prefer Real-Time Data Exchange	• Increased frequency of information update and increased levels of integration is preferred.
Active Management of Public Information and Technology Assets	• Ability to release and report on information contained with the tool to deliver accountability to citizens regarding detailed procurement spend and contract information. • Data should be available for performance metrics and the Citizen dashboard as deemed necessary by the City.

Risk - Based Approach to Security	• Technology solutions will be secure from unauthorized access and data and content will be assigned based on user privilege rules.
Security by Design	• Desire to build in controls and adapt them to level of risk based on compliance to City, legal, and regulatory requirements while including audit considerations.

Proposed Procurement IT Architecture

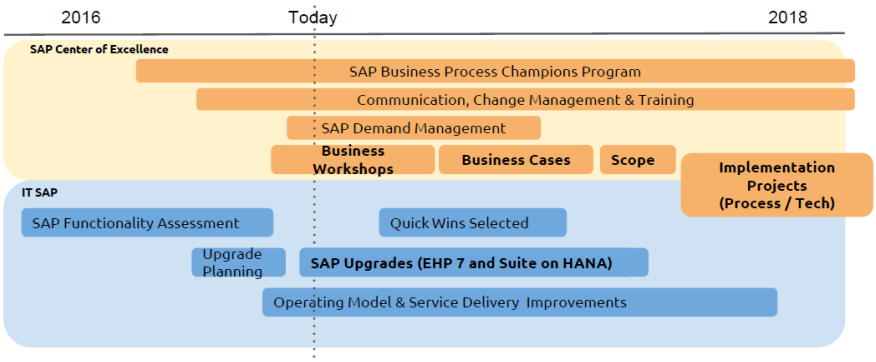
Aligning the CPSS business model with the IT Enterprise Architecture requires viewing the business model as a set of capabilities supported by underlying technologies and tools. While the City's Business Architecture documentation features a high-level capability map for the City's core capabilities, the capability mapping for the redesigned CPSS business model does not yet exist. To fill this gap, a proposed procurement architecture is illustrated below. This can serve as the foundation for the development of an application architecture following the selection of a technology solution.



The procurement architecture outlines the core capabilities housed in the restructured business areas, with Account Management and the introduction of Corporate Contract Management being net-new capabilities introduced to better serve the business partners and the corporation.

SAP Renewal Program

The City is participating in an ongoing renewal of its major SAP technology. SAP was implemented in 1996, and is undergoing phased renewals over the course of 2017-2018. This program is intended to increase the City's return on investment from SAP through a combination of improvements and the rollout of increased training and knowledge sharing. The renewal program at the City seeks to modernize and simplify SAP tools and improve the user experience. The proposed procurement & contract management solutions would need to align with this ongoing work. We have identified areas of linkage between the SAP renewal program and the procurement and contract management technology implementation in the roadmap and they are as follows:



- Develop detailed implementation plan for the project
  Master Data Cleanup – Material/ Service / Vendor
- Business Requirements Review / Business Process Engineering
- RICEs (Reports, Interfaces, Conversions, Extensions) Validation

The in-scope processes for SAP renewal program and the sequence of implementation will be informed by the procurement and contract management technology implementation scope (5

processes - spend analytics, sourcing, procurement, contract management and supplier performance management) and the Warehouse assessment project (scheduled 2017) outcomes.

Considering Cloud Solutions

The City's IT Branch does not have a mandated platform preference for technology solutions, but is shifting towards a "Consider Cloud" approach to new technology adoptions. The City is actively investigating ways to use the cloud to increase IT speed and agility. Consideration of solution architecture is primarily split between two options 1) on premise and 2) Software as a Service (SaaS). For the basis of the business case, a SaaS (Cloud) solution was selected as preferred based on several key differentiators:

1) SaaS solutions typically incur a lower up-front implementation cost than their on-premises counterparts, which, despite typically higher subscription fees and operating expenses, reduces their total cost of ownership
2) SaaS solutions typically have accelerated implementation timelines relative to their on-premise counterparts
3) Many solution providers are discontinuing support for on-premise offerings to focus investment on their SaaS offerings, increasing the risk of inadequate on-premise solution support over the 5 year business case timeline
4) SaaS solutions are typically updated on a more frequent basis than on-premise solutions, with procurement and contract management technologies evolving rapidly in functionality improvements
5) SaaS solutions typically require fewer internal subject matter specialists to operate and maintain the system than their on premise counterparts.

SaaS solutions do have the disadvantage of possible service outages, due to the remote software hosting and data storage. Cloud technology is still developing rapidly and poses areas where risk must be considered, including data security, access management, and implementation of appropriate controls. The City should consider the storage location of its data when evaluating solution providers. Transitioning data storage primarily to the cloud can also complicate any future solution transitions.

4. Business Requirements and Technology Vendor Capabilities

CPSS Business Model Requirements

The new CPSS business model being implemented throughout 2017 introduces a new set of functions that have expanded technology needs over the needs of the current-state. Technology requirements were assessed by function to understand where new technology features would be most effective in addressing manual process pain points and adding value to the City. In particular, Strategic Sourcing was identified as a function that requires the diverse capabilities offered by an integrated suite of modules covering the full procurement lifecycle to effectively develop and execute value-adding category strategies and cost-saving supply consolidations.

Functions	Technology Requirements	Value to the City
CPSS Operations		
Transactional Centre	• Automation of PRs and POs • eSourcing (eBidding and reverse auctions) for low value procurements • Lifecycle contract management for low value change orders • Knowledge management of procedures, workflow and lessons learned	• Improved service levels on transactional activities through rapid procurement of material and services • Reduction in manual employee efforts and improved productivity
Strategic Sourcing	• Spend taxonomy for opportunity identification • RFx development library for strategic sourcing document release • eSourcing (eBidding and reverse auctions) for RFx release on strategic sourcing procurements • Contract drafting and collaborative negotiation • Contract template and clause library for creating agreements • Knowledge management of procedures, workflow and lessons learned	• Increased active management and consolidation of spend for cost savings • Better visibility of spend for analysis to manage risk and inform strategies • Shortened procurement and contract negotiation timelines

Competitive / Non-Competitive Procurement	• PR and PO Automation • RFx development library for routine procurement needs • eSourcing (eBidding and reverse auctions) for project based procurements • Knowledge management of procedures, workflow and lessons learned	• Costs savings through increased competitive bidding • Improved procurement throughput and efficiency • Shortened procurement timelines
CPSS Continuous Improvement		
Corporate Contract Management	• Digital contract library • Contract drafting and management • Contract template & clause library • Contract collaboration tools for redlining and review versioning • Compliance management tools • Contract tool for PRs and POs to identify non-compliant purchases • Contract workflow • Lifecycle management for change orders, amendments, renewals, and closeout • Knowledge management of procedures, workflow and lessons learned	• Improved visibility • Standardization and error reduction • Strengthened governance and control • Ability to address audit concerns • Self-service capabilities for the business partners • Collaboration with suppliers and Law Branch through contract module • Reduction in paper and file management
Quality Assurance, Reporting, & Analytics	• Spend taxonomy and commodity classifications • Digital contract library • Contract compliance monitoring and reporting • Automated workflow and approvals with auditable timestamps • Knowledge management of procedures, workflow and lessons learned	• Increased ability to analyze data and provide management dashboards to CPSS, business partners, and City leadership
Technology & Innovation	• Cloud based tools for agile adoption and deployment • Innovative technology suitable for regular update and improvement • Change champion training on new technologies	• Support to drive regular update and improvement • Innovative tools to improve CPSS and employee capabilities • Sustains benefits realization
Functionalities of impact to other stakeholders - CPSS Supply Chain		

Inventory Control & Replenishment	• Central Stores hosted catalogue • Electronic replenishment purchasing integrated with SAP ECC MM module	• Allows for business partners to view and purchase directly from Stores • Links replenishment directly to business area demand
Functionalities of impact to other stakeholders – Others		
Business Partners	• PR and PO automation • Electronic Catalogues • Supplier performance scorecards and feedback functionality	• Time savings through simplified purchasing processes • Ability to increase leverage with suppliers • Allows for closer management of supplier performance through a segmentation strategy to reduce and manage project risk
Accounts Payable	• PR and PO automation	• Provides visibility to PRs and POs to accelerate issues resolution and payments to suppliers
Law	• Contract processing workflow • Standardized clause library • Assignable content privileges	• Standardization of contract clauses • Negotiation time savings for document review • Efficient document approvals

Business Requirements

The pain points identified in the Needs Validation were used to develop detailed business requirements for a new technology solution. These requirements are to be released during an RFP process to engage the supplier market and procure a suitable solution. Summary business requirements are in the table below.

In-Scope Processes	Key Business Requirements
Spend Analytics	• Spend classification with multiple taxonomies • Spend visualization and drill down abilities
Sourcing	• RFx development suite, drafting, and template library • Support for electronic bid evaluation and comparison
Procure-to-Pay (P2P)	• Electronic catalogues • Linkage to AP Dolphin DMS
Contract Management	• Contract clause library and lookup • Contract drafting, review, approval and development tools
Supplier Performance Management	• Performance management visibility and supplier information capture • Scorecards and historical performance data storage

Overall	• Auditable electronic workflow and approvals with time stamps • Integration and configurations available

The requirements were consolidated, and a group of potential suppliers that meet the requirements were identified.

Solution Suppliers & Market Trends

Supplier Shortlist

A shortlist of suppliers for investigation was developed based on a set of 5 guiding principles to narrow down the large pool of suppliers in the market to a grouping likely to have the proven capabilities required by the City of Edmonton. The guiding principles were:

1. Consideration of the IT Branch's principle of "Best City Investment", taking into account the City's existing investments in technology platforms and systems[1]
2. Analyst reports and supplier rankings
3. Preference for SAP certified solutions and solutions with demonstrated SAP integrations
4. Examination of improving and scaling solutions already in place at the City
5. Implementation ease and supplier capacity

Analyst reports from Gartner for (P2P) Procurement and Contract Management suites provided a view into the current market leaders. Recent analyst rankings can be found below[2][3].

Technology Supply Market Trends

Given the typically extended lifespan of technology solution, it is necessary for the City to understand the major market trends that will impact any selected solutions over the next 5 years and beyond. The procurement and contract management technology market is expanding rapidly with the introduction of cloud-hosting and adoption of digital tools across modern businesses. The increased functionality and

[1] The City's investment in SAP software & tools is approximately $152 M, with SAP usage heavily embedded across the City. This is justification to consider SAP functionalities as a priority before looking externally to the supply market, as internal expertise and support for SAP based tools is already in place, including the existence of the SAP Centre of Excellence.

