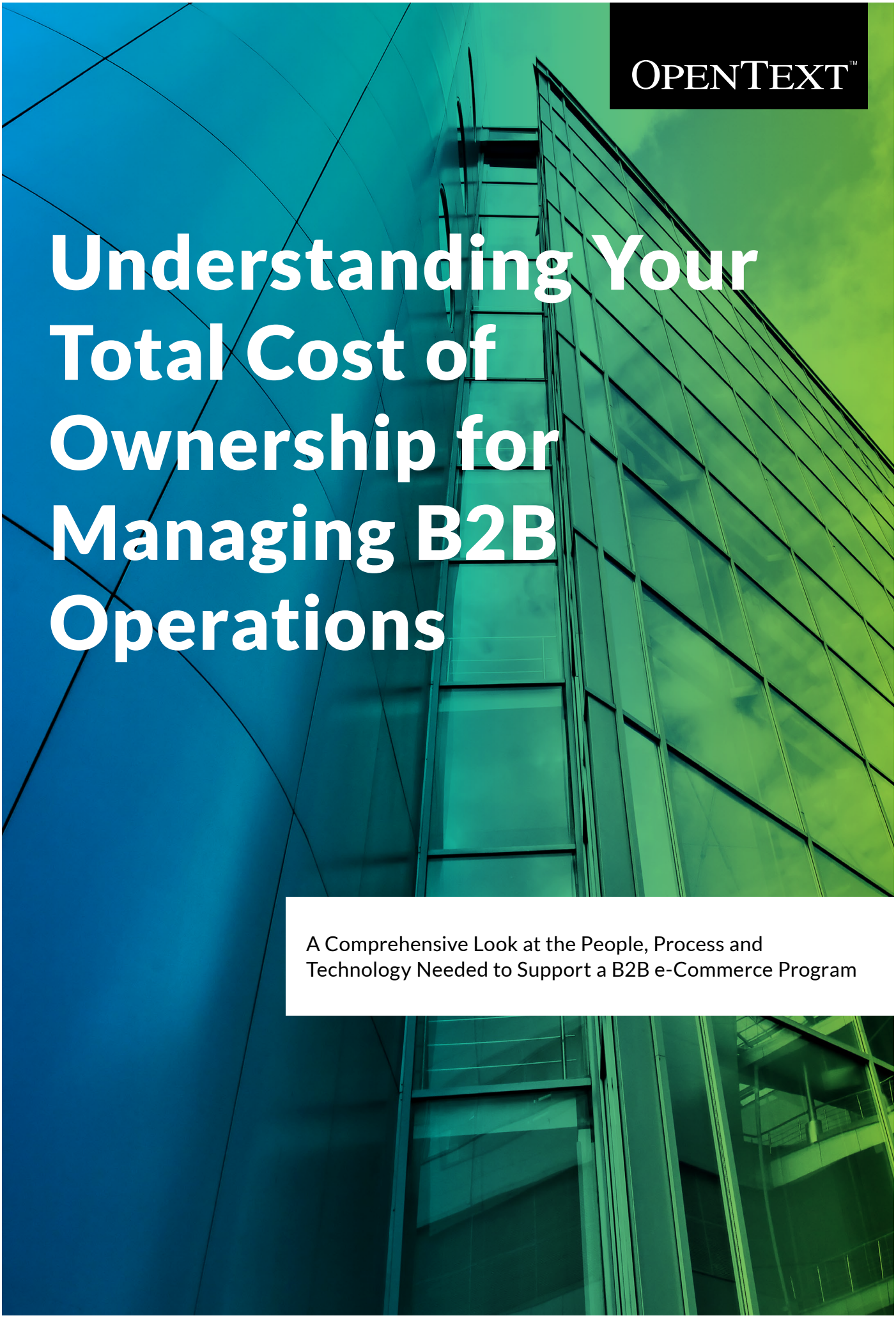
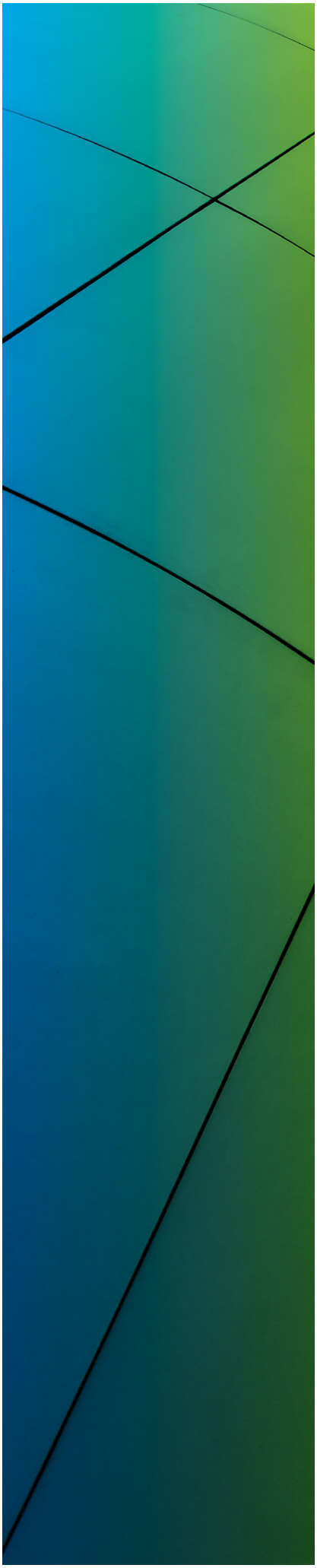


OpenText™

Understanding Your Total Cost of Ownership for Managing B2B Operations

A Comprehensive Look at the People, Process and Technology Needed to Support a B2B e-Commerce Program



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Executive Summary

In a 2010 global survey of 819 cross-industry senior executives, which analyzed the trends in customer-supplier relationships and supply chain technology, more than 70 percent of the survey respondents expected supply chain complexity to increase over the next three years, and 88 percent of the respondents believed that having a strong, flexible B2B e-commerce program provided differentiation from competitors and was important to growing business at key accounts.[1] It is likely that your organization has experienced this increased supply chain complexity and your B2B e-commerce program has had to adapt to this complexity.

Three years later in 2013, a new survey determined that when considering the companies' plans for future use of B2B e-commerce, 96 percent of participants plan to increase the number of customers they trade with electronically, the number of suppliers they trade with electronically, and/or the number of business processes they support. 59 percent of participants plan to expand their use of B2B e-commerce in all three areas.[2] And a different survey by Stanford Global Supply Chain Managed Forum concluded that when considering the overall value of B2B managed services, 96 percent of companies indicated that these services increased the value of their B2B integration program.[3]

The benefits of developing B2B programs—whether in-house or outsourced—are clear. But, operating a global supply-and-demand chain is becoming increasingly complex as companies face a wider range of requirements from trading partners, find themselves working with suppliers and customers in more territories and have to react to greater diversity in operational and technical capabilities within their trading partner communities. A company's ability to manage and benefit from the complexities of today's value chains is a critical factor in its success.

However, achieving critical business objectives can be difficult enough without the constant concern of configuring, monitoring and managing B2B e-commerce systems. How can your business sort through the complexity in order to develop a strategy for creating a mature B2B program that will yield benefits such as reduced costs, improved capabilities and increased customer satisfaction? What cost, speed and agility factors must be considered to determine if your B2B program should be developed in-house or outsourced? Can a solid financial model be developed that gives an accurate projection of the ongoing operational expense of operating your B2B program, and whether it is financially sound to stay in-house or outsource?

The first step in developing a strategy for optimizing your B2B operations is to determine the total cost of ownership (TCO) of your current B2B operations. You can then weigh the relative TCO associated with on-premise versus outsourced B2B programs and make an informed decision based on your analysis that will help your B2B program reach optimal maturity. Some companies may be faced with creating an entirely new B2B environment, but most situations involve the comparison of an existing solution to a new one.

This paper will focus on the management and growth of B2B programs and the necessary cost analysis in this situation. Many, and in some cases all, of the cost considerations outlined in this guide are applicable to creating a new B2B program as well.

This paper will introduce a methodology, or process, for measuring TCO and will assist with answering questions such as those posed earlier regarding the cost, service, speed and agility comparisons that should be considered to make the decision to manage a B2B program in-house or to outsource. This TCO guide encompasses more than just the hardware, software and infrastructure costs.

The B2B environment is complex and a "true" TCO comparison must consider many other factors and costs, including: mapping, trading partner implementations, change management, program management, disaster recovery and help desk support. Often overlooked or underestimated expenses such as personnel hours and operational expenses must be carefully examined to provide the most accurate determination of TCO. This paper will identify the key roles, tasks, and cost components that should be considered in a comprehensive cost analysis of managing a B2B program.

