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Business Value Highlights

291%
three-year ROI

$291,900
in total benefits per 100
trading partners per year

$73.08 million
in higher annual revenue
per organization

45%
faster to onboard
new partners

85%
more productive document
management teams

61%
faster delivery of documents
and desktops

80%
fewer document
transaction errors

99%
less unplanned downtime

The Business Value of IBM Sterling B2B Integration and Managed File Transfer Solutions

EXECUTIVE SUMMARY

The flow of information and data securely, with integrity and in a timely manner between multiple disparate businesses, partners, employees, and customers, is an enabling capability for organizations wanting to compete in the digital economy. But business-to-business (B2B) integration and managed file transfer (MFT) capabilities are not new requirements, with technologies such as electronic data exchange (EDI) and basic file transfer protocol (FTP) having been available for many decades. IBM Sterling B2B collaboration, the focus of this study, was a pioneer in and continues to be a mainstay in B2B data exchange workloads. What is new is a fundamental shift where B2B integration middleware and MFT software are increasingly being used to serve a broader ecosystem of stakeholders, requiring broader visibility, intelligence, and collaboration among partners, retailers, institutions, and consumers.

There has also been a significant shift toward cloud-native architectures in commercial and bespoke software solutions. Cloud-native architectures use software containers to enable portability and scalability of software in hybrid cloud and multicloud environments. IBM has re-architected the Sterling portfolio of software into containerized components, providing customers with multiple deployment options and opportunities to optimize computing resources. IBM Sterling B2B collaboration software customers interviewed as part of this study were not yet using the re-architected solutions, and even though we do not yet have fully quantifiable impacts of containerized versions of the portfolio, cost savings associated with optimized compute resources should contribute to higher value and return on investment (ROI).

At the core of B2B integration middleware and MFT software is the exchange of documents between multiple parties, both internal and external to the enterprise. Data exchange requires onboarding, mapping, transport, monitoring, and management across the entire ecosystem of trading partners. The IBM Sterling B2B collaboration software portfolio enables the entirety of

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the data exchange process, delivering real business value to customers as the B2B processes of the past are expanding into the broader ecosystem in the digital economy.

IDC interviewed organizations using IBM Sterling B2B integration and managed file transfer solutions (IBM Sterling B2B collaboration) to understand the impact on their B2B document transfer and business operations. These organizations' businesses rely on the consistent, secure, and timely flow of documents and other information between their employees and partners, customers, and other third parties. Study participants reported achieving significant value with IBM Sterling B2B collaboration by improving business results and increasing their capacity and ability to exchange B2B documents. IDC calculates that interviewed IBM customers will realize value worth an annual average of $14.72 million per organization ($108,700 per 100 employees whose work relies on IBM Sterling B2B collaboration and $291,900 per 100 trading partners) by:

- **Generating higher revenue** by better serving customers, addressing new business opportunities, and bringing forward recognition of revenue

- **Reducing the cost of unplanned outages** by limiting productivity and revenue losses associated with B2B-related downtime

- **Enabling more efficient handling of B2B document management** by automating processes, consolidating multiple tools, reducing the frequency and impact of errors, and increasing B2B platform capacity

- **Allowing efficient management of B2B platforms** through consolidation, improved performance, and increased functionality

- **Increasing productivity for line-of-business (LOB) users** by providing self-service capabilities and improving workflows for LOB teams that rely on B2B documentation and data

SITUATION OVERVIEW

If there is one constant in this world, it is change. The first half of 2020 has shown us that things can change very quickly at a global scale. Data exchange software, which is inclusive of business-to-business integration middleware and managed file transfer software, is used in many different vertical industries, including financial services, healthcare, manufacturing, retail, education, and government. None of these industries have been immune to the effects of the global pandemic; all continue to experience change, making flexibility and adaptability of physical and virtual resources mandatory qualities of service for any solution.

Cloud-native architectures are also a reality of change, where containers are being used to enable portability and scalability of software. The encapsulation of operations and software functionality into containers that are separated from processing and storage is enabling deployment across any on-premises, hybrid cloud, or multicloud environment and out to the edge. While containerizing the IBM Sterling portfolio will not change the speed of partner onboarding, efficiency of mapping, and management and monitoring of data exchange, the real impact will be related to lower IT operations and management costs by improving utilization and simplifying change management. Containers also provide greater flexibility and control in choosing where Sterling B2B assets should be located for optimal management and monitoring of system operations and provide flexibility in deployment and opportunities for unlimited scaling.