[2] Source: (Left) Gartner Magic Quadrant for Procure-to-Pay Suites 2016

[3] Source: (Right) Gartner Magic Quadrant for Strategic Sourcing Application Suites 2017

maturity of modern procurement and contract management technologies is driving 5 main trends in the supply market:

- **Trend 1:** Transition to Cloud Service - In 2015, over 90% of procurement technology implementations were cloud based. This is due to increased supplier focus on using the cloud to deliver increased agility, upgrades, collaboration, and a rapid pace of innovation.
- **Trend 2:** Organizations are using solution integrators to help determine "best fit" integrations, managing integrations around the unique needs of the organization.
- **Trend 3:** Procurement technologies are beginning to move from procure-to-pay solutions to source-to-pay solutions, in which additional elements such as invoicing, AP automation, and contract management receive a growing focus. Driving procurement from negotiated contracts contributes to a stronger procurement value proposition.
- **Trend 4:** Vendors are prioritizing their user experience (UX -creation of sleek, easy to use technology interfaces), and customer experience (CX - lifecycle customer service) offerings to drive adoption by minimizing training time requirements and the accelerating time to benefits realization.
- **Trend 5:** As transactional activities are automated, technology vendors are enabling employees to focus on strategic processes to better identify and execute on procurement opportunities.

Trends in Procurement

The digitization of industry is impacting the future of procurement. The increased use of sensors, communications equipment, and software to link the objects and devices used in everyday life to the Internet of Things requires the City's procurement to prepare for the management of new and complex digital categories. Additionally, the purchasing of complex services to support the implementation of digital tools will require the City to carefully manage the value delivered from its service agreements. The support of the right technology is necessary to lock in value from these historically hard to manage categories. The global digitization of industry is also impacting other areas of procurement, introducing powerful tools to leverage big data analytics to improve opportunity identification and decision making while transactional activities are automated using core P2P technologies. CPSS will need to act as the bridge between the data generated from the City's operations, fleet maintenance, and Open City teams and the supply market. Procurement technologies will free up capacity of buying resources from repetitive tasks to allow them to focus on planning, stakeholder engagement, supplier risk management, and execution of new category strategies.

Scenarios for Analysis

To reflect the diverse grouping of suppliers available while maintaining a manageable number of scenarios for analysis, it was decided that three scenarios would be explored in detail. Analysis of multiple scenarios allows for a more complete picture of the procurement and contract management technology landscape, while allowing for assessment of how well multiple tools fulfill the business requirements of the City. The scenarios are depicted below.

Scenario 1 represents the City's option of not implementing an integrated solution, and instead pursuing the enhancement of its existing SPA tool and adopting individual modules for eBidding (COOLNet Alberta) and contract management (CobbleStone Systems).

Scenario 2, SAP Ariba, was considered in the detailed analysis on the basis of the anticipated ease of integration with the existing SAP ECC system, as well as its ability to utilize existing intellectual capital within the City IT team.

Scenario 3, Best of Breed, represents the numerous solutions available as an alternative to SAP Ariba in the supply market. These are the major competitors to SAP Ariba in the supply

market. Both Scenario 2 & 3 would result in similar benefits and functionality, with key differentiators being the ease of integration and pricing structures

Scenarios	Description	Processes Addressed	Pros(+) / Cons (-)
Scenario 1: Status Quo + Interim Solutions	SAP MM Refresh + SPA + CobbleStone + COOLNet Alberta (eBidding)	• Sourcing (eBidding) • Contract Management	+ Lower up front cost and simpler implementation - Doesn't address key business requirements / pain points - Manual approvals and compliance risks
Scenario 2: SAP Ariba Comprehensive	SAP Ariba Strategic Sourcing and eProcurement suites integrated with SAP ECC	• Sourcing (eBidding) • Contract Management • P2P • Spend Analytics • Supplier Management	+ Aligns with City IT EA & SAP Renewal Roadmap + Addresses all CPSS pain points / business requirements + SAP expertise and support already in place at the City. - High cost and complex implementation and integration
Scenario 3: Non SAP Best of Breed Solutions	Full module suites integrated with SAP ECC		+ Addresses all CPSS pain points / business requirements + Rated as visionaries in Gartner's Magic Quadrant - Non SAP vendors have integration support risks - High cost and complex implementation and integration

5. Critical Success Factors and Implementation Roadmap

Critical Success Factors

A review of lessons learned from similar public sector technology implementations in Canada reveals three common critical success factors:

1) Enhance processes to take full advantage of the technology and minimize customizations and avoid additional expenses
2) Active engagement with internal and external stakeholders throughout the selection and implementation process and invest in training and change management to drive full solution adoption and buy-in
3) Prioritize suppliers into onboarding batches and develop and manage a supplier enablement plan

Critical Success Factors for eProcurement Solution at the City

To achieve these critical success factors, it is recommended that CPSS adhere to the principles below throughout each phase of the implementation. CPSS and the City must recognize the necessity of early engagement and buy-in to successfully deliver a transformation of this scale. Given the recent changes across the City with the 2016 Department restructure, the P2P transformation, and the CPSS business model design, teams across the City are adjusting to new responsibilities and ways of working. Given this context, there is an elevated need to align the implementation roadmap with other initiatives and collaboratively engage with the business partners. The following guiding principles will help direct the implementation towards success.

Before implementation...	During rollout...	For sustainment...
1 Streamlined business processes to avoid technology customization	1 Digitize and maintain contracts to drive technology usage	1 Benefits tracking and performance management
2 Integrated roadmap rather than piecemeal	2 Active engagement with business partners and suppliers	2 Establish end-to-end P2P process and technology support (Continuous Improvement)
3 Couple strategic sourcing approach with technology roll-out and supplier enablement	3 Change management and training - business partner as well as supplier support	3 Drive for supplier adoption and enablement on portal

Key activities in each implementation phase will drive the levels of enablement across the business partners and suppliers needed to fully realize the expected benefits. Implementation success requires acknowledging and supporting the business partners' and suppliers' during each project phase to develop the necessary level of system usage and supplier enablement for delivering benefits to the City. As part of sustainment activities, it is recommended the City undertakes an operational excellence program beyond typical

change management and communication activities. Operational excellence techniques will serve to embed the habits and behaviours required to maintain the realization of benefits over the long term.

Module Rollout

Modules were selected for rollout based on a combination of business need and also based on the necessity for pre-work and sequencing of dependencies. Module rollout is planned in the following order:

1. **Sourcing** - Sourcing is not dependent on the migration of data from other sources to begin realizing benefits, so it is prioritized in this implementation.
2. **Contract Management** - Contract management is the largest risk area to the City, and implementation is a CPSS Leadership priority to better manage the City's risk exposure on Corporate Contracts. It will be implemented in parallel with sourcing.
3. **Supplier Performance Management** - Supplier performance management is a priority to improve supplier data quality and is a logical follow-up to contacts
4. **Procure-to-Pay P2P** - Technical design and implementation of P2P is longer than for the other modules, placing its rollout later than other modules
5. **Spend Visibility** - This module is dependent on the implementation of P2P to provide spend data for cleansing and analysis, as well as the implementation of the new taxonomy.

Business Partner Rollout

As the dominant user of the new technology, the rollout will commence with CPSS Branch. A suggested subsequent rollout approach to the business partners is based on the grouping of the City's department. To accelerate benefits realization rollout should be prioritized based on two criteria:

1. The level of involvement of that group with the procure-to-pay process, prioritizing those directly involved (CPSS, Account Payable, Law)
2. The volume and value of POs issued by a City department, prioritizing the departments with higher spend and PO volumes, as these are work drivers for CPSS.

Supplier Enablement

Spend Channel Selection

The City's current spend channels include POs, Outline Agreements, and Corporate Credit Cards (CCCs). A key activity in implementing an eProcurement (P2P) technology is determining the right buying channel strategies to balance efficiency, ease of use, and proper controls for managing the City's spend categories of varying complexity. Spend channel selection can be completed by evaluating data around the City's spend category profiles, including category type, complexity, demand profile, number of users, solution characteristics. This will identify the most appropriate channel for the spend category, which will determine the level of data granularity and reporting available to the CPSS Strategic Sourcing and Continuous Improvement teams to effectively identify opportunities. Spend channel decisions should be made with consideration of the acquired technology to maintain the right level of data integrity and control. Spend channel assignment should be balanced with the needs of the City's users through a review of the current state. This preparatory work will develop recommendations to determine the appropriate spend channel for the City's buying mix to efficiently engage vendors through improved spend channel design and streamlined contracting procedures.

Supplier Enablement Strategy

To realize the benefits of the proposed solution, the City must embrace the role of supplier enablement and engagement as critical to the project's success. Supplier enablement begins in the Design phase of the implementation, where suppliers are engaged to understand process pain points and to solicit their input into the new solution design and their experiences and lessons learned in adopting new technology solution. This results in the definition of an enablement strategy that outlines a comprehensive

analysis of the City's suppliers and proposes an approach to onboard these suppliers into the City's technology solution. Up-front work should also be completed to assess the City's major supplier's readiness to participate in the setup of a supplier network. A 2013 survey of 10 major City suppliers indicated that they would be open to the introduction of a supplier network on the basis of reduced overall transaction expenses and a reduction of manual errors, but indicated sensitivity to supplier networks requiring fees from the supplier[4].