THE B2B ENVIRONMENT IS COMPLEX AND A "TRUE" TCO COMPARISON MUST CONSIDER MANY OTHER FACTORS AND COSTS, INCLUDING:

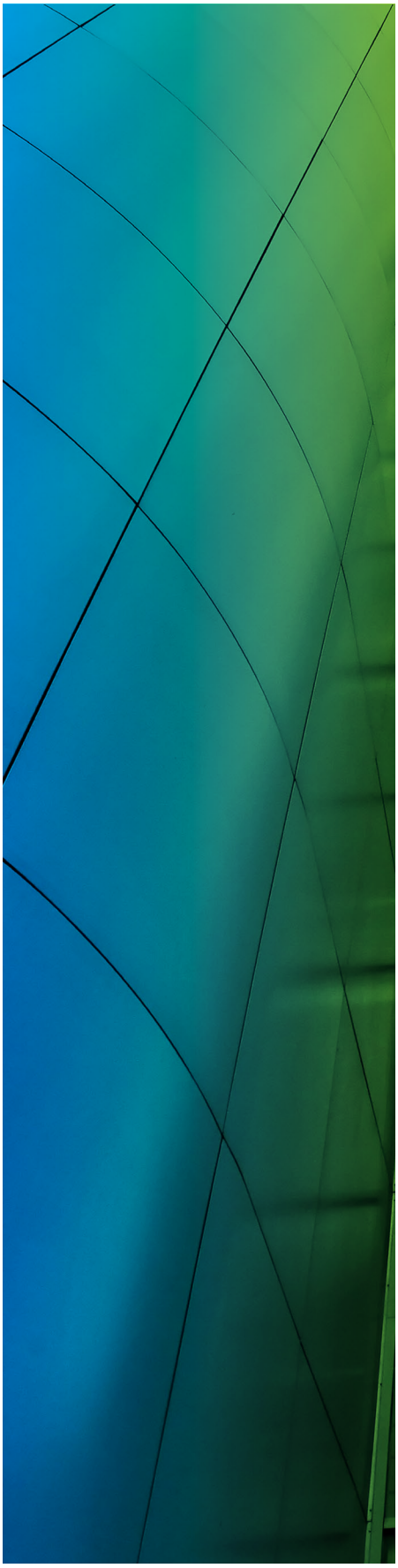
- *Mapping Requirements*
- *Trading Partner Implementations*
- *Change Management*
- *Program Management*
- *Infrastructure*
- *Disaster Recovery*
- *Help Desk and Support*

1. Christopher, "Enhancing Customer-Centric Supply Chains," GXS Inc. and SCM World, October 2010

2. "B2B Integration: Business Value and Adoption Trends" Stanford Global Supply Chain Management Forum. June 2013

3. "B2B Managed Services: Business Value and Adoption Trends" Stanford Global Supply Chain Management Forum. March 2013

Understanding the full scope of a B2B program will help you obtain an accurate determination of TCO. In addition, TCO analyses for two sample companies are provided, with detailed operational statistics comparing on-premise versus outsourced B2B operations. We have also provided a quick-reference document as an overview and checklist of the tasks to be completed and personnel needed at each stage of a B2B program.



Identifying B2B Program Roles and Responsibilities

The first step in assessing the necessary cost components associated with a B2B program is identifying the roles and responsibilities involved in the program. The following provides an introduction to the stages of a B2B program and the roles and processes needed at each stage.

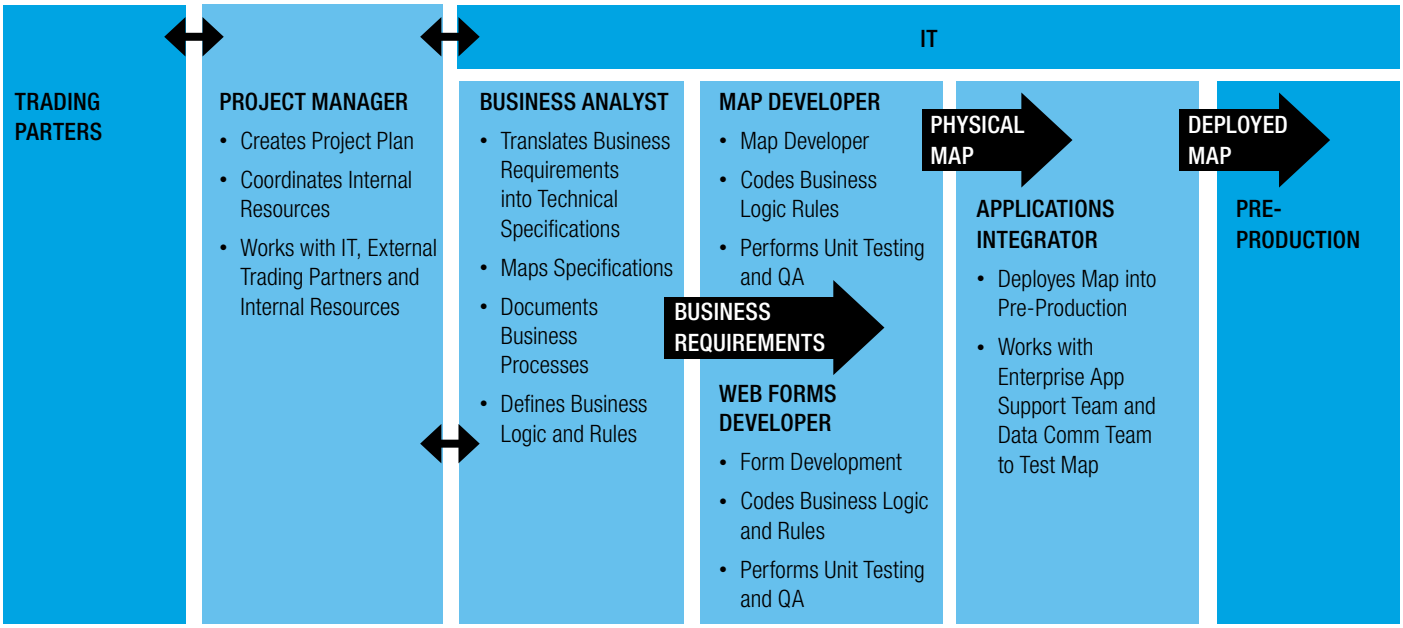
B2B programs require a wide variety of roles and skill sets for success, including map development, Web form development, trading partner onboarding, back-office application integration, testing, internal and external IT monitoring and support, planning and change management. Roles needed to support these tasks are listed below. In some companies these roles are not necessarily performed by a dedicated or full-time individual or handled by a group—in some cases several roles are performed by a single person—a limiting factor in scaling or effectively measuring costs associated with a B2B program.

- **Project Manager**
- **Business Analyst**
- **Map Developer**
- **Applications Integrator**
- **Web Forms Developer**
- **Internal B2B IT Support**
- **External Trading Partner Facing IT Support**
- **Infrastructure Planning Team**
- **Change Management Team**
- **Help Desk & Monitoring Team**

While the names of specific roles will vary across companies and industries, each of the roles must perform numerous functions to successfully support or grow the B2B program. The following sections provide further detail and descriptions of the key functions performed by each role, the tasks that must be completed at the different stages and the cross-functional coordination that must occur to successfully launch B2B programs or growth initiatives.

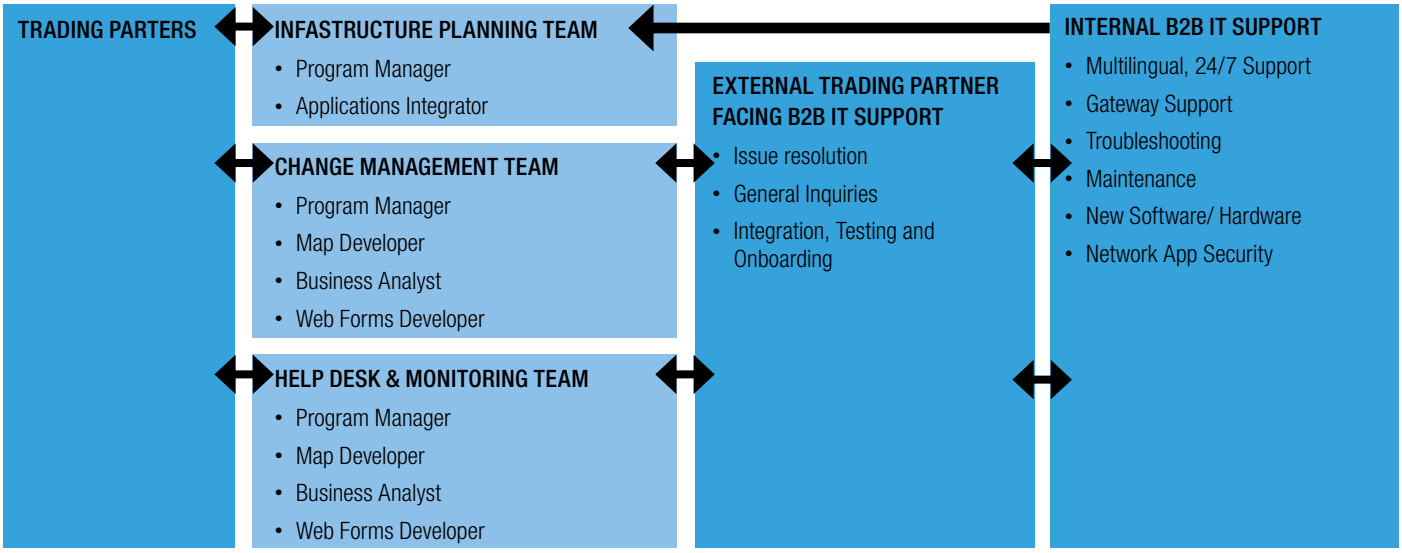
The following diagram illustrates the typical roles and tasks that must be completed when a B2B program is being set-up or is undergoing significant changes or growth.