OVERVIEW OF IBM STERLING B2B INTEGRATION AND MANAGED FILE TRANSFER SOLUTIONS

The IBM Sterling suite of B2B collaboration solutions enables secure, compliant, and assured delivery of files and documents across the expanding ecosystem of partners, suppliers, and customers as the world's economy shifts to digital. The suite includes the following products, delivering B2B collaboration capabilities:

- **B2B Integrator (B2Bi):** Provides an EDI gateway between B2B networks and internal business applications

- **Sterling File Gateway (SFG):** Provides edge-based managed file transfer of any type or format to and from trading partners, business units, employees, and other stakeholders

- **Control Center Monitor (CCM):** Provides insight over the operational health of Sterling products and visibility into document exchange processes in the network

- **Connect:Direct (C:D):** Provides secure, reliable, and automated point-to-point file transfers across business-class operating systems, removing dependency on vulnerable FTP-based technology

- **Control Center Director (CCD):** Provides a faster and easier way to centrally update and configure C:D nodes and efficiently scale a managed file transfer environment

- **Sterling Secure Proxy (SSP):** Provides a reverse proxy solution that enables the flow of data between public untrusted and private trusted network boundaries while protecting internal business applications and IT networks from external threats

- **Information Transformation Extender (ITX):** Provides advanced data transformation capabilities to manage and map complex B2B formats with internal application integration formats and protocols

- **Partner Engagement Manager (PEM):** Is used for partner onboarding and ongoing engagement management and handling partner-specific qualities of service such as security, frequency, availability, and connectivity

- **Global Mailbox (GM):** Addresses demand for high-availability operations and redundancy with reliable data storage across geographically distributed locations

While this study focuses directly on the B2B integrator and SFG software components, any or all of the other products may also be in use in the customer environments. More specifically, PEM, SSP, and C:D are often part of the B2B and MFT solution deployments.

Although many of these Sterling products have been in the marketplace for some time now, IBM has modernized each to stay relevant with customer demand. Part of this modernization includes making the portfolio of products available in cloud-native containers certified to run on the Red Hat OpenShift platform. This move to containers is aligned with many other software products that have also been moved to containers and is relevant to IBM's cloud strategy: enabling software to run in a cloud-like fashion anywhere.

For IBM, this strategy enables efficient software engineering and product management. For customers, this translates to an opportunity to pool the Sterling B2B portfolio onto a shared infrastructure to lower recurring costs. Direct cost reduction comes from improved utilization by being able to elastically scale individual B2B resources. From the perspective of the traditional approach of server software purchasing, calculations about cores needed to run at peak capacity dictate the initial and recurring cost of the software. Peak capacity may occur once a day, once a week, or seasonally, which means average utilization is often much lower. Shared cloud infrastructure changes peak utilization calculations. For example, running B2B Integrator and C:D on shared elastic infrastructure means B2B Integrator may be more highly utilized during working hours, while C:D has higher evening utilization. This creates the opportunity to reduce the software and hardware footprint while also improving energy consumption.

Additional benefits include the ability to deploy components of the B2B portfolio wherever needed using the same standard approach. The ability to centralize management and

automate deployments, upgrading, and patching also improves costs and security, reduces errors caused by technical debt, and allows teams to more quickly gain the benefits of the improvements and innovation that are part of a new release.

The IBM Sterling B2B collaboration suite of products were released in OpenShift-certified containers in the fall of 2019; migrating an established B2B collaboration environment is often part of a larger architectural change aimed at bringing the benefits of a cloud architecture to IT assets wherever they are deployed. This can take time. As a result, IBM Sterling B2B collaboration customers had not yet completed migrations at the time this study was undertaken and the benefits could not be fully quantified in this assessment.

Organizations that are choosing to implement Sterling B2B collaboration solutions in containers are likely leveraging container architectures for the broader organization or enterprise. Shifting to a container architecture impacts IT and DevOps processes that changes the way the IT department operates. IBM continues to support deployment of Sterling B2B collaboration software in traditional VMs for those organizations that are not yet ready for containers.

THE BUSINESS VALUE OF IBM STERLING B2B INTEGRATION AND MANAGED FILE TRANSFER SOLUTIONS

Study Demographics

IDC conducted research that explored the value and benefits for companies using IBM Sterling B2B collaboration to support their B2B operations, including document and file management and transfers. The project involved 10 interviews with IT and B2B managers and executives about the impact of IBM Sterling B2B collaboration on their organizations' B2B document management operations, businesses, and costs.

The organizations interviewed by IDC faced a number of challenges in their B2B document management and exchange processes. Inefficient and error-prone manual processing and transmission of documents and data generally posed a significant challenge, given the complex digital business environments in which they operate. Further, they often found the B2B managed file transfer environment that they must support structurally challenging; often, each of their business partners and customers has their own systems, applications, and even standards for the data exchange process. Interviewed organizations also noted the increasing importance of ensuring security and the challenge of integrating and adapting to a variety

of different third-party requirements. Study participants commented on these and other challenges related to their B2B environments:

- **Need to balance performance with security/risk:** *"Because of the nature of our business, we work with a diversified group of companies around the world, notably in financial services …. In terms of B2B-related challenges, it's about balancing security with speed. The fastest way to communicate may not be the most secure. So security is obviously a primary focus for us."*

- **Integrate decentralized and disparate requirements:** *"There is complexity when you have lots of decentralized systems internally or externally. For example, where customers have the need for foreign exchange from one place to another, the challenge is to create a robust environment that we understand."*

- **Support disparate international operations:** *"We're an international company; so that's a challenge in that we're working with people 24 x 7 across different time zones and in different languages. This makes it challenging to get points across in terms of B2B activities."*

Table 1 presents study demographics and profiles. Interviewed organizations were generally large-scale businesses in terms of average employee count (64,990) and revenue ($32.2 billion). In terms of geographical distribution, eight companies were based in the United States, with the other two in Germany and Norway. There was also a good mix of verticals represented, namely, the securities and investment services (3), banking, healthcare, life sciences, logistics, manufacturing, retail, and software sectors. These verticals all face specific challenges related to the need for timely and accurate document and file transfers that factor into the key role that IBM Sterling B2B collaboration plays in supporting their business operations.

