THE B2B INTEGRATION PATH

A ROADMAP FOR BUSINESS VALUE GENERATION

SCM World

Shaping the Future of Supply Chain

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With over 10 years of experience, Patrick has a diverse background spanning the hi-tech, mining and retail industries. Prior to joining SCM World, he was Director, Inventory Management at CVS Health, where he led the management of the supply and demand across many consumer packaged goods categories. Prior to CVS, Patrick held roles in supply demand management at Apple, and inventory and production planning at both Rio Tinto and Dell.

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FOREWORD

Thank you for your interest in this important research on business-to-business (B2B) integration maturity. Seamless B2B integration helps organisations transact digitally across their trading partner ecosystem, streamlining e-commerce and supply chain transactions in order to reduce cost and speed time to revenue.

OpenText™, with 65,000 customers connected to over 600,000 trading partners globally, knows that B2B integration is a journey, not a destination. It's a complex environment constantly in flux, involving the full spectrum of technology, people and process. To keep pace with growing demands on your business to cut cost and drive growth, you need to streamline supply chain processes and become agile in supporting new technologies and market dynamics, while focusing on those things that differentiate you from your competition. To get there, you need the best in breed B2B integration programme.

This paradigm shift cannot be completed in a few days or weeks. It can easily burden already strained IT staff who are asked to do more with less. One way to meet the demands on your business and address the complexity of B2B integration is to outsource to an expert. Increasingly, organisations are finding that a reliable partner with the scalable infrastructure, expert staff, proven processes and global best practices can run a B2B integration programme more cost effectively and efficiently. This 'managed services' approach also enables organisations to leapfrog the competition by gaining rapid access to new capabilities, such as supply chain analytics.

OpenText is dedicated to helping enterprises along this journey – from an initial project to managing complex global supply chains with thousands of trading partners. For over 40 years, we have helped enterprises mature their B2B integration programmes for improved business results. Today, OpenText Business Network enables over 18 billion transactions representing more than $6.5 trillion in commerce annually, powering the world's leading global supply chains across many industries.

We partnered with SCM World to define a B2B integration maturity model and to provide a practical roadmap for maturation, including data-driven guidance on what steps can be taken to mature, and what benefits you can expect to gain along the journey. We hope you find value in this research.

George Schulze
Senior Vice President, OpenText Business Network

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EXECUTIVE SUMMARY

Your business is run on networks of inputs and outputs that extend beyond the four walls of your operations. Business leaders already know that collaboration across business partners results in improved management of costs, inventory and ordering processing, ultimately leading to the faster generation of cash.

Data shared in this research reveals a path to the advancement of collaboration via business-to-business (B2B) integration. Key advancement opportunities include:

- A foundational standardisation of tools, with further deployment of advanced technologies and metrics across a collaborative network;

- Centralisation of decision making and the dedication of skilled B2B expertise;

- Increasing the value and volume of digital transactions with trading partners.

The aim of this report is to guide supply chain, operations and customer service executives on the journey to integrating and automating B2B resources, specifically people, technology and processes. In support of this, we introduce the B2B integration path framework.

The framework ties together the elements of people, technology and process to create five steps of advancing integration maturity: transactional, informative, analytical, relational and generative.

Using this five-step model as a way to benchmark where companies currently rate themselves on the B2B integration journey, the results of an SCM World survey fielded in early 2016 reveal the following key findings:

- Overall, average maturity is 2.8 on a 5-point scale, with 5 being highly mature and 1 being least mature.

- 14% of companies rate their people, technology and process capability below 2.

- Only 16% achieved an overall score greater than 3.4, of which 2% reached 4 or above.

- When compared to process and technology, the people capability category has the highest percentage of respondents at steps four and five; however, it also has the greatest percentage of laggards still stuck at step one.

- Process has the highest percentage of responses that fail to reach even step three, the analytical phase.

- There are clear distinctions in capability across industries. The automotive sector is the leader with an overall score of 3.1, which is propelled by technology and process scores. It's a clear sign that the complex nature of industrial supply networks and the need for greater multi-tier visibility can serve as a guide for other industries.

- Outsourcing at least part of your B2B integration operations accelerates the expansion of partner networks.

- With each progressive step on the B2B integration path, there is an expected 2-3x improvement in the cash conversion cycle rate.

Of the 100+ companies that participated in this research, not one evaluated all three capability elements (people, technology, process) at step five, generative. This result highlights two critical lessons:

1. Even after decades of continued multi-enterprise integration, there is a still a very real need to invest if you want to be a leader.

2. Moving up the maturity curve requires advancement of people, technology and process together, but it is possible to advance at least one element up a level without moving all three.

Use the five-step framework to first self-assess your people, technology and process capabilities. With a starting point identified, this report will serve as a guide on the path to a fully integrated, collaborative value chain network.

INTRODUCTION

Walter Canton looks over a cargo manifest for a truckload of ball bearings due for production of diesel engines on the receiving dock at a factory in Waterloo, Iowa. He finishes his count, scans a barcode with a handheld RFID scanner and sends in a forklift to start unloading the pallets.