B2B Program Setup: Roles and Key Functions



An established B2B program also requires coordination between various teams and/or individuals to provide ongoing support and maintenance. The diagram below illustrates the typical functions needed to support a B2B program.

Ongoing B2B Program Management: Roles and IT Support Functions



B2B PROGRAM GROWTH DRIVERS

Companies often decide to grow their B2B programs in order to:

Increase Customer Satisfaction

Reach New Customers

Establish Competitive Differentiation

Handle Rapid Growth

Determining Total Cost of Ownership

When the key roles and responsibilities have been identified, financial metrics associated with managing B2B supply chain operations must be gathered in order to determine TCO for the B2B e-commerce program. This is not an easy task and is often more involved than simply obtaining information from the finance and accounting departments. All of the tasks involved in maintaining, growing, or even creating a B2B program must be understood and measured to give a comprehensive view of the program cost.

Many companies have already made an investment in B2B automation of some form, making maintenance or growth scenarios for existing integration programs much more common. Companies with established B2B programs should still measure and understand the costs of their B2B operations. The rate of technology and standards changes, in addition to ongoing customer requests for new document types or formats, often result in necessary B2B program changes that must be made in a relatively short time frame. Companies with a clear understanding of their B2B program TCO are a step ahead when it is time to make changes for growth scenarios which typically require filling a gap in a company's current capabilities or expanding the scope or reach of an existing B2B program.

Additional reasons why companies grow their B2B program include:

- **Increase Customer Satisfaction**—Meet a wide variety of B2B integration requirements from a diverse customer base.
- **Reach New Customers**—Changing strategies to target a new region or new industry or customer base.
- **Establish Competitive Differentiation**—Augment B2B capabilities, enabling access to better B2B technology and skills on a global scale.
- **Handle Rapid Growth**—Rapid company growth often requires internal resources to focus on meeting the growth opportunity in front of them, not on building out a new B2B platform and skill sets. Rapid growth is a common driver for outsourcing B2B programs to handle a growing customer base and customer requirements.

B2B Program Setup: Roles and Key Functions

Calculating the hardware and software costs is fairly straightforward. It is the planning, implementation, support and change management costs that require an in-depth analysis and understanding of the technical and business aspects of managing B2B operations.

Costs associated with B2B program management include:

- Infrastructure Planning
- Hardware Purchase and Installation (as needed)
- Software Purchase and Installation (as needed)
- IT Infrastructure Costs
- Initial Implementation & Training
- Maintenance of Hardware
- Maintenance of Software
- Ongoing Change Management & Training
- Trading Partner Backlog
- Fines/Penalties for Non-Compliance (if applicable)
- Help Desk & Monitoring
- Disaster Recovery

TYPES OF MAPS

***Base**—A base map is data translation for which the specifications are documented. The logic to translate data from input to output has a one-to-one relationship and sufficient test data exists to verify that the translation is working properly.*

***Clone**—A clone map is a map for a single trading partner that is derived from a previously developed map. A clone map is the same document type, same direction (inbound/outbound), same industry standard version and same back-office application as the previously developed map.*

***Complex**—A complex map is a map that requires data content verification, complex data structures or file level manipulation.*

***Canonical**—A predefined and 'standardized' map containing logical data definitions and components associated with integrating business systems. When organizations adopt a canonical approach, they conform to the predefined map components and minimize custom integration and mapping.*

Implementation Planning Cost Considerations



Following are the representative tasks and program activities that a company must conduct as part of each major cost area associated with B2B program management. These components are typical of B2B programs throughout the world from companies of almost any size and in any industry.

The factors in the first section, Infrastructure Planning, help determine the level of efficiency that a B2B program is operating at, when compared with hardware, software, IT infrastructure and implementation & training costs. For example, programs with high document volume, complex mapping needs and a large number of trading partners will, of course, require a certain level of IT infrastructure and personnel to support the program. Determining the specific costs associated with the various areas of your B2B program also provides an accurate comparison of on-premise B2B operations versus the use of managed services for your B2B program. Drilling down to specific cost areas provides a more informed decision to outsource all or part of your B2B program, depending on where the greatest cost savings can be realized.

Infrastructure Planning Costs

- **Document Volumes**—Monthly document volume and expected growth in document volume, to include the total for both inbound and outbound documents.
- **Mapping Needs**—Current number of base, clone and complex maps and average number of maps added each year.
- **Specification Needs**—Current number of base, clone and complex specifications and average number of specifications added each year.
- **Web Forms**—Current number of forms needed and average number of forms added each year.
- **Fines/Penalties**—Average monthly amount of non-compliance fines and penalties.
- **Trading Partner Setup Services**—Initial number of trading partners, average number of trading partners ramped each year, number of trading partners to be removed from backlog.

Hardware Purchase and Installation Costs

- **Hardware Purchase**—The time associated with the installation, maintenance and refresh of hardware to support the B2B system. Hardware refresh is an often over-looked cost of maintaining or growing a B2B program.
- **Hardware Installation**—The cost of servers and workstations. This should include all required hardware for all environments (including pre-production/test environments and production systems).

Software Purchase and Installation Costs

- **Software Purchase**—Cost of additional licenses for development, production, data center, etc.
- **Software Installation**—Cost and time associated with initial/additional software installation, maintenance and refresh needs.
- **Web Portal**—Initial setup costs for Web portal (used to connect to non-automated suppliers).

IT Infrastructure Costs

- **VAN and Telecommunications Charges**—Monthly cost for VAN and Telco charges.
- **Infrastructure Costs**—Portion of data center costs related to B2B program (rent, utilities, etc.).
- **Disaster Recovery**—Average annual costs for the infrastructure, services and associated personnel for disaster recovery services.

Initial Implementation & Training

- **Full-Time Equivalent (FTE)**—Number of FTEs required to handle trading partner backlog, number required for initial and ongoing infrastructure planning team, initial implementation team, ongoing change management team and help desk and monitoring support.
- **FTE Changes**—Average salary increases and expected growth/reduction in FTEs.
- **Training**—Cost for initial and ongoing training for internal IT and business users as well as external trading partners. Training is often required for new standards, a new integration broker, supplier onboarding and new translation software.

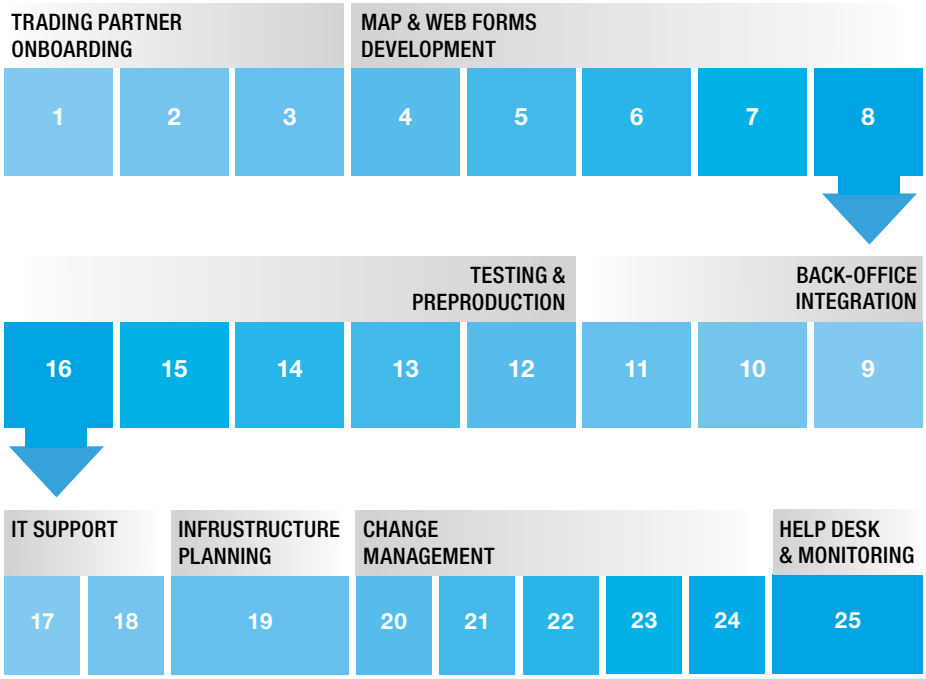
Calculating FTE

Of the cost considerations listed, calculating FTE is the factor that is least understood and most often miscalculated. Typically, it accounts for the greatest cost associated with running a B2B program—making it even more critical that the FTE needed to support a B2B program is understood and measured. A lack of understanding of the cross-functional resources and processes needed to support a B2B program from initial setup through ongoing maintenance and growth can lead to inaccurate FTE calculations. This TCO guide provides a clear view of the roles and functions needed to support a B2B program—each of which should be included in any cost analysis of your B2B infrastructure.