TABLE 1 Firmographics of Interviewed Organizations

	Average	Median
Number of employees	64,990	25,250
Number of IT staff	2,892	1,500
Number of business applications	484	350
Revenue per year	$32.28 billion	$7.00 billion
Countries	United States (8), Germany, Norway	
Industries	Securities and investment services (3), banking, healthcare, life sciences, logistics, manufacturing, retail, and software	

n=10   Source: IDC, 2020

Choice and Use of IBM Sterling B2B Integration and Managed File Transfer Services

Interviewed IBM customers discussed the rationale behind their choice of IBM Sterling B2B collaboration. They focused on the platform's ability to meet their B2B-related challenges by providing a more robust and efficient document management platform. Study participants appreciated the platform's ability to handle the various document formats used by their customers as well as its ability to scale to handle and secure their growing document transfer volumes. They also cited superior functionality with respect to alternative or competing solutions as driving their choice of IBM Sterling B2B collaboration:

● **Best overall solution, strength in security and standardization:** *"The decision was made for reasons of security and standardization that it was essential to consolidate our B2B activities onto a single platform. We assessed the marketplace, including several other solutions, and made the determination that IBM Sterling B2B was the best enterprise-scale solution."*

● **Need to establish sustainable, streamlined B2B environment:** *"Maintainability of our B2B document environment was very difficult, and the mapping logic was getting more and more complicated. We chose to use IBM Sterling B2B to streamline this. After we started using the B2B Integrator's mapping tool, this has improved significantly."*

● **Provide flexibility to handle different customer formats and integration requirements:** *"The biggest challenge for us with B2B is the number of different formats and integration options with our customers. IBM Sterling B2B is flexible enough to accommodate all that for us."*

Interviewed organizations are using IBM Sterling B2B collaboration as a platform to support significant levels of B2B operations and document and file transfers, as shown in Table 2. Study participants are supporting a substantial number of trading partners that drive their businesses (5,042 on average) and exchanging huge volumes of B2B documentation (146.8 million B2B documents transacted per year on average). In addition, the number of employees whose work was tied to the use of the platform was 13,544, representing teams such as manufacturing, supply chain, finance, HR, and others whose work depends on the timely and robust flow of documentation and other information related to business partners and customers.

TABLE 2 IBM Sterling B2B Collaboration Use

	Average	Median
Number of trading partners, ongoing basis	5,042	939
Number of manufacturing facilities	145	–
Number of business applications	294	113
Number of employees whose work relates to IBM Sterling B2B network	13,544	10,000
Annual volume of B2B documents exchanged	146.81 million	45.04 million

n=10   Source: IDC, 2020

Quantifying the Business Value of IBM B2B Integration and Managed File Transfer Solutions

IDC's research demonstrates the significant value that IBM customers are achieving by improving the robustness, capabilities, and security of their B2B platforms for exchanging documents and other communications with partners, customers, and other third parties. Interviewed organizations described how IBM Sterling B2B collaboration enables them to handle varied and challenging documentation and integration requirements seamlessly and robustly:

- **Single unified enterprise-level B2B platform:** *"With IBM Sterling B2B, we're able to provide one enterprise-level system to handle all processing versus a bunch of fragmented or smaller systems."*

- **Ease of meeting various standards:** *"We benefit from the seamless integration for onboarding a partner or setting up an interface, and all of our projects are much easier with IBM Sterling B2B. The other benefit is the standardized mapping tool .... There is no other tool that provides that kind of process."*

- **Function as a companywide file exchange hub:** *"With IBM Sterling B2B, we can be the main hub entry point for the entire company's file exchanges for across numerous markets."*

IBM customers spoke of the significant value they are achieving through their use of the IBM Sterling B2B collaboration platform in terms of improved business results, LOB and B2B efficiencies, and reduced IT staff time requirements. As shown in Figure 1, IDC calculates that study participants using IBM B2B Sterling will achieve benefits worth an annual average of

$14.72 million per organization ($108,700 per 100 users and $291,900 per 100 trading partners) in the following areas:

- **Higher revenue** by better serving customers, addressing new business opportunities, and moving forward recognition of revenue (IDC puts the value of revenue gains at an annual average of $8.85 million per organization [$65,300 per 100 users and $175,500 per 100 trading partners].)

- **Risk-related benefits** by reducing the impact of unplanned outages on employee productivity levels and business operations (IDC estimates that interviewed organizations will see higher productivity and revenue worth an average of $1.58 million per organization [$11,700 per 100 users and $31,400 per 100 trading partners].)

- **Efficiencies in managing B2B documents and file transfers** by allowing teams to handle more document transfers at higher velocity and quality (IDC calculates staff efficiencies as having an annual average value of $1.48 million per organization [$10,900 per 100 users and $29,400 per 100 trading partners].)

- **IT staff efficiencies related to B2B operations** by minimizing IT staff time required to manage and support B2B operations (IDC estimates that interviewed IBM customers will realize staff efficiencies worth an average of $1.47 million per organization [$10,800 per 100 users and $29,100 per 100 trading partners].)