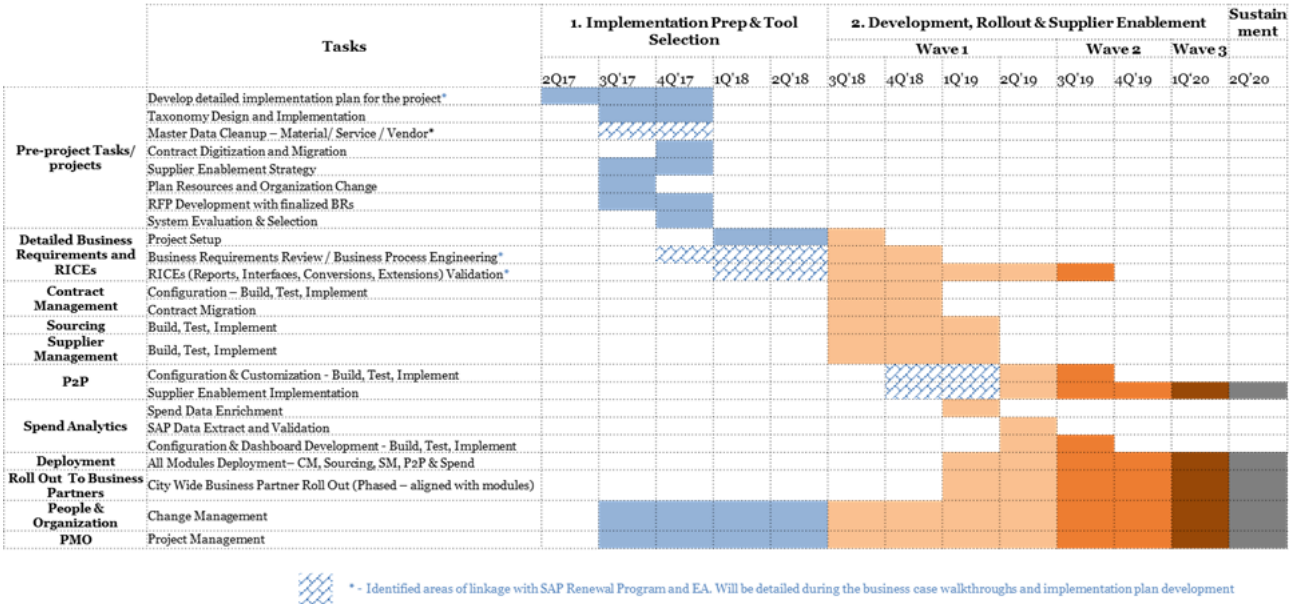
Supplier enablement is an ongoing journey that will require dedicated participation of a City resource for the lifetime of the technology solution at the City. This resource will take ownership for communicating the network's value to suppliers, and will assist them in conducting business with the City through the electronic portal, and ultimately executing the onboarding process for City suppliers. This resource will guide suppliers through the key enablement steps:

- Design & Build Supplier Network
- Registration on the Supplier Network
- Supplier Education & Training
- Supplier Testing & Deployment
- Supplier Support (Ongoing)

Supplier enablement resourcing and time requirements have been included in the Scenario implementation costs, discussed in Section 7.

Implementation Roadmap & Activities

The implementation roadmap outlines the key activities, timeline, and sequencing of the proposed solution implementation approach. The implementation is based around the design, configuration, testing, and deployment of the solution modules, followed by rollout to the business partners and onboarding of suppliers. Implementation will take place through three main phases: 1) Implementation Prep & Tool Selection, 2) Development, Rollout, & Supplier Enablement, 3) Sustainment. Preparatory activities begin in Year 1 starting with solution selection and contract award to a technology vendor. Development, Rollout, & Supplier Enablement will begin in Year 1 and Continue throughout Year 2. All modules will be live in Year 3, followed by additional sustainment and supplier enablement activities.



[4] City of Edmonton: Business Case for an eProcurement, Strategic Sourcing and Accounts Payable Automation Solution

Implementation Prep and Tool Selection

The City can immediately initiate multiple preparatory activities following the approval of this business case. These will set up the implementation for success by aligning City stakeholders, and increase the speed with which modules can be deployed after the selection of a technology solution.

Implementation Activities – Implementation Prep & Tool Selection

Stage 1 Implementation Prep & Tool Selection	Stage 2 Development, Rollout, & Supplier Enablement	Stage 3 Sustainment

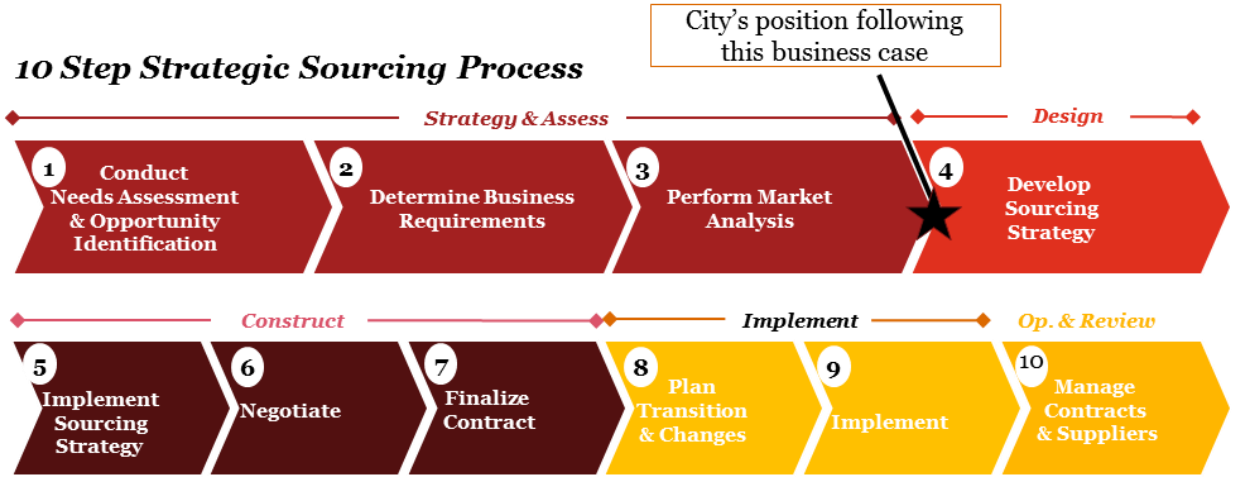
Objectives	• Complete preparatory activities necessary for a successful technology implementation • Develop and validate the detailed business requirements • To source a suitable procurement and contract management technology solution for the City's needs based on evaluation against comprehensive business requirements

Key activities	
1.	• **Taxonomy Implementation** - Select implement and maintain an effective commodity classification system • **Master Data Clean Up** - Prepare data for migration and remove unnecessary data. Attempt to populate missing fields • **Contract Digitization & Migration** - Create electronic formats of all contracts and purchase orders • **Decommissioning of SPA & Transition of Data** - Pull procurement information on suppliers, bids, and contract performance from SPA during decommissioning • **Supplier Enablement Strategy** - Develop segmentation, engagement approach, and procedures for supplier onboarding • **Plan Role and Organization Change** - Determine roles impacted by the implementation and assess the nature of the impacts • **Detailed Business Requirements** - Capture and validate all business requirements, engaging the business partners
2.	• **RFP Development** - Create and release clear business requirements, systems, and integration points to the supplier market for bids • **System Evaluations & Selection** - Assess bids, observe vendor solution demonstrations in accordance with predefined script, and select a technology solution for implementation

Internal & External | Internal

Deliverables	• Finalized business requirements • RFP documentation and compiled bids • Contractual agreement for technology implementation with solution provider

Effectively sourcing the technology solution to match the City's business requirements will determine the ultimate benefits the City can realize. Therefore, the sourcing strategy need to be developed keeping in mind, the understanding of the City's Best Investment approach, the procurement directives and procedures for the City, the effort required for procurement (competitive/ non-competitive), and the detailed business requirements for the City. If the City chooses to go through the competitive procurement, the recommended industry standard strategic sourcing process for sourcing the appropriate technology solution is as follows:



Suggested criteria for the City to use in evaluating the technology solutions (through competitive / non-competitive procurement) of technology vendors fall into 5 main categories:

- **Design** - How well will the technology enable the City's requirements and desired configurations?
- **Cost** - What will be the cradle to grave costs of implementing the solution, including internal and external resource requirements?
- **Risk** - How complex is the technology implementation and how reliable is the

technology provider anticipated to be over the technology's lifetime?

- **People** - How significant will the change impacts of the new solution be for the organization based on required skills and training?
- **Business Fit** - How well does the solution fit the strategic goals of the organization?

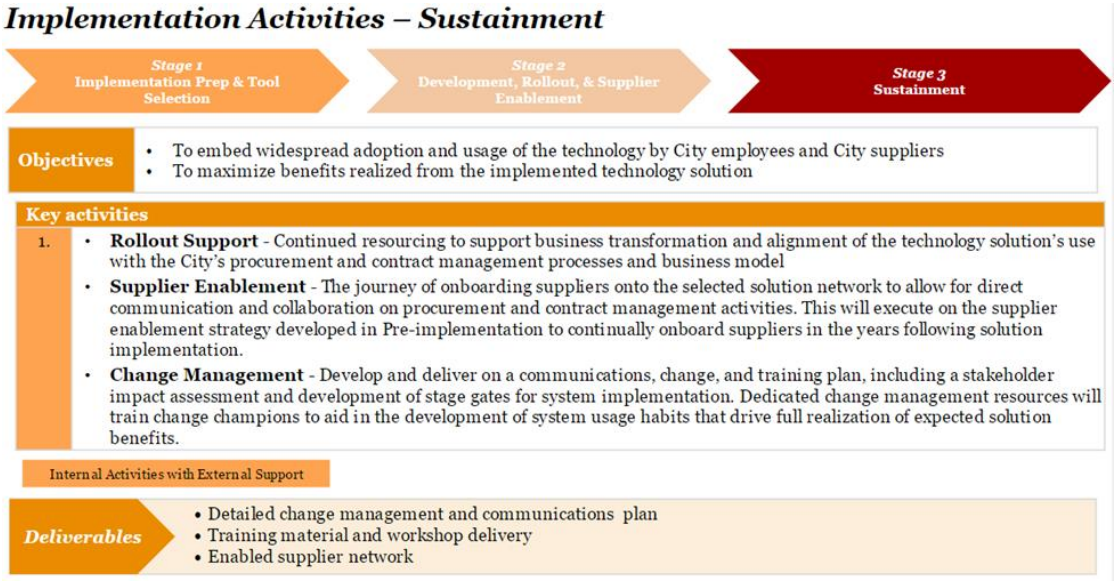
Weighting the above criteria and evaluating the solution with a cross-functional committee will provide broad coverage of the solution's ability to meet the requirements of the City.

Development, Rollout, and Supplier Enablement

Key implementation activities are detailed below. These will be completed in conjunction with a system integrator, selected as part of the RFP process. Technology vendor resources and external consultants from the integrating Firm will carry out the implementation activities with the support of City IT resources.