The B2B Program Management Cycle

The next diagram outlines the 25 steps that are typically performed in the cycle of managing a B2B program, an ongoing process in which some steps may occur at the same time, and many steps are repeated as the program is enhanced and expanded. This cycle occurs after Implementation Planning has occurred and all hardware and software is in place

The B2B Program Management Cycle: 25 Steps



THE FOLLOWING B2B PERSONNEL PROFILES PROVIDE AN OVERVIEW OF THE ROLES NEEDED AND TYPICAL FUNCTIONS FOR EACH ROLE.

PROJECT MANAGER

- *Focuses on major implementations of B2B initiatives*
- *Utilized for major upgrades of the B2B platform, expansion of the B2B program or starting a new program*
- *Reports into the IT organization*
- *Creates project plan with resources, milestones*
- *Coordinates internal resources to ensure timely and costly completion of project*
- *May work with external trading partners to coordinate activities*

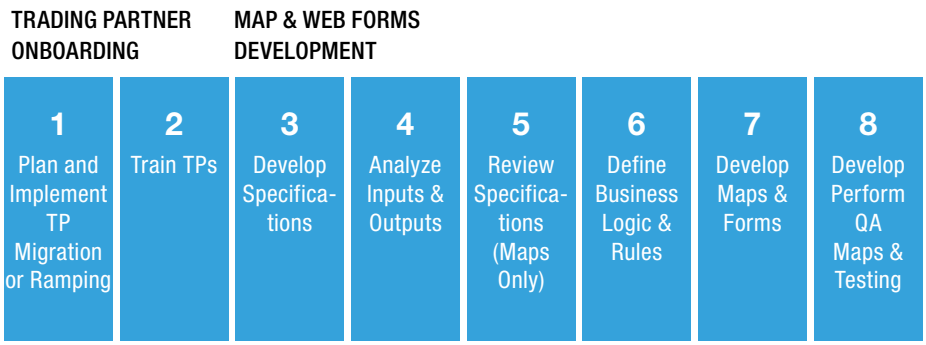
Trading Partner Onboarding

One of the most important and challenging processes of a B2B program is getting trading partners successfully conducting e-commerce. Processes must be established in order to migrate existing trading partners or onboard/enable trading partners that are not currently exchanging electronic documents with your business. This requires a thorough analysis of trading community technical skills and willingness to integrate, as well as trading partner education on options available to connect with a company electronically. The analysis will determine the extent of B2B capabilities that need to be supported, including document types, document formats, communications protocols, and trading partner enablement tools, such as B2B Web forms to automate B2B processes with trading partners that are not B2B-enabled. Trading partner onboarding is a significant cost consideration for most B2B programs and typically includes the following key cost considerations:

1. **Trading Partner Migration or Ramp Planning**—Identify trading partners that need to be implemented; develop communication plan and determine transaction types, standards and formats to be exchanged. Perform end-to-end testing with trading partners to ensure compliance with standards and formats.
2. **Initial and Ongoing Training**—Provide initial training and ongoing support for trading partners as new systems, standards, software and formats are introduced.

When the trading community requirements have been identified, the map and form development work can begin. This requires careful coordination between numerous B2B professionals. The implementation team must work together to perform map development, Web forms development, trading partner onboarding, back-office integration and testing and pre-production services. Each of these key tasks involve numerous steps that must be completed, typically involving members of the implementation team as well as external parties.

Map Development



The following steps must occur during the map development phase of a B2B program. The Project Manager coordinates the internal resources, which at this stage includes a Business Analyst and Map Developer. Map development costs that should be considered include defining specifications, physical development, end-to-end testing and the personnel hours required to support each of these tasks.

3. **Mapping Specification Development**

- Determine document sets that need to be matched with trading partners
- Determine e-commerce standards to be utilized with each trading partner
- Determine customization required for each trading partner

4. **Analyze Inputs and Outputs of Enterprise Systems**, which might include ERP (e.g. SAP, Oracle), warehouse management, transportation management, supply chain planning, accounts payable and accounts receivable

BUSINESS ANALYST

- *Translates business requirements into technical specifications*
- *Maps specifications to trans- form data from enterprise systems (ERP) into industry standard formats (XML)*
- *Documents business processes specific to customer's value chain such as purchasing, order fulfillment, shipping, receiving, invoicing or payment*
- *Defines business logic and business rules required in B2B integration platforms to satisfy customer, channel or application-specific needs*
- *Workflow*
- *Acceptable data fields*
- *Alert thresholds*

MAP DEVELOPER

- *Takes the business requirements developed by the analyst as an input*
- *Performs the physical map development using a third- party translation software product*
- *Codes business logic and business rules as appropriate*
- *May create specialized types of maps—clones, merges of files, splits of files*
- *Performs unit testing and quality assurance of the map*

- Take into consideration variations by application, as many companies run multiple unique instances of enterprise systems
- Determine required data fields for each enterprise application necessary to perform business functionality

5. Review Specifications from Key Trading Partners including customers and suppliers

6. Define Business Logic and Business Rules that are required in B2B integration platforms to satisfy customer, channel or application-specific needs

7. Physical Development of Map using a third-party translation software tool

- Aggregation and de-aggregation of data
- Merging and splitting of files
- Re-organization of files
- Data enrichment and data validation scripts
- Create lookup tables
- Hard coding of business logic
- Boolean operations logic
- External application callouts
- Database queries
- Third-party application interfaces via Web services

8. Quality Assurance and Unit Testing

- Performed by the developer to ensure mapping function and business logic per- forms as expected. Using sample inputs confirm that outputs are produced as expected.
- Troubleshoot and resolve problems with the map

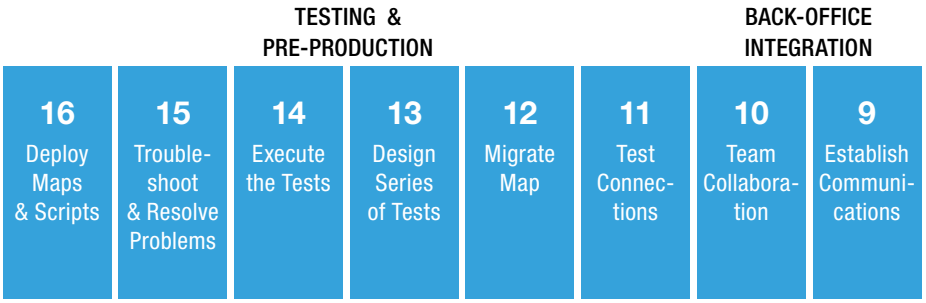
Web Forms Development

Web forms development may be required for customers that need Web forms to reach small and mid-market suppliers who are not EDI-enabled. Many of the tasks and processes for Web forms development are also performed for map development. The Project Manager coordinates the internal resources, which at this stage includes a Business Analyst and Web Forms Developer. Web forms development includes defining specifications, physical development and testing.

- **Web Forms Specification Development**
  - Determine business processes that must be automated
  - Identify forms data fields that are required for each business process
  - Identify customization, if any, required for business processes
- **Analyze Inputs and Outputs of Enterprise Systems** which might include ERP (e.g. SAP, Oracle), warehouse management, transportation management, supply chain planning, accounts payable and accounts receivable
- **Physical Development of Form** using a commercial, off-the-shelf forms development engine
- **Create Map to Convert Output of Form** into format desired by target applications
- **Quality Assurance and Unit Testing**—Conduct unit testing by the developer to ensure form data entry and business logic performs as expected. Use sample inputs to con- firm that correct output files are produced.