- **Line-of-business productivity gains** by reducing friction for LOB employees in accessing B2B documentation and providing improved visibility and seamless transmission of B2B documentation (IDC calculates the value of LOB productivity gains at an annual average of $1.34 million per organization [$9,900 per 100 users and $26,600 per 100 trading partners].)

### FIGURE 1 Average Annual Benefits per 100 Users

n=10   Source: IDC, 2020
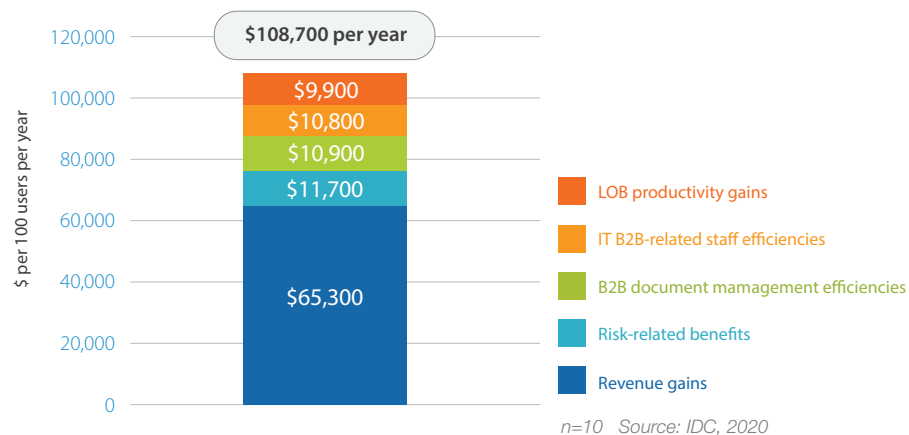
Generating Higher Revenue

Study participants reported that they are generating higher revenue with IBM Sterling B2B collaboration by better serving customers, addressing new business opportunities, and advancing revenue recognition. Among other factors, these improvements tie back to having more effective B2B and document exchange operations, including improved ability to onboard and work with partners critical to their business success. Interviewed organizations underscored specific benefits such as the faster onboarding of partners, expanding the potential base of partners by offering compliance with EDI standards, and the ability to build better long-term relationships with their partner base. They commented on these benefits in detail:

- **Improved communication with partners, faster onboarding of new partners:** *"We've opened up new vehicles for communicating with our partners with IBM Sterling B2B .... As a result, we need 24–48 hours to onboard a new partner compared with 4–5 days previously."*

- **Improved relationships with key trading partners:** *"IBM Sterling B2B has greatly improved our relationship with our trading partners because large partners mandate strict EDI standards. Without this tool, we would not be able to do business with any big wholesalers."*

- **More robust communication with partners, faster onboarding:** *"IBM Sterling B2B has provided us with the functionality we needed to be able to communicate with some of our trading partners that our old tool did not provide .... The calendar time is down to a couple of days now compared with two weeks on average before."*

IDC quantified the specific improvements that the IBM Sterling B2B collaboration platform provides for onboarding new partners, as shown in Figure 2. Interviewed organizations reported needing only around 2.6 days on average to onboard a new business partner, a 45% improvement, and time savings of over two days on average.

FIGURE 2 Time to Onboard New Partner (Days)

n=10   Source: IDC, 2020
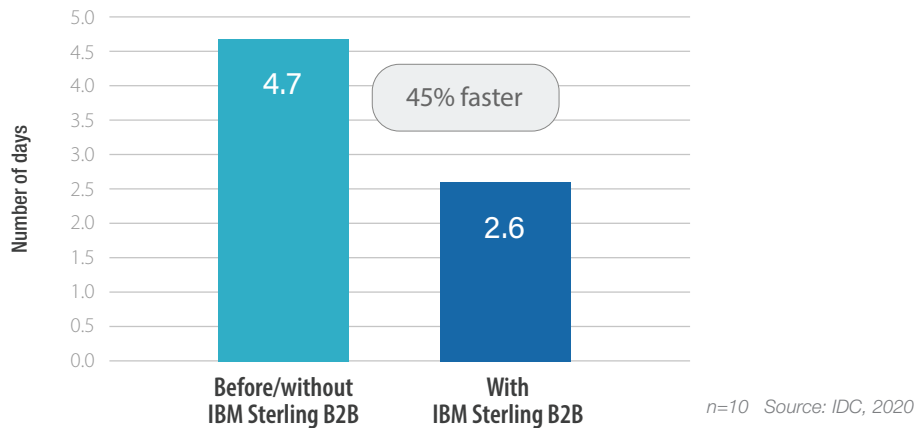
Interviewed companies also linked higher revenue to improved customer services enabled by IBM Sterling B2B collaboration. They cited higher levels of B2B responsiveness and faster exchange of documentation. Study participants commented on these benefits:

- **High availability to support customers:** *"We have happier customers because we're highly available and never down with IBM Sterling B2B. This means that our customers save money on their end from not retransmitting or having to apply manual resources to fix problems that we may have had internally."*

- **Improved customer service:** *"We are certainly able to improve customer service because we can deliver documents into our core applications in a timely manner …. I would say that we've improved customer service by at least 25% because there is no delay in terms of delivering the data, orders, and ASNs, and so on."*