Sustainment

Sustainment is a critical component of the implementation, and is expected to begin in Year 2 and continue throughout the 5 year implementation study period. Details on sustainment activities can be found below. Successful benefits realization will require strong executive sponsorship, a strong commitment from the project's sponsors, and strong, effective change management over a considerable period.



Sustainment should involve a substantial benefits measurement component, applying the 2016 updated P2P performance management framework to measure the performance of the new business model functions. Benefits monitoring will allow for agile deployment of additional resources to areas where benefits realization may be lagging behind targets. The improvements can then be compared to the baseline of the business model without technology enablement. Additional benefit measurement can be completed by taking advantage of the proposed solutions workflow capability to measure cycle times across procurement and contract management to identify bottlenecks and areas for continuous improvement across the CPSS business model.

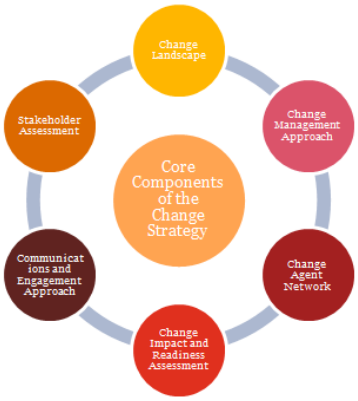
Leading practice for sustainment is to include the use of operational excellence and Lean tools to solidify benefits realization through the development of a continuous improvement culture. Empowering employees to take ownership of processes and recommend improvements to the CPSS Continuous Improvement team will help drive incremental value from the proposed technology. Driving a cultural change across the organization to remove wasteful activities (errors and work defects, delays, inadequate use of employee skills, etc.) will help effectively utilize employee capacity to the strategic advantage of the City.

6. Organizational Change Impact

The implementation of a technology solution will change the way procurement and contract management is delivered across the City. To adjust to the new ways of working, City staff and City suppliers will require support and engagement through the development of a robust change management plan. This business case outlines the core components the City will need to include in its Change Strategy, as well as a high level discussion of the major change impacts each stakeholder group can expect throughout the implementation.

Change Management and Communication

Implementation of the proposed technology solution will necessitate changes to the procurement and contract management processes across the organization. The changes will be targeted to fully utilize the selected technology solution while minimizing the need for customization, and will impact a large number of individuals and roles. A collaborative approach to change management is necessary to embed and sustain the transformation.



The project will require the City to define and broadly communicate its objectives for the implementation, showing the City's stakeholders the motivating benefits they can expect from adopting the solution and associated changes. Successful benefits realization will require strong executive sponsorship, a strong commitment from the project's sponsors, and strong, effective change management over the 3 Year implementation and sustainment period identified in the Implementation Roadmap.

The City will need to develop a change management plan, which will should be generated to include the following content:

1. List all the change management activities e.g. stakeholder management, communications, change network, learning & development, organisational design, change impact assessment, change readiness, post go-live support;
2. Detail when the change management activities are taking place across City Departments and Branches;
3. Clearly display all change management deliverables and milestones that will be presented to the Project Steering Committee, procurement and contract management staff, and business partner employees. These may include change impact assessments, learning needs analysis, learning & development strategy, change readiness assessments, transition plans;
4. Identify who is responsible for each change management activity through the use of RACI matrices;
5. Detail the communications and engagement approach for stakeholders across the City; and
6. Identify a plan for establishing and training change agents within the organization.

Impact on Primary Stakeholders

The process and technology changes resulting from the implementation will directly impact several primary stakeholder groups. Primary impacts are effects arising from a change in day-day processes, roles, or

technology used regularly by a stakeholder group who is involved in the change initiative. Change impacts are explored below.

Primary Stakeholders	Change Impacts
Corporate Procurement & Supply Services (CPSS) Branch	**Procurement:** • Changes in service delivery model • Process and responsibility changes • Increased focus on analysis and opportunity identification • Transition towards strategic work • Governance and control changes regarding competitive procurement and bidding • Training requirements on new system • Increased focus on supplier interaction and collaboration **Supply Chain:** • Changes in goods receipt and Central Stores reservations processes • Changes in MRP and replenishment ordering processes
Business Partners - Procurement & Contract Management Staff	• Training requirements on new system • Process changes for departmental bidding and evaluation processes • Redefined self-service procurement methods such as electronic catalogues • Better visibility to service level metrics
Information Technology Branch - IT and SAP Teams	• Additional skill and training requirements from new system management • Removal of SPA tool and associated development and maintenance overhead • Temporary workload increase during implementation through provision of project team members • Capital investment requirement for 3 Years to support up front solution implementation
City Suppliers	• Enablement will require suppliers to adjust their processes in dealing with the City • Enabled suppliers will have increased access to City opportunities • Increased efficiency and speed in bidding on City opportunities • Possibility of incurring supplier network fees • Objective measurement of supplier performance
Law	• Training on system usage for contract clause library management and document review • Process changes for document review and sign-off for standard and non-standard City contracts and documents

Impact on Secondary Stakeholders

Numerous secondary impacts will be felt across City. Secondary stakeholders are those who will be impacted by the changes, but are not directly involved in the implementation project. It will also have a significant long

term impacts on other roles throughout the City by changing towards primarily electronic documentation and approvals.

Secondary Stakeholders	Change Impacts
Business Partners - Clients of Procurement & Contract Management Staff	• Increased visibility into procurement and contract management • Approval and bid evaluation process changes • Business partner-driven information flow and automated approval workflow • Automation of workflow and delegation of authority approvals
Office of the City Auditor	• Simplified auditing through electronic controls. • Modification of audit plans to include updated governance and controls
Office of the City Clerk - Corporate Records & Information Management	• Process changes in documentation and record keeping • Training on usage and access to electronic procurement and contract documentation
Edmonton's Citizens	• Financial savings and value for money • Increased transparency into City operations and spending • Benefits from increased competition in bidding

The scale of the proposed implementation in the context of the recent changes from the P2P Transformation and CPSS Business Model Design will require alignment of change management with the current organizational and process changes already underway. A focus of the organizational change strategy needs to be explaining and demonstrating the way in which technology will enable and sustain the new CPSS business model. It will allow staff to transition towards more fulfilling strategic work, develop specialized skills, and reduce frustration through the automation of manual and error prone processes. Communicating the positive organizational impacts from the technology implementation to CPSS staff and embedded business partners will mitigate the risk of change fatigue.

7. Cost Benefit Analysis - Costs

Solution costs were estimated for a 5 year period across each scenario. The cost estimates in this business case are inclusive of all lifecycle activities to procure, implement, and operate the solution, including RFP development, preparatory activities, implementation, and ongoing operation and sustainment of the technology. Both the costs incurred to the City through external consultants, as well as the internal costs incurred from dedicating internal resources to the project are included in the study to provide a comprehensive of the City's financing requirements. The costs in the model are intended to be conservative to accommodate reasonable uncertainty in the provided pricing and required implementation effort for adopting a new procurement and contract management technology. They have been based on a bottom up approach, with individual estimates for each major component expected in preparation, solution implementation, and sustainment activities.

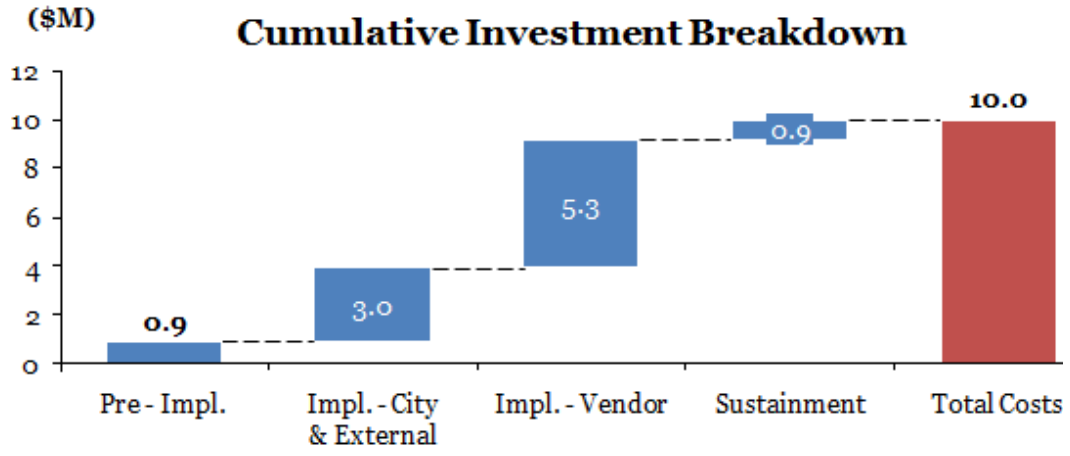
Cost Assumptions

The cost for the solutions vary over the implementation timeline.

- Rates used for external support are based on competitive Edmonton market rates for consulting services.
- Software license costs in Year 2 are only for sourcing, supplier management, and contract management to correspond to the modules implemented in that Year. P2P and spend analytics are included in Year 3 & beyond.
- Cost estimates for the software solutions are based on a best estimate of the supply market and must be validated through the City's procurement process, in the case of business case approval.
- External effort estimates are based on the scope of work to be completed (typically takes 1 year), not on the duration of actual implementation (expected to take 2 years at the City). The durations in this model are extended beyond what is typical in experience. Cost estimates are provided based on the scope of work, but do not constitute a guarantee, and costs may change based on the implementation timeline selected by the City.
- Software license / subscription costs are assumed to be fixed over the 5 year study period. This is often negotiated as part of the contract with the technology vendor.
- Additional cost assumptions can be found in the Excel model that accompanies this Business Case.

Implementation Costs

Implementation Costs were estimated based on analysis of previous implementation of procurement and contract management technologies similar in scope to the one proposed for the City. Costs originate from two sources: 1) Vendor fees and 2) resourcing costs (internal and external). A high level overview of the costs expected over the project implementation stages can be found below:



eProcurement Solution Vendor Fees

Vendor fees were compiled based on provided understanding of the supplier market for leading practice procurement solutions and implementations. These vendor fees are subject to change and do not constitute an implicit or explicit guarantee of eProcurement solution vendor fees. These costs are illustrative only and constitute only an estimate of the pricing the City should expect when releasing an RFP for a technology solution. Each vendor has its own fee model, which may depend on the modules implemented to include pricing factors such as spend through the system, number of users, and transactional counts. Based on the results of the supply market analysis, and on growing trends in the marketplace, all cost information is based on the implementation of a SaaS model. The fees to the vendor through initial system setup costs do not include the solution configuration and implementation. It is assumed this solution will be implemented (configured and integrated) through a third party integrator (consultant), not by the SaaS vendor.