WEB FORMS DEVELOPER

- *Takes the business requirements developed by the analyst as an input*
- *Performs the physical form development using a third- party forms tool*
- *Codes business logic and business rules as appropriate*
- *May create specialized types of forms*
- *Performs unit testing and quality assurance of the map*



Back-Office Integration

The newly developed maps and forms must be integrated with the relevant business systems to ensure proper automated document flow. This involves collaboration between different teams and testing between the platform and enterprise application. Back-office integration includes additional tasks that impact the cost of your B2B program and organization. The following tasks, and the necessary personnel time to complete these tasks, must be considered when measuring the TCO of your B2B program.

9. **Establish Communications** between B2B integration platform and the enterprise application
10. **Collaborate** with the applications development and support teams
11. **Test Connection** between enterprise application and B2B platform

Testing & Pre-Production

Testing and pre-production is another significant cost factor in any B2B program. There are several tasks that must be performed, typically by numerous individuals and/or teams in a company. System level testing is conducted during this phase to ensure that end-to-end data flows between enterprise applications and trading partners are successful. The Applications Integrator plays a key role in deploying the maps and working with internal teams to test functionality in a pre-production environment.

12. **Migrate Map** from development to the pre-production environment
13. **Design a Series of Tests** to emulate real-world business scenarios such as the receipt of a purchase order, the delivery of an invoice or the initiation of a payment
14. **Execute the Tests** using several different types of trading partners to ensure a representative sampling of business scenarios has occurred; ensure that expected output is delivered to the trading partner
15. **Troubleshoot and Resolve Problems** with enterprise application connectivity, file transfer scripts, translation maps, customized business logic and data enrichment utilities
16. **Final Deployment** of the maps and scripts from pre-production to the production environment

Maintaining and Growing a B2B Program

An established B2B program must be continually maintained, supported and enhanced as needed. This is typically handled by a series of internally focused and externally focused teams that provide ongoing support. Varying communications protocols, standards and data formats, globalization across different standards, languages, and time zones, plus a constantly changing technology landscape all contribute to making the management of B2B a highly labor-intensive and time-consuming process. All of these factors are important considerations when measuring the TCO of your program. Typically,

APPLICATIONS INTEGRATOR

- *Takes the physical map as an output from the Map Developer*
- *Deploys the map into the pre- production environment*
- *Collaborates with peers in the enterprise application support team and data communications team to test the map functionality in pre-production environment*

three teams are needed to provide ongoing B2B program support, including: Infrastructure, Change Management and Help Desk & Monitoring. Internal IT resources and external trading partner-facing IT resources offer services and support for the three ongoing B2B program teams. In some organizations these may not be separate or dedicated teams, but regardless of the organizational structure within a company, there are three major functions that the B2B team(s) must be responsible for.

IT SUPPORT		INFRASTRUCTURE PLANNING	CHANGE MANAGEMENT					HELP DESK & MONITORING
17 Provide IT Support for B2BPro-gram	18 Provide IT Support for TPs	19 Develop Specifica-tions	20 Maintain and Add Maps & Web Forms	21 Manage Trading Partner Changes	22 Manage-Back-Office Integra-tion	23 Perform Testing & Pre-Produc-tion	24 Provide-Commu-ni-cation Updates	25 Provide Tier 1/2 Support

IT Support for B2B Programs

The following provides a description of the function and features of the IT support teams, as related to ongoing B2B program support. The time spent on B2B programs by IT resources is often a significant factor when calculating TCO for ongoing B2B programs.

17. Internal B2B IT Support

In addition to offering multi-language support capabilities and 24/7 availability, the IT team supports the B2B program internally by:

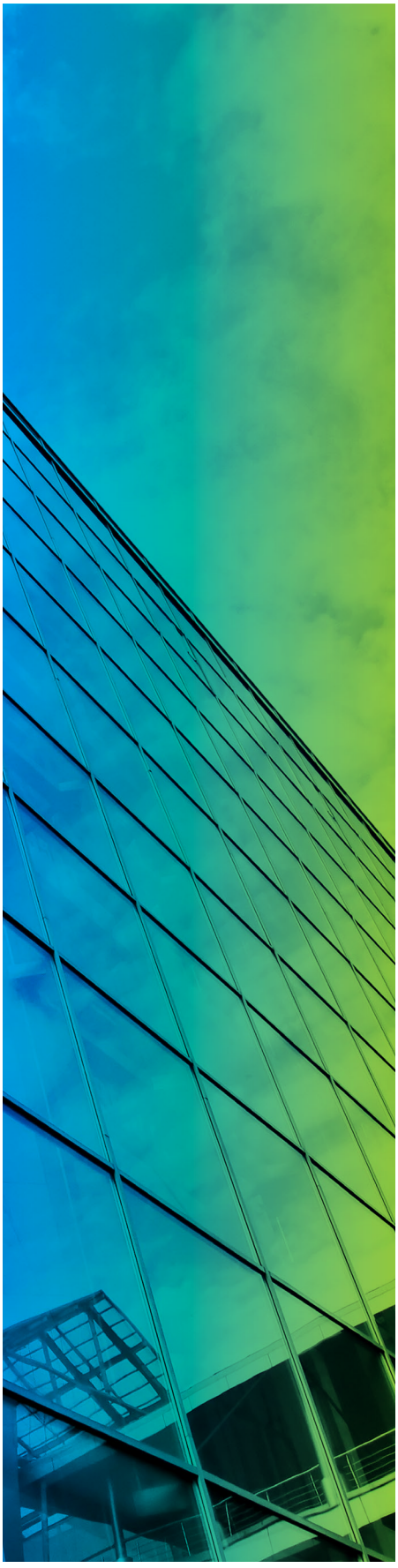
- Providing B2B gateway and communications gateway support, including resolving system issues, translation errors, communications problems, etc.
- Troubleshooting B2B integration errors with IT applications teams
- Providing maintenance, changes and additions to maps, Web forms, and communications (as opposed to ongoing changes)
- Handling new software and hardware installation
- Managing software and hardware breaks/fixes, upgrades and planned maintenance
- Maintaining network and application security, including current certifications for technology (ERP), communications (AS2) and security/reliability (SAS 70)

18. External Trading Partner Facing IT Support

The IT team also provides support for external parties, including trading partners, with the same multi-language support and 24/7 availability. External support functions include:

- Issue resolution with trading partners, such as communication failures, translation errors (trading partner sending bad data), etc.
- Answering general trading partner inquiries such as error tracking, transaction status, set-up questions and general how-to questions
- Coordinating integration, testing and onboarding with trading partners

B2B program management involves much more than IT resources. The following teams, each composed of B2B personnel in different roles, support the B2B program. The Infrastructure Planning, Change Management and Help Desk & Monitoring teams ensure the successful maintenance of your B2B operations.



Infrastructure Planning Team

The Infrastructure Planning team is engaged for major B2B program changes. The three scenarios that typically involve the Infrastructure Planning team are:

- General maintenance & repair needs
- Changes driven by a large trading partner
- Deliberate plans to expand the scope of the B2B program

19. Implementation Plan

The Infrastructure Planning team creates an implementation plan based on the situation (one of the three scenarios requiring a change in infrastructure). An implementation plan is created that identifies and documents the technology and resource limitations of the current infrastructure. The implementation plan also outlines steps that need to be taken to fill the unmet requirements and/or gaps in the current infrastructure. The plan covers needed changes in the areas of connectivity, security and data storage.

- Connectivity—Changes related to the expanded breadth of Internet-based communications protocols (AS4, Secure FTP, MQ)
- Security—Changes related to firewall policies, penetration testing, network & data encryption, PGP keys, digital certificates, digital signatures
- Data Storage—Changes related to the length of time that structured messages are archived, European Union e-invoicing requirements and log files

Change Management Team

The Change Management team is responsible for changes and enhancements to the B2B program including map and Web forms maintenance/additions, trading partner onboarding as needed, ongoing back-office integration, testing/pre-production, communications changes, new protocols to be added, data storage and security. These needed changes are driven by the increasing number of communication standards and data formats in use, global expansion resulting in language, currency and time zone differences, changing technology and increasing automation. The time and FTEs required to monitor emerging trends in technology, determine what new technologies and upgrades need to be incorporated, test and become experts on those technologies, and then to implement them and train all system users, can be extensive and is often not included when doing a TCO analysis. The following provides further detail for each of the areas of B2B program changes.