Greater speed of execution and less complication in servicing customers and partners, including both onboarding and invoicing, have helped interviewed IBM customers move forward the recognition of revenue. In some cases, they have brought forward the timing of recognition to a significant extent, going from weeks or months to days as described by study participants:

- **Faster to revenue:** *"We are faster to revenue with IBM Sterling B2B because we are enabling our implementation team to move faster in terms of existing products and onboarding clients for payroll or benefits. To recognize revenue, on average, it takes two weeks with IBM Sterling B2B. Prior to that, it would be a month."*

- **Invoicing acceleration:** *"Our ability to recognize revenue has gone way up with IBM Sterling B2B …. When I joined, we had customers telling us that they hadn't received invoices for three months, but they still wanted their discounts. We were often 30 days deficient on sending invoices to customers, so it often took 90 days to revenue. Now, it's literally seven days."*

The use of IBM Sterling B2B collaboration has also allowed interviewed organizations to take better advantage of new opportunities and operate more efficiently with respect to their current books of business. The platform's functionality has improved the speed and effectiveness of B2B transactions associated with core business activities. Study participants noted:

- **Improved ability to execute business:** *"Without IBM Sterling B2B, we would not be able to onboard the transactions that we do. One example is we have an EDI transaction to get a real-time inventory level in their warehouses …. Without the kind of seamless integration of data between our trading partners and manufacturers we have with IBM Sterling B2B, it would be very difficult to recognize revenue."*

● **Improved functionality improves business operations:** *"IBM Sterling B2B has unquestionably allowed us to run our business operations more effectively. It has better innate security, better automation and integration with our native applications, better ability to handle scale and workload, and better transparency and reporting about the success or failure of file transfers."*

The overall positive revenue impact for interviewed IBM customers of using IBM Sterling B2B collaboration is summarized in Table 3. IDC calculates that they will realize higher annual gross revenue worth $73.08 million per organization, which represents a significant business gain.

TABLE 3 Business Operations Impact: Increased Revenue

	Per Organization	Per 100 Users	Per 100 Trading Partners
Additional gross revenue per year	$73.08 million	$539,600	$1.45 million
Assumed operating margin* (%)	15	15	15
Recognized net revenue impact per year	$10.96 million	$80,900	$217,400

n=10   Source: IDC, 2020

* IDC applies assumed 15% margin in quantifying revenue gains for purposes of its model.

Limiting Risk Associated with B2B Document Transfers

Study participants reported that IBM Sterling B2B collaboration offers them the capability to manage, track, and execute document transfers quickly and reliably. The platform's design minimizes the occurrence of incomplete or problematic B2B transactions taking place at either the originating company or the customer or partner site. Reducing or eliminating these types of document-related problems has served to significantly reduce business risk for interviewed companies. Commenting on reductions in unplanned outages enabled by the platform, one study participant noted: *"With IBM Sterling B2B, we went from an average of three service impacting events that lasted anywhere from 30 minutes to 45 minutes per month to where we're at now with only one to two a year lasting 15–30 minutes. When there's an outage, there are hundreds of employees who can't work, and we cannot accept orders. They then have to turn everything into paper and pick up the phone."*

IDC quantified these reductions in unplanned downtime related to B2B operations, as shown in Table 4. The data indicates the near elimination of lost productive time annually for interviewed organizations since deploying IBM Sterling B2B collaboration, demonstrating the robustness and reliability of the platform as a foundation for their businesses. By reducing the impact of unplanned outages on employees, interviewed organizations are losing 99% less productive employee time, which is worth annual productivity time savings of $1.89 million.

In addition, interviewed organizations noted that they can ill afford B2B platform outages because of the possibility of interrupting business operations, which includes the potential loss of revenue. By reducing business interruptions with IBM Sterling B2B collaboration, IDC calculates that study participants will avoid the loss of $7.45 million in revenue per year.

TABLE 4 Unplanned Downtime

	Before/Without IBM Sterling B2B	With IBM Sterling B2B	Difference	Benefit (%)
MTTR (hours)	2.2	1.1	1.1	50
Lost productive time per user per year (hours)	3.8	0.1	3.7	99
Value of lost productive time per organization per year (FTEs)	27.4	0.4	27.0	99
Value of lost productive time per organization per year	$1.92 million	$0.03 million	$1.89 million	99
Value of lost gross revenue per year per organization	$7.57 million	$0.11 million	$7.45 million	99

n=10   Source: IDC, 2020

Managing Document Transfers Efficiently

Having a scalable and more efficient B2B platform with IBM Sterling B2B collaboration has allowed interviewed organizations to handle significantly more document transfers in a robust manner in support of business operations. These efficiencies relate back to several areas of improvement with IBM Sterling B2B, including its ability to complete document transactions faster. By completing document transfers faster, interviewed organizations not only have bandwidth to handle increased document flow without needing additional team time but also better ensure timely delivery of required B2B documentation. Commenting on the benefit of faster and more timely document delivery, one study participant noted: *"With IBM Sterling B2B, we have less than a one-minute SLA on document delivery …. We are at 5-9s in terms of the timely delivery of documents with IBM Sterling B2B compared with 80–85% previously."* Figure 3 shows improvements in the average time to deliver documents. With IBM Sterling B2B, the overall delivery process was 61% faster than previous or alternative solutions.