Vendor Cost Item	Cost Estimate	Cost Timing
Vendor License/Subscription Fees	$1,080,000	Each Year (Years 1-5)
Vendor Implementation Services	$-	One Time (Year 1)
Data Enrichment	$100,000	One Time (Year 1)
Initial System Setup	$350,000	One Time (Year 1)
Hosting and Other Support Services	$-	Each Year (Years 1-5)

Resourcing Costs

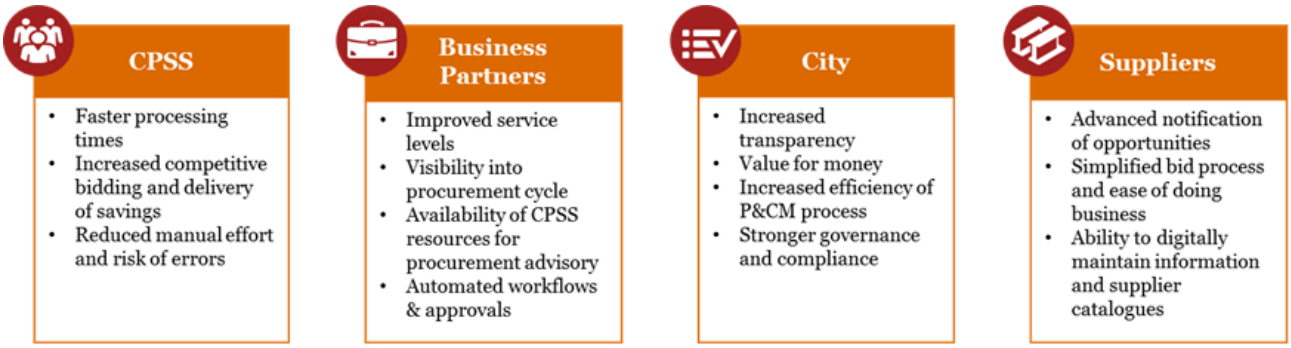
A bottom up approach to the implementation was used to determine the resourcing costs, based upon industry experience and the City's unique needs. An estimate was then created for each "line item" expense, aligned with the activities in the Implementation roadmap and the expected timing of the expense. For illustrative purposes, it is estimated that the five year program costs (including annual subscription costs) will be approximately $10.02M.

8. Cost Benefit Analysis - Benefits

This section outlines the anticipated benefits from implementing a new technology solution. It details both the qualitative benefits, as well as details on the development of quantitative benefits from the CPSS current state. Benefits are quantified by in-scope process, and will be realized across the functions within the new CPSS business model, as well as within the City's other Branches across the City.

Qualitative Benefits

The proposed solution will generate benefits for all of the City's stakeholder groups, with numerous qualitative benefits emerging across all of the Departments of the corporation, as well as with City suppliers.



Benefits to CPSS

The fully enabled CPSS business model, supported with technology, will position CPSS as a value adding strategic business partner known for efficient service delivery. Key benefits expected for CPSS include:

- Increased employee productivity by automating the ordering process and reducing errors;
- Expedited approval process through electronic routing to approvers;
- Improved effectiveness of contract management through an integrated contract management system to reduce the number of last minute contract adjustments/extensions that put pressure on the purchasing team to process expedited sole sourced requests;
- Improved visibility to contracts;
- Employee satisfaction arising from increasingly strategic work;
- Increased record accuracy and access to supplier lists and contact information;
- Increased visibility of contracted pricing and goods/services, including agreements, rate cards and pricing;
- Improved ability to conduct warehouse planning and inventory replenishment activities;
- Increased access to vendor by vendor analysis of spend and categories to identify trends in order to support category management and strategic sourcing;
- Increased support to drive higher contract volume and value due to more effective demand management; and
- Improved contract compliance by reducing material and/or service acquisition outside of existing contracts through technology managed procurement processes.

Benefits to the Business Partners

The new technology solution will help to address the expectations from the business partners for increased

throughput, faster service, reduced costs, reliable timelines, and consistent processes. Key benefits for the business partners include:

- Reduced effort in processing purchase order changes;
- Online access allowing users to view transaction status;
- Diminished lead times for goods and services due to faster purchasing transaction process;
- Reduced end-to-end process time and costs with electronic approvals;
- Ability to manage volume discounts;
- Cost savings due to negotiated; and
- Improved budget management, forecasting and reporting accuracy through proper allocation of expenditures to project codes.

Benefits to the City

The City will be better positioned to realize outcomes of transparency and value for money, while improving its place as an employer and customer of choice regarded for procurement and contract management excellence. Key benefits for the City include:

- Reduced effort through automated good receipt and escalation which can reduce communication time between different departments and groups;
- Control leakage of negotiated contracts through proactive contract management enabled by technology to prevent value erosion over time in the absence of strong contract and supplier relationship management;
- Reduced volume of non-compliant off contract purchases by enforcing thorough and complete approval process prior to ordering, including compliance to delegation of authority levels;
- Improved awareness of procurement policy parameters;
- Strengthened governance and controls to drive compliance to City Directives;
- Alignment of CPSS and the City's departments through OneCity approach to capital budgeting and planning; and
- Improved adherence to the City's defined Delegation of Authority processes.

Benefits to Suppliers

Suppliers will benefit from the implementation of a supplier network and a more direct method of managing their business relationship with the City. Key benefits to suppliers include:

- Increased access to bid on City of Edmonton procurement opportunities through notification;
- An increase in the City's ability to seek competitive bids on opportunities;
- Simplified bidding through an electronic portal;
- Ability to maintain up-to-date supplier information through the supplier portal;
- Reduction of document management and delivery costs;
- Ability to collaboratively negotiate and develop contractual documents;
- Reduction in manual errors in POs and sourcing requests;
- Ability to provide electronic catalogue shopping to increase customer access; and
- Ability to provide feedback to the City as a customer.

Quantitative Benefits

To provide the business case for the City to invest in a procurement & contract management technology, benefits were quantified based on analysis of current state processes and using a bottom up approach to estimate the expected improvements and process optimizations that could be realized if processes were automated or enabled through technology.

The table below lists the benefits that were quantified, as well as the module that will cause the benefit to be realized.

Module	Benefits
Spend Analytics	Spend visibility of single / sole sourced spend to be converted to Strategic Sourcing
Sourcing	RFx communication time reduction
	RFx drafting time reduction
	Corporate credit card spend through master service agreements (MSAs)
Procure-to-Pay (P2P)	Catalogue based buying
	Purchase requisition (PR) automation
	Purchase order (PO) automation
	Purchase order (PO) communication automation
	Purchase order (PO) filing and retrieval automation
Contract Management	Contract drafting time reductions
	Contract vendor collaboration time reduction and automation
	Reduced off-contract L-Order spend
Supplier Performance Management	Vendor information management and supplier onboarding

Benefits Modelling Approach

Benefit projections are adjusted based on the different implementation scenarios in the cost-benefit model. For the SAP Ariba and Best-of-breed scenarios, the implementation of an integrated suite of modules, each with similar capability, gives similar benefit realization projections. However, the Interim solution benefits are adjusted using multipliers, with benefits only applying on the basis of changes to Supplier Performance Application (SPA), the implementation of COOLNet Alberta Sourcing, and the adoption of Cobblestone Systems Contract Management. Benefits occurring throughout a particular year in the study period are assumed to be realized at the end of that study period as one discrete cash flow. This allowed for simplicity in the development of benefit timelines.

Benefits are classified as either “Harvestable” or “Non-Harvestable” based on whether or not the benefit will have a direct impact on the City’s budget. In similar business cases, these may be referred to as “hard” and “soft” benefits, respectively. Furthermore, benefits are grouped into belonging to CPSS or the City, to indicate whether or not the value from the benefit will be realized within CPSS or within the business partners that use or contribute to CPSS services (i.e. Integrated Infrastructure Services, City Operations, Law Branch, etc.). As an example, savings due to increased use of competitive bidding will be realized in savings on materials and services, so this is allocated to "City-wide." In the case of shared benefit realization between CPSS and the business partners, such as PO automation, benefits are allocated based on the assumed volume of

transaction through each group.

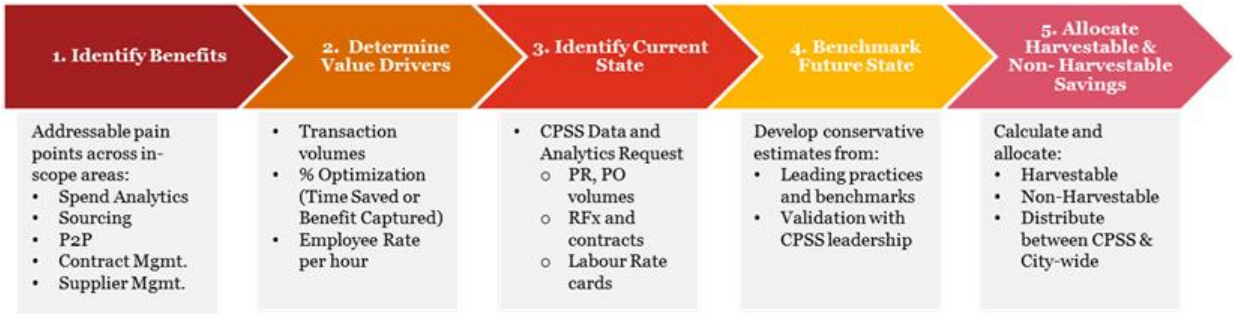
Harvestable benefits - Savings that will be realized through direct savings to City expenditures or cost avoidances.

Non-Harvestable benefits - Savings that are realized through the reallocation of labour or funds to other more value-added tasks.

Benefits are timed to be realized in alignment with the proposed Implementation Roadmap. As each module is rolled out, the benefits realized will ramp up, with full benefits being realized in the third year after implementation. The benefit ramp up assumptions can be found below:

Benefits Ramp Up Assumptions	Year 2	Year 3	Year 4	Year 5
Spend Analytics	-	-	90%	100%
Sourcing	90%	90%	100%	100%
P2P	-	60%	90%	100%
Contract Management	60%	90%	100%	100%
Supplier Management	75%	90%	100%	100%

Benefits were calculated through a systematic analysis of City data and validated assumptions to quantify the time and budget savings that could be expected from each benefit. Current state values were agreed upon with CPSS leadership, drawing upon 2013 process map analysis, stakeholder interviews, and leadership's understanding of the current state. These were compared with benchmarks and agreed upon future state targets. The differences were then attributed as the benefit. Time savings benefits were then converted into dollar values using an all-in $60/hour rate to represent employee time value. Benefits were then allocated as Harvestable or Non-Harvestable to the appropriate stakeholder group.