20. Map & Web Forms Maintenance and Additions

A great deal of the complexity involved with managing B2B programs can be attributed to the ever-changing standards, formats and technology that provide the framework for every B2B operation. The Change Management team handles all of the changes needed to keep the B2B system up-to-date, including:

- Field changes
- Changes to industry standards
- ERP application changes, including consolidation and/or standardization
- New TMS, SCP, WMS application
- Significant project to modernize integration environment
- New business processes involving ASNs, PO Changes, etc.
- New business rules for data in the fields

ONGOING B2B PROGRAM TEAMS & ROLES

INFRASTRUCTURE PLANNING TEAM

- *Program Manager*
- *Applications Integrator*
- *Internal IT Support*

CHANGE MANAGEMENT TEAM

Program Manager
Map Developer
Business Analyst
Web Forms Developer
Internal IT Support
Trading Partner IT Support

- Changes to the maps that convert the form into the schema
- Technology upgrades to ensure map and form consistency

21. Manage Trading Partner Changes

Changes from trading partners are an expected part of every B2B program. Trading partners usually differ in size, location and technological sophistication— adding greater complexity that must be considered when measuring TCO. Typical changes handled by the Change Management team include:

- Seasonal supplier changes
- Changes resulting from mergers & acquisitions
- Expansion into new product lines
- Expansion into new distribution channels
- Customer wins
- Expansion into new geographic regions
- Program to reach small and medium-sized businesses (SMBs) that were never enabled

22. Manage Back-Office Integration

The Change Management team manages changes related to ERP upgrades and consolidations as well as modernization of integration/translator technology.

23. Perform Testing & Pre-Production

Testing and pre-production services are conducted beyond the initial implementation—as needed for map/Web form changes, content testing with trading partners and customer-side and expansion projects that require more extensive testing.

24. Provide Communications Updates

The Change Management team facilitates changes if trading partners want to switch from one currently supported communications protocol to another.

Help Desk & Monitoring

25. Tier 1 and Tier 2 Support

The Help Desk & Monitoring team provides Tier 1/2 problem solving and support. The process followed by Help Desk & Monitoring generally involves these steps:

- Accepting inbound calls, e-mails, instant messages and trouble tickets via other systems generated from internal end-users and external trading partners
- Creating trouble tickets recording the contact details of the end-user or external trading partner
- If possible, resolving the issue on the phone with the end-user or sending a reply via e-mail or instant message
- If not resolved, the issue is escalated as a trouble ticket to the Tier 2/3 support organization
- Tier 2/3 support conducts troubleshooting, technical analysis and advanced diagnostics to attempt to resolve problem
- As necessary, Tier 2/3 support coordinates with internal teams and external trading partners to recreate problem or identify root cause
- Corrective action is taken to implement the fix
- Changes to hardware or software infrastructure are made, as needed, and a maintenance window is scheduled
- The end-user or external trading partner is notified and the trouble ticket is closed in the system

B2B APPLICATIONS

- **Transportation Management System (TMS)**—*System to manage transportation operations—providing planning, shipment and reporting func- tionality.*
- **Supply Chain Planning (SCP)**—*System for coordinating assets to optimize the supply chain—balancing supply and demand.*
- **Warehouse Management System (WMS)**—*Information management system that manages the storage and movement of items through the warehouse.*

HELP DESK & MONITORING TEAM

- *Program Manager*
- *Map Developer*
- *Business Analyst*
- *Web Forms Developer*
- *Internal IT Support*
- *Trading Partner IT Support*

IN-HOUSE B2B HELP DESK AND MONITORING

THE COST OF COMPREHENSIVE SERVICE

To meet time zone needs, some companies increase help center coverage to 24/7—resulting in added costs in the form of shift premiums to cover evenings and weekends.

Calculating TCO

To calculate TCO, all the tasks described must be accounted for in terms of direct and indirect costs. The following companies migrated from an in-house B2B program to an outsourced program and now have quantifiable results highlighting the benefits realized from using a managed services approach to optimize their B2B programs. The complex nature of B2B and the unique structure and requirements of individual B2B programs make it difficult to determine average or expected TCO without conducting an in-depth TCO analysis of your specific program. These industry examples of TCO serve to illustrate the benefits of obtaining an accurate calculation of TCO to aid in more informed decision making.



Case Study: Mid-Sized Consumer Packaged Goods Company

TCO for On-Premise B2B Operations

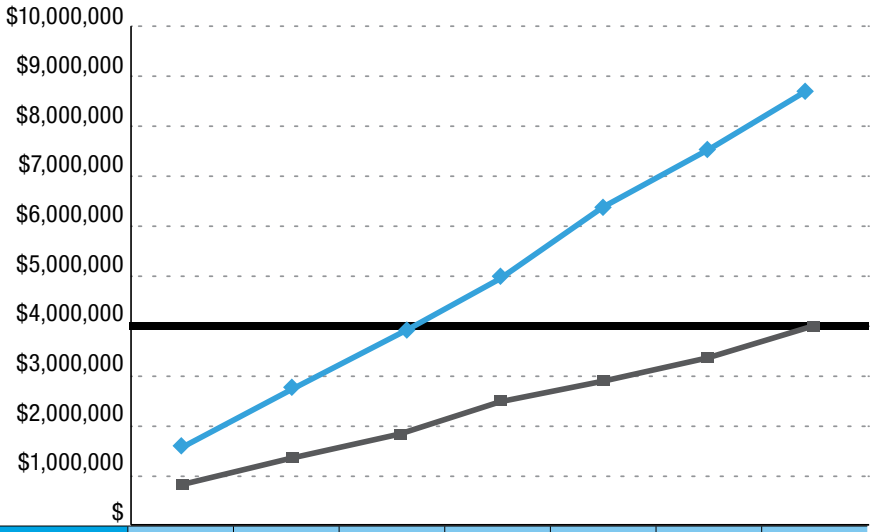
A leading manufacturer managed their B2B program on-premise. They needed to grow their B2B system in order to remain competitive. But, with an already high level of document volume and maps to manage, they decided to conduct a careful analysis of current and projected costs to determine if keeping the program in-house would be the most efficient and strategic route to running mature B2B operations. The table below provides a detailed analysis of their TCO.

Company TCO Profile

COST ELEMENT	INPUT
Current monthly document volume	110,000
Current number of maps/Number to be added per year	30/10
Current number of Web forms/Number to be added per year	0/0
Current number of trading partners/Number to be added per year	35/5
Number of trading partners in backlog	0
Hardware needs (Initial & Refresh/Annual Maintenance)	$125K/$25K
Software needs (Initial/Annual Maintenance)	$315K/$65K
Web portal set-up costs	$0
Monthly VAN costs	$9,000
Ongoing infrastructure charges (rent, utilities, etc.)	$9,000
Initial infrastructure team hours	3,000 hours
Initial implementation team hours	3,250 hours
Ongoing infrastructure planning team (number of FTEs)	1.25
Ongoing change management team (number of FTEs)	1.75
Help desk/monitoring (number of FTEs)	1.75
Added FTEs over seven years if remaining on premise	4.00
Annual disaster recovery costs	$90,000
Fines/penalties incurred for non-compliance	$10,000
Annual training costs	$3,000

TCO Saving Through B2B Managed Services

For the mid-sized manufacturer, a thorough cost comparison made the decision to move to a managed services solution simple. In the first year the TCO with OpenText (formerly GXS) would equal $.8 million—an immediate cost savings of 53% (from the $1.6 million TCO for managing the B2B program on-premise). TCO for a full seven-year program with OpenText would be around $4 million, versus $8.8 million for an on-premise program over the same period. The OpenText solution enabled a reduction in FTE requirements from 8.75 to 1.5, a cost savings of $4.7 million over seven years (or 83%).

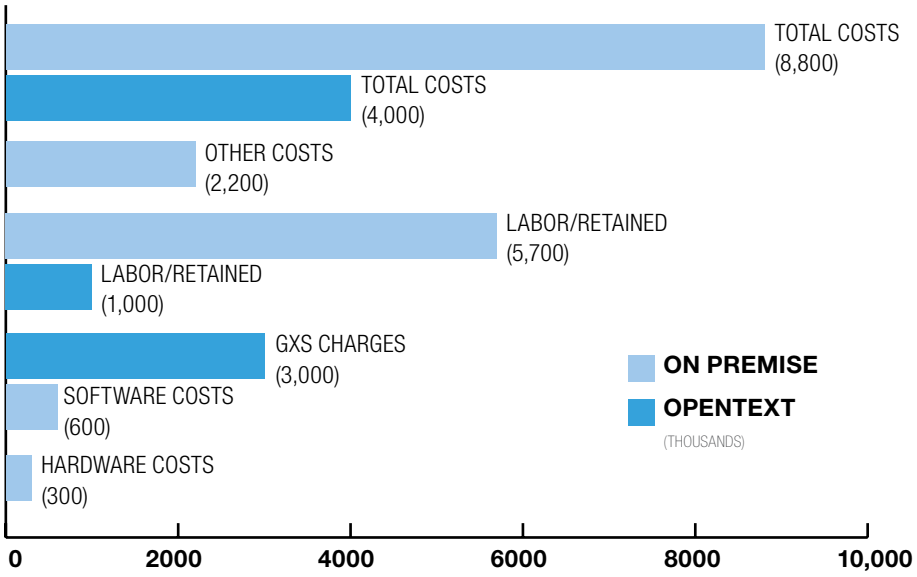


CUMMULATIVE COSTS ($ IN MILLIONS)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
ON-PREMISE SOLUTION	$1.6	$2.7	$3.9	$5.1	$6.3	$7.5	$8.8
OPENTEXT SOLUTION	$.8	$1.3	$1.8	$2.4	$2.9	$3.4	$4.0

CUMMULATIVE SAVINGS ($ IN MILLIONS)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
OPENTEXT SOLUTION	$.8	$1.4	$2.1	$2.3	$3.4	$4.1	$4.8

The chart below shows the extent to which each of the key cost areas contributes to the total costs of both the on-premise and the OpenText solutions. The savings of moving to the OpenText B2B Managed Services solution are significant. The FTE costs for the on-premise B2B operations alone were greater than the total cost for a complete OpenText solution over a seven year period—this is not including the on-premise hardware, software and infrastructure costs over the same period.