Figure 3 presents data on the average time needed to deliver documents. Study participants reported going from needing an average of almost 21 minutes to just over 8 minutes with IBM Sterling B2B collaboration for a typical document transaction, representing a significant improvement of 61% on average.

FIGURE 3   Average Time to Deliver per Document (Minutes)
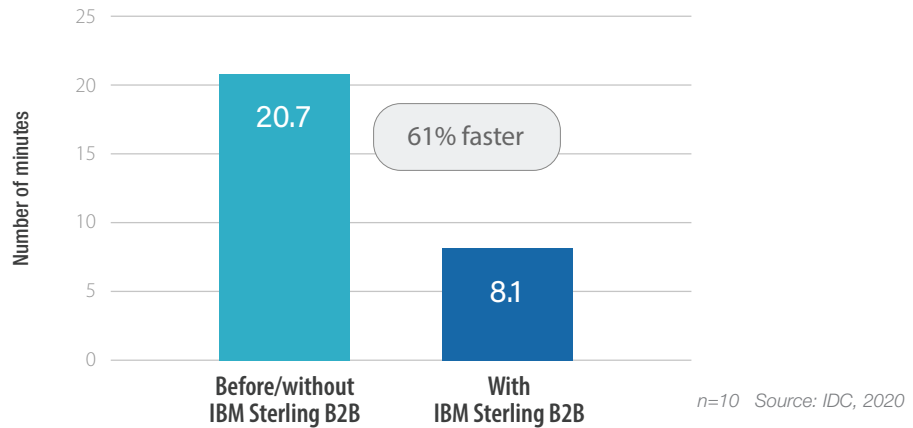

n=10   Source: IDC, 2020

Figure 4 provides another perspective on the impact of the use of IBM Sterling B2B collaboration for interviewed organizations in terms of timeliness of document delivery. It has reduced the frequency of documents not delivered in a timely manner by 86%, going from around 14% to only 2% of documents. Timely delivery of B2B documentation is important for a number of reasons, including interviewed organizations' ability to onboard partners and new customers, recognize revenue, and communicate in a robust fashion with customers.

FIGURE 4   Timely Delivery of Documents


n=10   Source: IDC, 2020
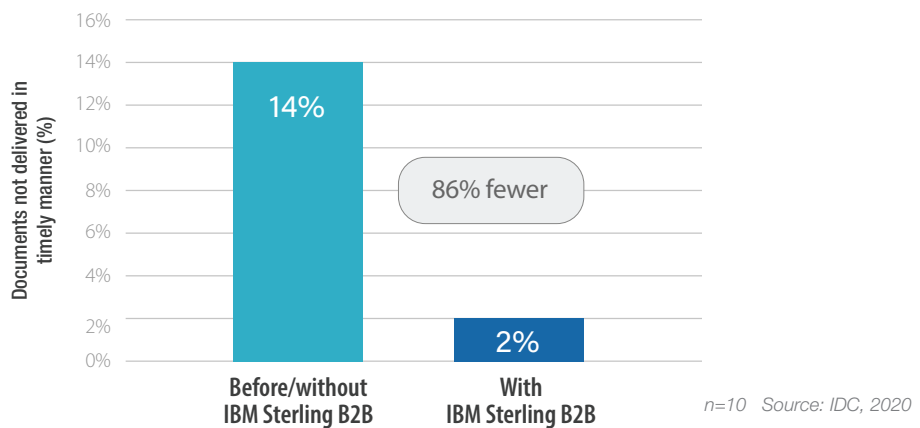
In addition to improvements in the speed and effectiveness of document delivery, study participants have improved the quality of document transmission with IBM Sterling B2B collaboration. This relates to features of the IBM Sterling B2B collaboration platform such as data validation that applies business rules with graphical modeling to documents being delivered to

identify errors. Commenting on real-time transactions and the reduction in errors, one study participant said: *"We're trying to get as close to real time as possible in exchanging documents. The IBM Sterling B2B platform allows us to exchange data in near real time. In addition, we're reducing the number of errors during transmission and reducing the support required for managing failed transfers."*

IDC quantified these improvements in document quality. As shown in Figure 5, interviewed companies were able to reduce the percentage of documents delivered that had errors or quality problems from 3.1% to 0.6%, or an 80% reduction in the transmission of problem documents.