Conservative Approach to the Business Case

The business case model was designed to be conservative, based on assumptions that provide contingency for the City's investment to allow for unforeseen delays or challenges in realizing full solution benefits. Some ways in which the model is conservative are:

1. The model neglects anticipated growth in City spend over the 5 year study period, despite an expected compound annual growth rate of 2%[5].
2. The benefits calculations assume only 68% supplier enablement based on a conservative estimate of supply market adoption.
3. The benefits assume only a 20% increase in bidding on current single/sole source procurements with the introduction of the Sourcing (eBidding) module.
4. Module implementation is on a highly conservative timeline of 2 years before initial rollout.
5. Benefit realization follows a highly conservative ramp up over a 2 year period.
6. The model does not quantify benefits due to improved supplier performance expected through the introduction of a supplier management module.
7. No additional benefits realization arising from solution updates are quantified, even as the capabilities of the selected technology are likely to improve over time.

[5]Source: City of Edmonton 2016 Annual Growth Monitoring Report

8. It is likely that the solution lifetime is able to extend beyond the 5 year study period, which is not considered for the purposes of this business case.

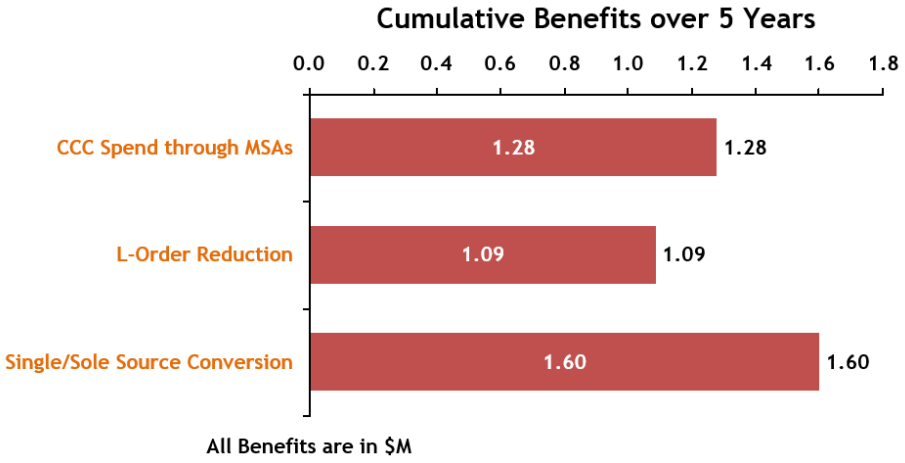
Benefits Estimate for the Next 5 Years

Benefits calculations are the same for Scenarios 2 & 3 (SAP Ariba & Best of Breed), due to similar functionality across their offerings. Benefits for Scenario 1 (Interim Solutions) were adjusted based on the capabilities of their modules. The expected projection of each benefit over the study period is shown in the table below. Benefit realization begins as the modules associated with that particular benefit are rolled out, with ramp up over Years 2 to 4 as described in the Model Approach.

The allocation of benefits as Harvestable or Non - Harvestable can be found in the Table below. Harvestable benefits are anticipated to be $4.0M, while Non-Harvestable benefits are anticipated to be $16.5M over the study period.

Benefit Allocations		Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Harvestable	City	$ -	$ 450,304	$1,050,099	$1,207,110	$1,267,610	$ 3,975,124
Non - Harvestable	CPSS	$ -	$ 600,598	$1,598,548	$2,064,429	$2,187,971	$ 6,451,547
	City	$ -	$ 628,516	$2,479,434	$3,355,571	$3,612,990	$ 10,076,510
	Totals By Year	$ -	$1,679,418	$5,128,081	$6,627,110	$7,068,571	

An increased level of detail on the Harvestable benefits can be seen in the Figure below.



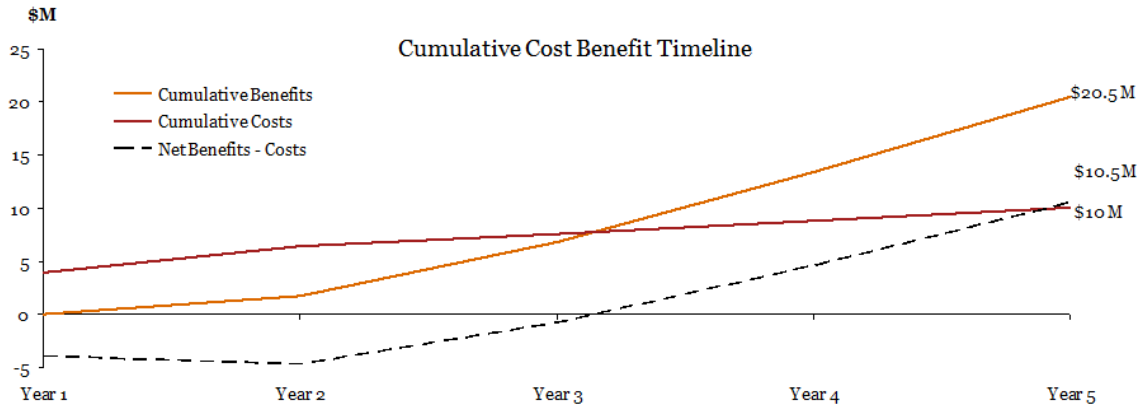
9. Cost Benefit Analysis - Results

This section summarizes the overall cost benefit analysis conducted to assess the expected return on investment from the technology solution options. Comparison of the detailed solution costs and benefits outlined in Sections 7 & 8 across the study period allowed for the application of discounted cash flow analysis. Using a compounding discount rate of 5% for future expenses and benefits, the present investment value of the investments was determined for each Scenario.

Cost Benefit Timelines

A cost benefit timeline was generated for each solution in the model developed for this business case. As in the Costs and Benefits Sections, the results of analysis from Scenario 2: SAP Ariba is shown here for illustrative purposes.

The figure below shows the anticipated cumulative costs and benefits for each year over the study period. From the figure it is clear that the investment breakeven occurs in early Year 4, this when the benefits realized to date cover the upfront investment required to implement and maintain the solution.



Investment Analysis

The business case outputs for expected costs and benefits of the scenarios can be found in the Table below. Each scenario in the model gives a positive return on investment, although the key measures indicate that the City will obtain more value from pursuing Scenarios 2 or 3 than implementing Scenario 1 (Interim Solutions). The breakeven point for each solution is realized in Year 4. The discount rate for all present value calculations was 5%, which is highly conservative given the City's anticipated access to lower interest rates on debt incurred for the study period[6].

	Scenario 1 - Interim Solutions	Scenario 2 - SAP Ariba	Scenario 3 - Best of Breed
Costs (Cumulative)	$4.79 M	$10.01 M	$9.96 M
Benefits (Cumulative)	$7.01 M	$20.50 M	$20.50 M
Net Benefit	**$2.22 M**	**$10.49 M**	**$10.54 M**
Net Present Value (NPV)	$1.48 M	$7.61 M	$7.66 M
Internal Rate of Return (IRR)	28%	51%	52%
Return on Investment	46%	105%	106%

The high expected IRR makes the implementation of an integrated technology solution a preferable investment over other capital project opportunities the City is considering for the 2019-2021 capital budgeting cycle. The substantial NPV and conservative estimates used throughout the cost benefit analysis indicate that the City can recover its investment even if there is some leakage of benefits over the study

[6] The City of Edmonton's 2015 Financial Annual Report indicated interest rates on debt accessible by the City are as low as 1.1% (5 year payment term) to a maximum of 3.5% (35 year payment term).

period. Given the high level of impact CPSS has on the delivery of major City projects on-time and on-budget, this investment merits prioritization over other proposed projects. Enabling CPSS now will serve to lower the costs incurred when delivering alternative projects in the future by technologically enabling CPSS Strategic Sourcing to identify opportunities, source for best value and cost reductions, and monitor and control contract value delivery. Investment in technology now will have the effect of reducing the lifecycle costs of all future projects involving a significant procurement or contract management component.

Harvestable Benefit Realization

Harvestable benefits with impact on Capital / Operating Budget Spend Savings (Avoidance) can be realized through Sourcing and Value leakage reduction:

- Citywide - Capital/ Operating budget spend avoidance by **$1.25M** across departments for Year 5
- Baseline (denominator) - Total of $154.9M – Annual CCC spend of $23.5M ; Single sole source spend of $121M; and 10.4M (L-orders to vendors with an outline agreement)
- Benefits can be achieved through value leakage reduction – reduction of L orders for vendors with whom the City already has outline agreements (with rate negotiated); increased visibility and sourcing of spend through single/sole source and CCC will reduce the spend budget across operations and capital

10. Key Risks & Mitigations

The nature and magnitude of the proposed technology implementation requires an analysis of cost, schedule, and quality risks that may impact the overall benefits realized by the project. Risk management must be an ongoing part of both the preparation, implementation, and sustainment phases of the project to build the necessary stakeholder buy-in required for a successful transformation. Analysis of the failure of public sector procurement and contract management technology implementations has revealed several barriers to implementation and benefits realization. The table below illustrates major risks to a successful implementation, and recommends several mitigation strategies to reduce the likelihood of project challenges impacting realization of return-on-investment to the City.

Implementation Risk	Mitigation Strategy
Low adoption of CPSS users, business partners and suppliers	• Build stakeholder support through engagement with City suppliers, City end users, IT and SAP teams throughout the preparatory and implementation phases • Effective change and communication strategy and execution • Limited scope initially limited to pilot departments such as CPSS
System and system implementation costs exceed plan	• Pay close attention to scope creep and limit urges to add more and more features • Due diligence in gathering requirements prior to engaging suppliers • Limit the customization requirements and be flexible in adapting processes to match system capabilities
Limited benefits realization	• Understand strategy, policy, process, structure requirements and changes needed to take full advantage of system benefits • Utilization of spend analysis and contract management to optimize benefit realization • Process Efficiency: Develop policies to enforce usage of renewed technology and related processes and tools among City staff. Simplify processes to fully leverage the technology and reduce turnaround times. • Cost savings: Enforce policies regarding the use of outline agreements and contracts, using contract management as a focus area for capturing savings. • Develop and implement a supplier segmentation and performance management strategy across City projects. • Understand the benefits of this initiative from both the hard and soft dollar perspectives
Insufficient post-implementation support for the solution, policies and processes	• Support from top down to encourage policy compliance through education and resource support • The system tool will streamline the process and reduce the time spent on the ordering process by removing manual tasks
Integrations with other systems	• Gather integration requirements ahead of RFP for system, understand technical capabilities of selected tool[7] • Build in a required stage gate into the procurement process for piloting and testing of integration.