On Premise and OpenText Cost Comparison (In Thousands)





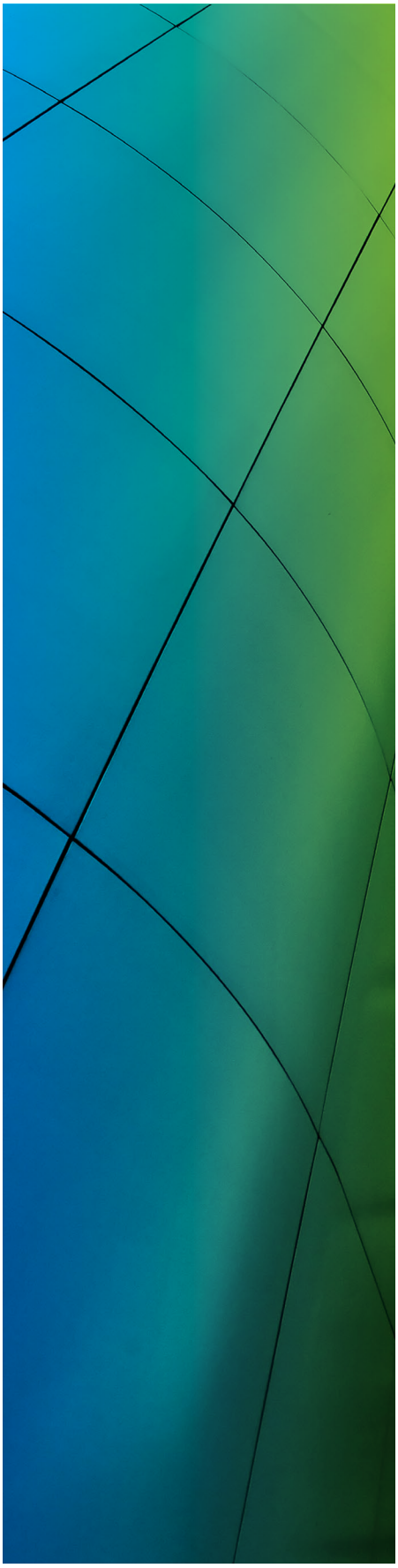
Case Study: Large Utility Company

TCO for On-Premise B2B Operations

A leading provider of energy services managed their B2B program on-premise and wanted to grow their B2B system. Steady growth in document volume and a substantial trading partner backlog would contribute to the need to add at least two FTEs if the program was kept in-house. Before beginning to grow their program in-house, they conducted a comprehensive TCO analysis of the current program to compare the TCO of the in-house program to that of a OpenText B2B Managed Services solution. The table below provides a detailed analysis of their in-house TCO.

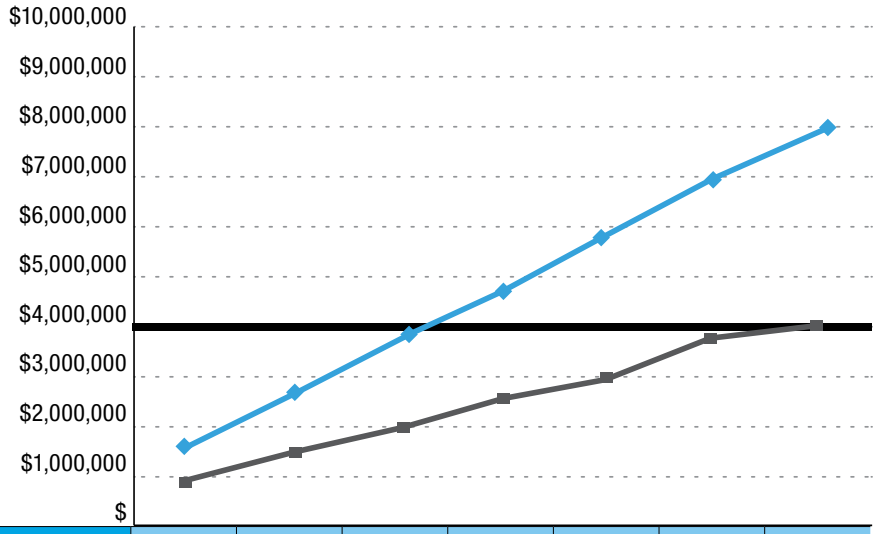
Company TCO Profile

COST ELEMENT	INPUT
Current monthly document volume	120,000
Current number of maps/Number to be added per year	12/2
Current number of Web forms/Number to be added per year	3/1
Current number of trading partners/Number to be added per year	130/25
Number of trading partners in backlog	30
Hardware needs (Initial & Refresh/Annual Maintenance)	$360K/$30K
Software needs (Initial/Annual Maintenance)	$165K/$55K
Web portal set-up costs	$50,000
Monthly VAN costs	$13,000
Ongoing infrastructure charges (rent, utilities, etc.)	$9,000
Initial infrastructure team hours	2,500 hours
Initial implementation team hours	2,500 hours
Ongoing infrastructure planning team (number of FTEs)	1.00
Ongoing change management team (number of FTEs)	1.50
Help desk/monitoring (number of FTEs)	1.50
Added FTEs over seven years if remaining on premise	2.50
Annual disaster recovery costs	$100,000
Fines/penalties incurred for non-compliance	$8,000
Annual training costs	$3,000



TCO Saving Through B2B Managed Services

For the large utility company, the cost savings of moving to the OpenText solution clearly sup- ported moving the in-house solution to OpenText B2B Managed Services in order to develop a more mature B2B program. TCO in the first year with OpenText, $.8 million, would result in immediate savings of 50% (compared to $1.5 million on-premise TCO). These savings would be consistent over the next seven years of the program, as TCO with OpenText over seven years would equal around $3.9 million, versus nearly $8 million for the on-premise program. Over the same period, internal FTE requirements would go from 6.5 to 1—a projected cost savings of $3.3 million over seven years, or 76%.