FIGURE 5   Document Quality

n=10   Source: IDC, 2020
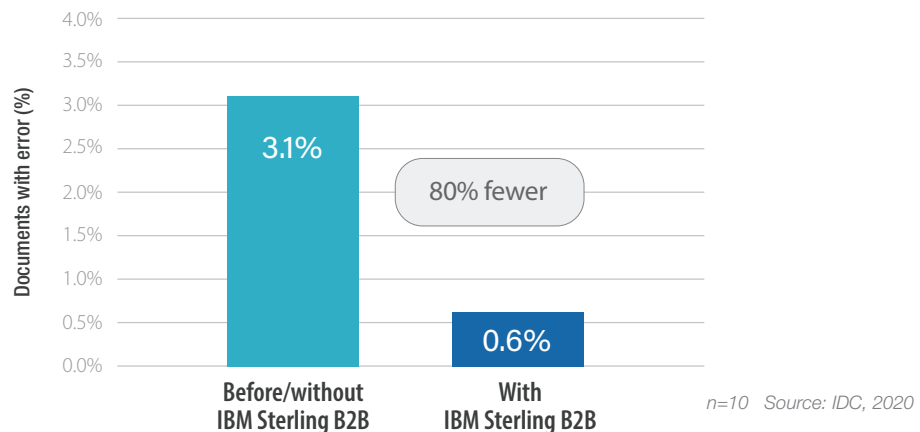
Interviewed organizations rely on the exchange of millions of B2B-related documents with their partners and customers every year. They have staff members involved in making sure that these documents are transacted effectively and with high quality. However, these efforts can be hampered by a lack of visibility into their real-time status and problems that arise due to errors and complications requiring manual intervention. When these issues related to B2B documentation arise, they create friction and mean that more staff time is required. IDC research showed that having a common platform with high performance and automation of document flow has allowed study participants to handle and move substantially more documents without a commensurate increase in staffing:

● **Running higher volumes of document exchange and scalability:** *"Our document exchange volume would be lower if we weren't using IBM Sterling B2B. It would probably be 30% lower because we'd be doing more manually, and we can scale faster. Everyone is saving time on scaling."*

- **Staff time savings from reduced errors:** *"Half of our B2B team's time used to be spent dealing with errors. Now it's close to zero. I would say it's about five hours a month collectively."*

Table 5 quantifies these benefits. IDC calculated that interviewed companies were able to process 85% more documents with the same level of staffing with IBM Sterling B2B collaboration. This substantial productivity increase for document transaction management teams translates into average annual value worth $1.70 million per interviewed organization.

TABLE 5 Document Transaction Management

	Before/Without IBM Sterling B2B	With IBM Sterling B2B	Difference	Efficiency with IBM Sterling B2B (%)
FTEs per year per organization for equivalent levels of documents exchanged	37.1	20.1	17	46
Equivalent documents able to support with current staffing	79.43 million	146.81 million	67.39 million	85
Staff time costs for equivalent levels of documents transacted	$3.71 million	$2.01 million	$1.70 million	46

n=10   Source: IDC, 2020

More Efficient IT Support of B2B Operations

Study participants also reported efficiencies for the IT teams involved in supporting and managing B2B operations and platforms. These efficiencies relate both to features of the IBM Sterling B2B collaboration platform, such as enhanced automation, and to study participants' ability to consolidate their B2B operations on a single platform. In some cases, interviewed IBM customers moved to IBM Sterling B2B collaboration from multiple tools that created inefficiencies in terms of costs as well as staff time required for management and support. One interviewed organization explained how IBM Sterling B2B collaboration has lowered its overall costs for B2B platform operations: *"We're paying 20–25% less now in total because we're no longer managing seven different platforms."* Another interviewed IBM customer reported moving from a homegrown approach supported by *"a bunch of smaller systems"* that collectively *"only did a fraction of what IBM Sterling B2B does."*

Table 6 shows that 54% fewer support staff team members were needed to carry out day-to-day operations involving B2B document transfer, given less frequent and easier to resolve issues related to document management and transactions. IDC quantifies the value of this improvement at an annual staff productivity value of $0.57 million per interviewed organization.

TABLE 6 Support Teams for Business Transactions

	Before/Without IBM Sterling B2B	With IBM Sterling B2B	Difference	Efficiency with IBM Sterling B2B (%)
FTEs per year per organization	10.5	4.8	5.7	54
Equivalent salary cost per year per organization	$1.05 million	$0.48 million	$0.57 million	54

n=10   Source: IDC, 2020

Study participants also reported that the amount of IT staff time and involvement required for B2B platform operations was significantly reduced, in part resulting from LOB self-service access to documents as well as higher overall quality of the B2B platform. As shown in Table 7, the use of IBM Sterling B2B collaboration has meant that interviewed IBM customers require 12 fewer IT staff members to manage and run the IT infrastructure behind their B2B operations, representing a 55% efficiency on average.

TABLE 7 IT Staff Time Required for B2B Platform Operations

	Before/Without IBM Sterling B2B	With IBM Sterling B2B	Difference	Efficiency with IBM Sterling B2B (%)
FTEs per year per organization	22.1	9.9	12.2	55
Equivalent salary cost per year per organization	$2.21 million	$0.99 million	$1.22 million	55

n=10   Source: IDC, 2020

Enabling Lines of Business Through Higher Productivity

Line-of-business users at interviewed organizations have also benefited from various features of the IBM Sterling B2B collaboration platform, such as self-service access to documents and other B2B data. Message tracking and reporting features along with auditing capabilities using centralized dashboards allowed real-time status information to be available to system administrators, LOB users, and partners. These users benefitted from improved transaction visibility and are able to manage and monitor document transfer activities themselves without unnecessarily involving other support staff. Study participants commented on these benefits:

- **The benefit of self-service access:** *"We've been able to give self-service abilities across hundreds of people with IBM Sterling B2B. They can log in and look up their transactions for their business units and see status reports .... There are probably 900 people who save a few hours a month by not having to go back and forth and dig through to pull data."*

- **Improved visibility enables LOB teams:** *"The IBM Sterling B2B platform provides visibility for our business teams. They have the ability to see the transactions as they are occurring, which improve their efficiency and operational effectiveness."*

Table 8 quantifies the improvements made possible by IBM Sterling B2B's self-service capabilities. On a per organization basis, an average of 830 LOB users have benefited from use of self-service with IBM Sterling B2B collaboration, resulting in an average productivity gain of 2.5 hours per year per user, which is worth an average of $1.27 million in higher productivity per organization.