[7] Prior to the selection of a technology, the cost, maintainability, scalability, and robustness requirements of the integration can not be known. This supports the use of a stage-gate in the procurement process for a pilot demonstration/test of the integration.

	• Including procurement evaluation criteria including the certification and partnering of technology suppliers with existing technologies in place at the City
Scalability	• Understand future operations changes and implement tool with those considerations in mind • Evaluate costs and benefits on a realistic lifetime of the system • Recommendation of using SaaS platforms for seamless expansion of user base through additional subscriptions
Data security, retention, and recovery	• Create a cloud solutions governance structure with representatives from across the organization to develop and maintain a cloud policy and strategy • Use data security and privacy as a requirement and evaluation criteria in the RFP release and bid evaluation process
Vendors unable to effectively deliver on schedule and within requirements	• Include demonstrations of a defined script as part of the RFP evaluation process as proof[8] • Include a question regarding capacity for implementation and support throughout the implementation period as part of the RFP released to the supply market

[8] This mitigation strategy was proven effective in evaluating project management technologies (eBuilder) for the City's IIS team. The original preferred proponent was unsuccessful in 2015 during demonstrations and the City moved to select the next vendor.

11. Resourcing Requirements

In order to deliver the full value of the implementation of a procurement and contract management solution, it is expected that involvement will be required from a large group of internal and external resources. The scope of the implementation will impact numerous teams within the City, with involvement required from each group that will be directly using and maintaining the technology. External consultants will be leading the solution design, testing, and implementation by configuring the technology to the City's specific design requirements. Both the time requirements from internal resources across the City, as well as external consultants, were considered in the implementation costs in the cost benefit model. Collaboration and knowledge transfer across these teams will be essential to project success.

This will require dedicated time and participation from CPSS leadership, City IT EA & SAP teams, Law Branch, and Accounts Payable. Collaboration and knowledge transfer across these teams will be essential to project success. The following outlines the various working groups and stakeholder resources required during the eProcurement implementation:

- ***Project Steering Committee*** comprised of the technology implementation project sponsor, the City's Chief Information Officer, City project manager, the integrating consultant team's proposed leadership team and its lead advisor. This group will help identify the stakeholders to include, resolve escalated risks and issues and provide decisions and direction to the delivery team.
- ***Core Technology Implementation Project Team*** comprised of the external integrating team of consultants.. This will collaborate with the City to execute on the project plan activities and create interim deliverables leading to the final technology configuration.
- ***City IT Team*** comprised of representatives from the Enterprise Architecture team and SAP Centre of Excellence to participate in pre implementation activities such as SPA decommissioning and master data cleanup as well as internally work to support integrating the new technology with existing systems throughout the implementation.
- ***Other Stakeholder Groups -*** Several other groups are important to include in the implementation and renewed operating model design. These groups may include:
- **CPSS Procurement:** engagement of leadership and buying staff representation to provide inputs on modifying procurement and contract management processes to fully utilize new technology capabilities..
- **CPSS Continuous Improvement:** involvement of representatives from the Innovation & Technology team for initial system training to equip them as change champions for rollout and sustainment.
- **CPSS Supply Chain:** involvement in interviews from replenishment and warehousing staff to determine the requirement for a host catalogue. Involvement of purchasing staff for training and rollout.
- **Business Partners:** workshops on the needs of embedded procurement & contract management staff, as well as inputs from business partners on the configuration of electronic catalogues and process changes. Business partner staff will also require availability for training workshops.
- **Suppliers:** consistent engagement through a select number of interviews and workshops with major suppliers to capture information on ways the City can be an easier customer to service (that translates to lower costs) and design an efficient and straightforward onboarding and enablement process.

The following table indicates the major stakeholder (groups). These timings may be refined during the planning phase of the project where we can confirm availability of the required resources:

Proposed levels of effort/commitment by stakeholders

Stakeholder Group	1. Implementation Prep and Tool Selection	2. Development, Rollout, & Supplier Enablement	3. Sustainment

Duration	9 months	2 Years	3 Years
Steering Committee	• Steering Committee Members	• Steering Committee Members	
CPSS Leadership & Staff	• Branch Manager • Director, Procurement Operations • Director, Continuous Improvement • Procurement Managers (10%)	• Branch Manager • Director, Procurement Operations • Director, Continuous Improvement • Procurement Managers (10%)	
City IT Team	• IT Staff Member • SAP Staff Member (25%)	• IT Staff Member • SAP Staff Member (50%)	• IT Staff Member (50%)
Core Project Team (City)	• Project Manager • Business Analyst • Strategic Sourcing Analyst (100%)	• Project Manager • Business Analyst • Change Management Resource • Supplier Enablement Analyst (100%)	• Change Management Resource (100% for Year 3)
Core Project Team (External)	• 2 External Consultants	• 3 Technology Consultants • Change Management Consultant	• Change Management Consultant (100% for Year 3)
Functional specialists	• Business Partner Specialists (As needed)	• Business Partner Specialists (As needed)	
Other stakeholder groups	• Business Partner Evaluation Committee Representatives • Select City Suppliers (Evaluation Committee is 30% for 2 months Select Suppliers: workshops)	• City Suppliers (As needed for enablement)	• City Suppliers (As needed for enablement)

12. Recommendation

Solution Recommendation

It is recommended that the City implements an integrated solution with the full suite of modules across spend analytics, sourcing, P2P, contract management, and supplier management, integrated with the City's SAP ECC. The purpose of the three scenarios was to understand the diversity of the supply market, and reflect the ability of solutions to meet the requirements for procurement and contract management. Based on that analysis, Scenario 1 is not acceptable and a piecemeal approach does not have benefits to the City. Scenarios 2 & 3 satisfy the business requirements of the City. Scenario 2 looks more attractive based on the available options, based on the City's guiding principles, current investment focus, and broad consensus support. However, the purpose of the three scenarios was to understand the diversity of the supply market, and reflect the ability of solutions to meet the requirements for procurement and contract management. Based on that analysis, scenario 1 is not acceptable and a piecemeal approach does not have benefits to the City. Integration across the modules of the tool will allow for full visibility and transfer across the entire strategic sourcing and procurement lifecycle. The integrated suite will allow for automating processes across spend analytics, sourcing, P2P, contract management, and supplier performance management. The alignment of the strategic sourcing suite with the establishment of the dedicated Strategic Sourcing and Corporate Contract Management functions as part of the new CPSS business module will allow for the City to capitalize on the increases in employee capacity resulting from the implementation and reallocation of staff towards the strategic sourcing function.

The investment in integrations between modules is thought to give best value as opposed to operating the modules separately. The Cost Benefit Analysis shows that there is a positive business case for implementing an integrated suite, and that this is preferable to the implementation of interim solutions and continuing to maintain the City's SPA tool.

Benefits will be realized through labour savings across the full procurement and contract management lifecycle, from opportunity identification, through the sourcing event development and execution, as well as in the ensuing contract and supplier management processes. Direct cost savings will result from increased ability to competitively procure from the supplier market, improvements in contract management oversight and effectiveness, and in consolidation of City spend through strategic sourcing initiatives. Benefits can be sustained through the use of operational excellence techniques to drive continuous improvement and a focus on efficiency within the CPSS team, using the implemented system to its full potential. The summary illustrative costs and benefits can be found below:

Summary Costs & Benefits	Year 1	Year 2	Year 3	Year 4	Year 5	**5 Year Total**
Benefits	$ -	$1.68 M	$5.13 M	$6.63 M	$7.07 M	$20.50 M
Costs	$3.90 M	$2.50 M	$1.21 M	$1.21 M	$1.21 M	$10.02 M
Total	**($3.90 M)**	**($0.82 M)**	**$3.92 M**	**$5.42 M**	**$5.86 M**	**$10.49 M**

Based on the results of the supply market scan and observed trends, it is recommended that the City obtain a Cloud-based SaaS solution through an RFP process, notifying the shortlisted suppliers in this report of the opportunity. It is expected that many vendors will offer tools suitable for the City's needs, and the evaluation should include analysis of security, total cost of ownership, integration, and the level of support available to the City. Key solution differentiators will be best explored through a competitive process involving solution demonstrations to supplement those already held.

The tool is expected to provide the following high level functionality to the functions across the CPSS business model:

Functions	Solution Features
CPSS Operations	
Transactional Centre	• Automation of the front end processes and PRs, automation of POs, and workflow for approvals and routing
Strategic Sourcing	• Spend analytics tools for data cleansing, enrichment, and drill down based on categorization and taxonomy classifications • Electronic tool for the development of RFx documentation from a template library • The ability to electronically post, track, receive, evaluate and advertise procurement opportunities • Electronic contract negotiation & award functionality
Competitive / Non-Competitive Procurement	• RFx Development • Electronic bidding for opportunities • Electronic supplier hosted catalogue for purchasing
CPSS Continuous Improvement	
Corporate Contract Management	• Document authoring and management tools with template and content libraries • Cross-enterprise visibility of active contracts • Tools for proactive contract management including lifecycle management for execution, change orders and extensions, and contract close out
Quality Assurance, Reporting, & Analytics	• Auditable and programmable workflow management for approvals and document visibility including timestamps • Reporting and data export capabilities for historic sourcing and contract management events and data
Technology & Innovation	• Configuration capabilities for continuous improvement and modification • Reporting and data export capabilities for historic sourcing and contract management events and supporting data and metadata
CPSS Supply Chain	
Inventory Control & Replenishment	• Ability to setup and manage a Supply Chain hosted catalogue for the business partners
Others	
Business Partners	• Ability to track status of a transaction through approvals and processing • Requirements matching those of CPSS Competitive / Non-Competitive Procurement

Accounts Payable	• Integration with SAP ECC and AP Dolphin DMS with visibility into original sourcing and contract documentation
Law	• Content libraries with assignable privileges • Document version control • Automated approval and workflow

The proposed solution in this business case would deliver benefits across the City's stakeholder groups. CPSS would receive the technology enablement it needs to sustain its new business model and continue to develop its capabilities. The business partners would realize cost savings and improved service levels to enhance their ability to deliver on major City projects. The City would benefit from improved efficiency and the ability to deliver on *The Way Ahead* while reducing risk through strong procurement and contract management oversight. Finally, City suppliers would have increased access to the City's opportunities, able to competitively bid on and transact business rapidly on the electronic system. It is recommended that the detailed business requirements are validated with City stakeholders immediately following the approval of this business case, with work beginning on the Implementation Prep & Tool Selection activities highlighted in Section 5.