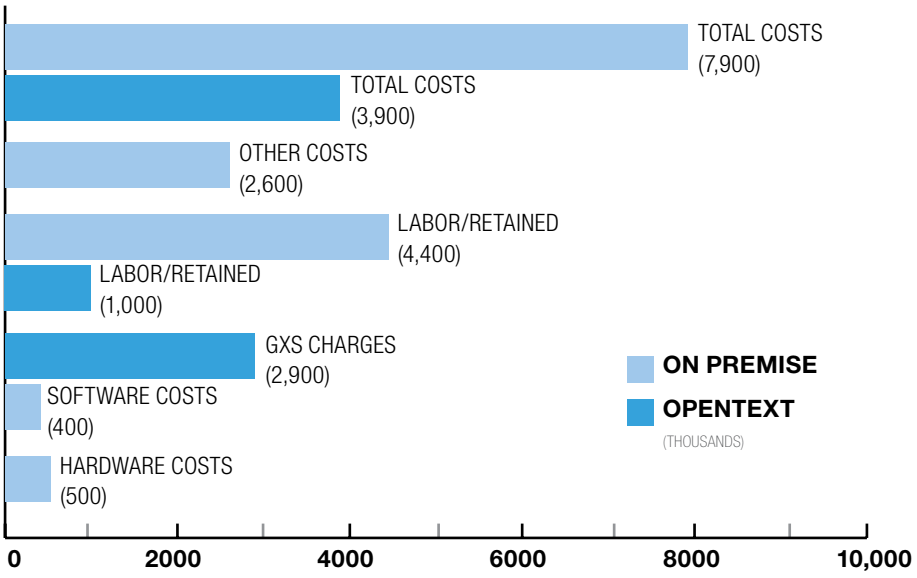


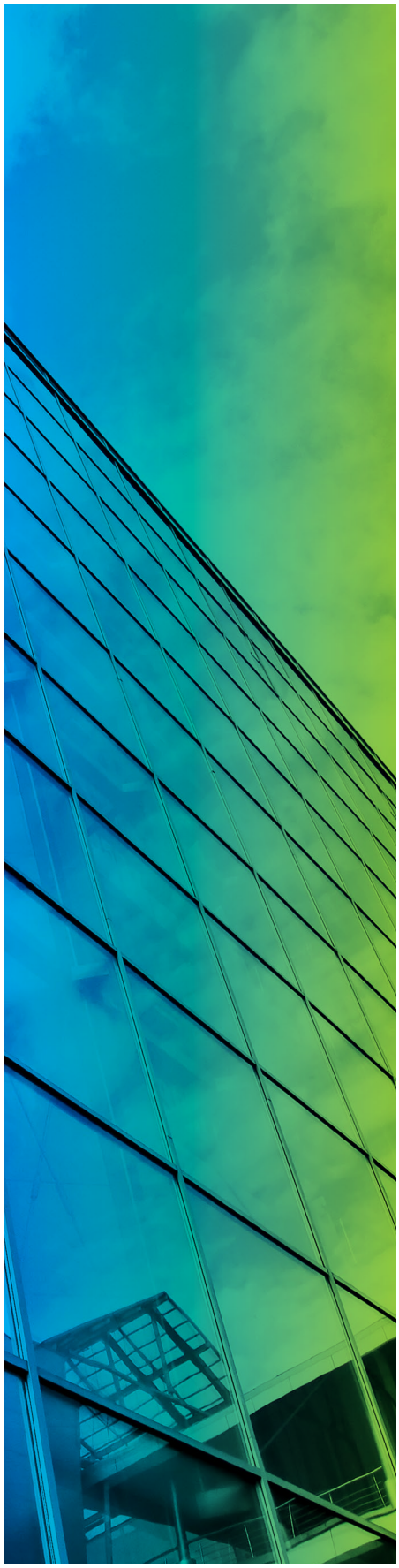
CUMMULATIVE COSTS ($ IN MILLIONS)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
ON-PREMISE SOLUTION	$1.5	$2.4	$3.5	$4.5	$5.7	$6.8	$7.9
OPENTEXT SOLUTION	$.7	$1.3	$1.8	$2.3	$2.8	$3.4	$3.9

CUMMULATIVE SAVINGS ($ IN MILLIONS)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
OPENTEXT SOLUTION	$.8	$1.1	$1.7	$2.2	$2.9	$3.4	$4.0

The chart below shows the extent to which each of the key cost areas contributes to the total costs of both the on-premise and the OpenText solutions. In this case as well, the OpenText total cost for a complete solution over seven years was less than on-premise FTE costs alone.

On Premise and OpenText Cost Comparison (In Thousands)





Calculating TCO for Your B2B Operations: Getting Started

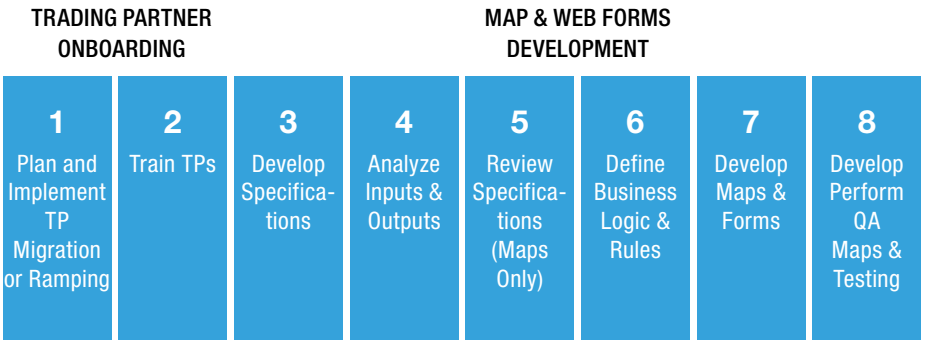
Contact OpenText for a comprehensive review of your current B2B program TCO. A OpenText representative will walk you through the many cost factors that must be considered when measuring TCO, to ensure that the analysis provides an accurate projection of current and future B2B program costs. Learn how your current TCO compares to that of an outsourced B2B program and discover the time and cost needed for your B2B program to reach optimal maturity.

Call us today at 1-800-503-9190.

The B2B Program Management Cycle: 25 Steps

Understanding the People, Process & Technology Needed to Successfully Launch & Maintain a B2B Program

CREATE/SETUP



TRADING PARTNER ONBOARDING

1	**Plan and Implement Trading Partner Migration or Ramping**—Identify TPs to be implemented; devel- op communications plan and determine transaction types, standards and formats to be exchanged; perform end-to-end testing
2	**Conduct Initial and Ongoing Training**—Training and ongoing support for TPs

MAP & WEB FORM DEVELOPMENT

3	**Develop Mapping & Web Forms Specifications**—Determine document sets, standards and customiza- tion required
4	**Analyze Inputs & Outputs of Enterprise Systems**—Consider variations by application and determine required data fields for each enterprise application necessary to perform business functionality
5	**Review Specifications from Key Trading Partners (Applies to Maps Only)**—Collect and review specs for customers and suppliers
6	**Define Business Logic & Business Rules**—Determine needed rules and logic to meet customer, channel and application requirements
7	**Physical Development of Maps & Web Forms**—Use third-party translation software for maps and forms development engine for forms in order to work with data and files to create maps and Web forms
8	**Perform Quality Assurance and Unit Testing**—Developer performs testing to ensure maps and Web forms perform as required

		TESTING & PRE-PRODUCTION				BACK-OFFICE INTEGRATION	
16 Deploy Maps & Scripts	**15** Trouble-shoot & Resolve Problems	**14** Execute the Tests	**13** Design Series of Tests	**12** Migrate Map	**11** Test Connec-tions	**10** Team Collabora-tion	**9** Establish Communi-cations

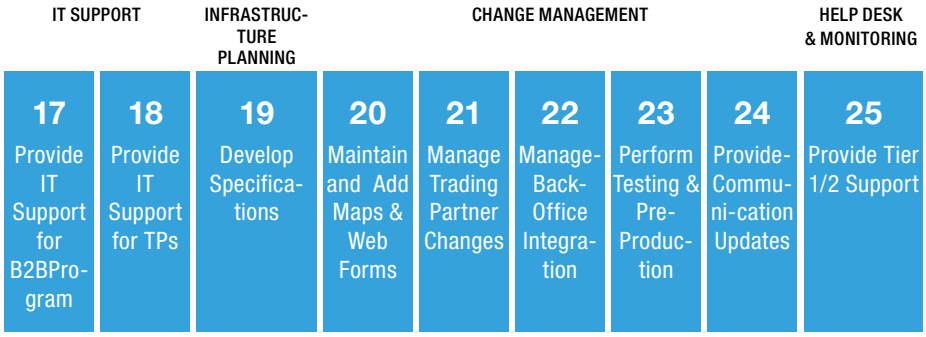
BACK-OFFICE INTEGRATION

9	**Establish Communications** between B2B integration platform and the enterprise application
10	**Collaborate** with the applications development and support teams
11	**Test Connection** between enterprise application and B2B platform

TESTING & PRE-PRODUCTION

12	**Migrate Map** from development to the pre-production environment
13	**Design a Series of Tests** to emulate real world business scenarios such as the receipt of a purchase order, the delivery of an invoice or the initiation of a payment
14	**Execute the Tests** using several different types of trading partners to ensure a representative sampling of business scenarios has occurred
15	**Troubleshoot and Resolve Problems** with enterprise application connectivity, file transfer scripts, trans- lation maps, customized business logic and data enrichment utilities
16	**Final Deployment** of maps and scripts from pre-production to the production environment





IT SUPPORT

17 **Provide Internal B2B IT Support**—Gateway support; troubleshooting; new hardware/soft-ware installa- tions, fixes, upgrades and planned maintenance; network and application security

18 **External Trading Partner Facing IT Support**—Issue resolution; answering TP inquiries and coordinating integration, testing and onboarding with TPs

INFRASTRUCTURE PLANNING

19 **Develop Implementation Plan**—Cover needed changes in the areas of connectivity, security and data storage

CHANGE MANAGEMENT

20 **Maintain and Add Maps & Web Forms**—Handle all changes and additions needed to keep B2B system up-to-date

21 **Manage Trading Partner Changes**—Handle TP changes including changes related to M&A, seasonal, expansion, SMB programs

22 **Manage Back-Office Integration**—Handle changes related to ERP upgrades, consolidations and modernization of integrator/translator technology

23 **Perform Testing & Pre-Production**—Cover changes to maps/Web forms, testing and expansion projects

24 **Provide Communication Updates**—Facilitate TPs that need to switch communication protocols

25 **Provide Help Desk & Monitoring Support**—Tier 1/2 problem solving and support

About OpenText

OpenText enables the digital world by simplifying, transforming, and accelerating enterprise information needs, on premises or in the cloud. For more information about OpenText (NASDAQ: OTEX, TSX: OTC) visit opentext.com.

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