TABLE 8 Business Operations Impact: Productivity Impact of Self-Service

	Per Organization	Per 100 Users
Number of impacted users	830	6
Higher gross productivity (%)	2.2	2.2
Equivalent FTE gain, higher productivity	18.7	0.1
Value of higher productivity per year	$1.27 million	$9,400
Hours of additional productive time per user per year	2.5	252

n=10   Source: IDC, 2020

ROI Summary

IDC's analysis of the financial benefits and investment costs related to study participants' use of IBM Sterling B2B collaboration is presented in Table 9. IDC calculates that, on a per organization basis, interviewed organizations will achieve total discounted three-year benefits of $33.86 million ($250,000 per 100 users and $671,500 per 100 trading partners) based on increased revenue, document management efficiencies, IT staff efficiencies, and LOB productivity gains as described previously. These benefits compare with projected total discounted investment costs over three years of $8.66 million on a per organization basis ($63,900 per 100 users and $171,900 per 100 trading partners). At these levels of benefits and investment costs, IDC calculates that these interviewed companies will achieve a three-year ROI of 291% and break even on their investment in 14 months.

TABLE 9 Three-Year ROI Analysis

	Per Organization	Per 100 Users	Per 100 Trading Partners
Benefit (discounted)	$33.86 million	$250,000	$671,500
Investment (discounted)	$8.66 million	$63,900	$171,700
Net present value (NPV)	$25.20 million	$186,000	$499,800
Return on investment (ROI) (%)	291	291	291
Payback period (months)	14	14	14
Discount rate (%)	12	12	12

n=10   Source: IDC, 2020

CHALLENGES/OPPORTUNITIES

The perception of EDI in the marketplace and industry is something that IBM and many other B2B integration middleware and MFT software providers face, but in reality, it isn't going away any time soon. As the trading partner and stakeholder relationships expand into the dynamic ecosystems of the digital economy, what is old is new again and value is being rediscovered in EDI. The global pandemic triggered by COVID-19 has also increased the volume of document and data exchange in the broader B2B ecosystem, with touchless and virtual interactions preferred over physical and fewer people in the office to open the mail.

Container technology has proven itself in portability, operations, manageability, and maintainability of software in steady-state operations, and the IBM Sterling B2B collaboration product portfolio is now well on this journey. Despite all the understood benefits of containers, it requires a mind, skills, and technology shift that demands organizations retool staff and tools to learn new ways of operating, maintaining, and managing IT environments. Few IBM Sterling B2B collaboration customers will embark down the path of containers unless the organization itself has a container strategy. This is perhaps where customers that want the advantages of containers may consider the IBM Cloud or managed services alternatives for the Sterling B2B collaboration portfolio.

CONCLUSION

An organization's ability to ensure the robust, secure, and timely flow of information and data between its business partners, employees, and customers is increasingly fundamental for competing successfully in the digital economy. Many organizations have relied on B2B

integration middleware to handle the exchange of documents between internal and external parties; however, increasing document volumes and criticality of timeliness have made these integration middleware solutions even more central to business success and competitive differentiation.

The IBM Sterling B2B collaboration software portfolio enables the entirety of the data exchange process, delivering real business value to customers as the B2B processes of the past are expanding into the broader ecosystem in the digital economy. IDC's research demonstrates the significant value that interviewed organizations are achieving by the use of IBM Sterling B2B collaboration solutions. At base, interviewed IBM customers attributed improved business results and increased capacity and ability to exchange B2B documents to their use of the IBM Sterling B2B collaboration platform. They cited automated processes, consolidation of collaboration tools, higher quality of data and file transfer, and increased capacity as driving efficiencies and cost savings related to B2B processes and document exchange, while the strong functionality of the platform has enabled them to win new revenue and drive higher productivity levels by streamlining and integrating such document-related processes. Overall, IDC calculates that interviewed IBM customers will achieve almost a four-to-one return on their investment in the IBM Sterling B2B collaboration platform over three years (291% ROI), demonstrating the significant impact that it has had on study participants' B2B operations and business activities.

APPENDIX

Methodology

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from current users of IBM Sterling B2B integration and managed file transfer solutions as the foundation for the model. Based on interviews with organizations using IBM Sterling B2B collaboration, IDC performed a three-step process to calculate the ROI and payback period:

- **Gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of using IBM Sterling B2B collaboration solutions.** In this study, the benefits included staff productivity gains, higher revenue, and operational cost reductions.

- **Created a complete investment (three-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using IBM Sterling B2B collaboration and can include additional costs related to migrations, planning, consulting, and staff or user training.

- **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of IBM Sterling B2B collaboration over a three-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings. IDC has used its standard Business Value assumptions of an average fully loaded salary of $100,000 per year for IT staff members and an average fully loaded salary of $70,000 for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).

- The net present value of the three-year benefits is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

- Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding.

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