Detailed Business Requirements

The business requirements developed to address the pain points across in-scope processes can be found below. These are intended as the foundational requirements to be included in an RFP release. They will be validated through broad stakeholder engagement, conditional on the approval of this business case.

In-Scope Process	Pain Points
Spend Analysis	• Inadequate NATO taxonomy and lack of commodity codes impair ability to prepare analysis by material category • Manual data extraction and reporting • Data quality challenges
Sourcing	• Inadequate template library • Lack of workflow automation • APC does not offer functionality to identify and notify potential suppliers of opportunities • Document management challenges and supplier frustration from hard copy submission requirement • Lack of tool to audit compliance and evaluation
Procure to Pay (P2P)	• Poor visibility into purchase requisitions and purchase orders results in challenges resolving mismatches • No electronic catalogues for Stores items or selected vendors • Inadequate governance and controls for purchasing against contracts • Manual order processing for IT suppliers • Paper based Service sheets for some ERS orders
Contract Management	• SPA is a cumbersome contract library • Inadequate data capture on contracts and outline agreements • No contract management clause library or drafting environment • Manual contract management and workflow • Dedicated contract management technology limited to IT Branch Vendor Management Office (VMO)
Supplier Performance Management	• Supplier performance tracking in SPA requires manual entry of performance metrics • Limitation to one-way feedback (City to suppliers) • Supplier performance evaluation process is limited to Design & Construction suppliers
Integration with SAP & Non-Process Considerations	• SPA receives one-way updates from SAP for Vendor Master data • The City's AP Dolphin DMS tool resides within the SAP interface with total integration with SAP ECC • The City's dashboarding tool Tableau is integrated with SAP through Rapid Marts • SPA's BI is integrated with the SPA tool for contract analytics

	Business Requirements	
In-Scope Process	**Focus Area**	**Description**

Spend Analytics	Data Preparation	Ability to synthesize data from multiple source systems (disparate ERP systems and Corporate Procurement Cards)
Spend Analytics		Ability to establish rules for data entry into the system (e.g. format requirements, quality control, mandatory fields)
Spend Analytics		Ability to test data integrity and apply cleansing functions
Spend Analytics		Supports automatic data cleansing and enrichment; features artificial intelligence (i.e. auto classification algorithms)
Spend Analytics		The system will have the ability to group together services, commodities, material groups and suppliers into categories
Spend Analytics	Opportunity Identification	Ability to support UNSPSC and other standard taxonomies on all contracts
Spend Analytics		Ability to enter customized taxonomies and commodity codes
Spend Analytics		Ability to tag multiple category taxonomies to a contract
Spend Analytics		Provides visibility to suppliers and contracts within material categories for contracts that have been tagged with a taxonomy
Spend Analytics		Users can drill down to line item details in spend analysis
Spend Analytics		Ability to filter data by multiple dimensions / data sets
Spend Analytics		Ability to extrapolate and forecast spend based on historical data
Spend Analytics	Spend Reporting	Ability to export data to multiple file formats (e.g. Excel, Word, Adobe, PowerPoint, CSV, etc.)
Spend Analytics		Ability to add filters and multiple criteria to data reports
Spend Analytics		Users can generate configurable reports and dashboards (e.g. templates, graphical representations)
Spend Analytics	Benchmarking	Ability to view aggregated peer group data for comparison by category
Sourcing	Account Management	Ability to provide visibility to procurement demand and pipeline
Sourcing		Ability to configure system triggers to reflect procurement milestones and
Sourcing		Ability to assign resources to sourcing projects for workload planning
Sourcing	RFx Development	Ability to build content library for sourcing documentation and templates
Sourcing		Ability to assign content privileges
Sourcing		Ability to manage version control of sourcing documents
Sourcing		Workflow management and routing for sourcing documents and approvals
Sourcing	RFx Release	Electronic posting of documents and attachments
Sourcing		Ability to notify supplier network of opportunity
Sourcing	Event Creation	Support for multiple auction types: Reverse, Forward etc.
Sourcing		Ability to assign auction roles (administrator, contracting authority, approver, bidders)
Sourcing		Ability to assign mandatory bidding fields

Sourcing		Ability to set bidding parameters (reserve price, bid increments, automatic extensions)
Sourcing		Ability to maintain sealed bids and bid confidentiality among bidders
Sourcing		Ability to configure event timing rules
Sourcing		Ability to restrict access to sourcing events
Sourcing		Ability to transfer of attachments / specifications to suppliers
Sourcing	Bidding & Evaluation	Ability to capture supplier conversation audit trail
Sourcing		Ability to create electronic bidding forms
Sourcing		Ability to support real-time collaboration with suppliers
Sourcing		Ability to rank vendors based on weighted evaluation of supplier responses
Sourcing		Ability to view vendor responses side-by-side
Sourcing		Ability to download / export vendor responses into standard formats (e.g. Excel, Word) for offline analysis
Sourcing		Rule-based workflow for approvals on vendor bids prior to award
Sourcing	Award	Notify winning and losing proponents with standard notification
Sourcing		Central dashboard with status of sourcing events, workflow, & tasks
Sourcing		Ability to transfer award information to third party systems (e.g. CLM) through standard integration
eProcurement	Requisitions & Orders	Guided buying interface
eProcurement		Ability to request unplanned services and recurring services
eProcurement		Requisitions based on customized templates
eProcurement		Support for Punch-out catalogs
eProcurement		Support for internal catalogs
eProcurement		Cross-catalog search
eProcurement		Ability to email P.O.s and files directly from the system
eProcurement		Ability to split costs across accounts
eProcurement		Ability to receive electronic transmission confirmation
eProcurement		Budget checks at time of requisition
eProcurement	Workflow	Configurable workflow for requisitions and purchase orders
eProcurement		Approvals on mobile devices
eProcurement		Ability to configure workflow to redelegate authority and privileges – e.g. during employee absences
eProcurement		Transfer of attachments to approvers and vendors
eProcurement		Commodity / material category specific workflow
eProcurement	Integration	Ability to integrate with Dolphin AP solution (3 way match)
eProcurement		Ability to provide visibility from requisition to invoice payment with Dolphin AP
eProcurement		Ability to download / export vendor responses into standard formats (e.g. Excel, Word) for offline analysis
eProcurement		Allows for integration to SAP Goods Receipts and linkage to supplier KPIs
eProcurement		Ability to escalate workflow for late Good Receipts

eProcurement		Rule-based workflow for approvals on vendor bids prior to award
eProcurement	Supplier P2P Enablement	Electronic communication of orders and timestamped audit trail
eProcurement		Ability to enter service sheet submissions for review
eProcurement		Ability for supplier to collaborate on e-order
eProcurement		Supplier maintained electronic catalogues
Contract Management	Drafting	Ability to develop and maintain a central clause and template library of pre approved content
Contract Management		System has a central workspace for contract authoring and drafting
Contract Management		Ability to enter custom contract metadata (e.g. title, status, contract type)
Contract Management		Ability to assign content-specific access rights & privileges (i.e. Law Branch's standard T&Cs)
Contract Management		Ability to reference master agreement within sub-agreement contracts
Contract Management		Ability to review scope of each master agreement against which contracts are issued
Contract Management	Contract Negotiation & Approval	Ability to configure workflow for collaboration with internal and external stakeholders
Contract Management		Supports transfer of attachments to approvers and vendors
Contract Management		Ability to redline and track changes to documentation
Contract Management		Ability to send contracts, change orders, NDAs, and similar documents for electronic signatures
Contract Management		Auditable document check-in and version control (with timestamps)
Contract Management		The system has the ability to support mobile device approvals
Contract Management		The system has the ability to support E-signature capabilities
Contract Management	Execute & Monitor	Search capabilities of central contract repository for all contracts
Contract Management		Search feature can search across all modules for contract numbers, titles, suppliers, PO numbers, names, metadata, etc.
Contract Management		Ability to apply criteria for filtering search results and limit search results to a reasonable number that is easy to navigate
Contract Management		Event triggered automatic alerts (non-compliance, expiry, exceptions, spend limit reached)
Contract Management		Support for contract changes
Contract Management		Ability to conduct administrative functions such as managing meetings, correspondence, obligations, reminders, changes, and close out
Contract Management		Ability for users to easily access signed contracts, change orders, historical rate tables, and price records

Contract Management		Ability to develop risk profiles for suppliers and flag users of changes in the risk profile of a contract or suppliers
Contract Management		Ability to report on approved and pending contract changes
Contract Management		Ability for vendors to input into contract change orders through web portal
Contract Management		Ability collect and report on root causes for contract changes
Contract Management		Ability to view anticipated spend and cumulative commitment against outstanding contracts
Supplier Management	Supplier Portal	Ability for interested suppliers to register on the portal
Supplier Management		Ability to allow vendors to enter required data and status directly into the system
Supplier Management		Ability for vendors to upload certification and compliance documentation (insurance, safety records)
Supplier Management		Ability to capture audit trail information on all transactions with vendor file changes (user, date, time stamp)
Supplier Management	Supplier Performance Management	Ability to develop a library of KPIs that can be included in any contract
Supplier Management		Ability to provide suppliers with visibility to their performance
Supplier Management		Ability to configure custom scorecards and automatically update data
Supplier Management		Search and store historical supplier performance data
Supplier Management		Ability for suppliers to provide feedback to the customer
Supplier Management		Ability to export performance data to multiple data formats (e.g. Excel, CSV)
Supplier Management		Set boundary conditions (thresholds) to trigger performance issue alerts
Supplier Management		System will feature customizable dashboards for individual users
Supplier Management		Ability to establish supplier improvement plans