At the same moment, Walter's co-worker on the other side of plant slides the door of a 30-foot truck closed and sends it off on its 630-mile journey to a small, specialist farming and agriculture dealer in Columbus, Ohio.

Behind this very observable flow of materials that turns ball bearings into tractors is a series of virtual transactions that transfer ownership of products, time-stamp physical movements and generate reports used to manage trillions of dollars of e-commerce around the world. There is a virtual trail from the final sale at the dealer all the way back to extraction of the metals from the earth many months before.

Over the last 20 years, supply chain has evolved from disconnected functional silos to integrated, end-to-end organisations that manage the flow and planning of materials from source to shelves. This evolution has given supply chain professionals a unique perspective on the huge importance of integrating process, technology and people across organisational and corporate barriers.

As management of the supply chain has evolved into orchestration of an extended value chain, the ability to connect systems and processes across multiple tiers of supply and demand networks promises to unlock exponential value. This challenge is no easy task.

This research taps into the wisdom of over 100 supply chain professionals with extensive business-to-business (B2B) experience to learn from their collective journeys. By surveying a variety of industries represented by companies of varying maturity, we have been able to identify the path toward the vision of an orchestrated ecosystem of B2B partners.

When Walter started his job in 1992, he was signing invoices and faxing them from his office to headquarters. Today, he carries an RFID scanner that automates a series of transactions in an instant. The factory has reduced costs, standardised data flows and drastically enhanced reporting.

This research shares insight on how to replicate this same benefit across the thousands of trading partners networked through your extended the value chain. It provides a path forward for those just getting started and a horizon for the first movers and early adopters. It is a roadmap for business value generation.

INTRODUCING THE B2B INTEGRATION PATH FRAMEWORK

The B2B integration path framework was developed to trace progressive advancement of B2B integration maturity in organisations across key industries.

The concept, inspired by Leavitt's Diamond, is that B2B integration maturity is the result of the interdependencies between structure and people, tools and technology, and process.[1] As such, improving individual capabilities within a single element implies progress; but true maturation requires advancements in all three.

The B2B integration path framework represents a five-step journey for advancing B2B integration maturity by using SCM World study data to identify improvements that must be made to increase maturity in the elements of structure and people (people), tools and technology (technology), and process (process).

In addition to enabling you to determine your organisation's current level of B2B integration maturity, the framework also allows you to compare your organisation's level of B2B integration maturity versus that of your peers, across industries and against the broader business community.

Routes to maturity on the B2B integration path are varied. True progress is marked by the intersections created with simultaneous movement along the three elemental paths of people, technology and process.

The five steps on the B2B integration path are defined as follows:

1. **Transactional.** Tactical execution of siloed, reactive processes on manual technology.

2. **Informative.** Key trading partners engage in foundational business processes, with limited digital visibility.

3. **Analytical.** Collaborative insight through the aggregation and analysis of connected digital demand and supply data.

4. **Relational.** Responsive network, with integration of most trading partners across multi-tier demand and supply networks.

5. **Generative.** Profitable growth cycles driven by end-to-end digital integration throughout the value chain.

PLOTTING YOUR POSITION ON THE B2B INTEGRATION PATH

To determine your position along the B2B integration path, consider the diagnostics questionnaire shown in the appendix to this report. You'll see that there are three sections within the questionnaire, which relate to the three elements of people, technology and process. Within each section there are a number of questions, offering five different responses. The responses are scored on a scale of 1 to 5, aligning to the five steps in the B2B integration path framework. The scores within each section are averaged, creating final individual scores for people, technology and process. These scores can then be used to identify relative strengths and areas for improvement.

Overall maturity is determined by averaging the individual scores from each section, creating a single numeric score by which companies can compare themselves against their peers and across industries.

1 | Five steps of the B2B integration path
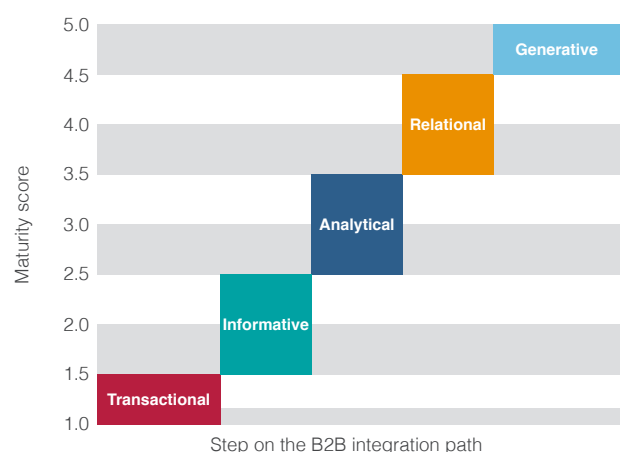
Source: SCM World

THE THREE ELEMENTS OF THE FRAMEWORK

PEOPLE

A company's commitment to advancing integration maturity is evident in the design of its B2B operation. This includes not only the clear strategic direction behind the operation and defining the potential impact on the broader business, but also the allocation of its network of resources. The level of skill and dedication of these resources, whether sourced internally or externally, is particularly telling of a company's devotion to maturing.

The B2B integration path's people element quantifies these primarily qualitative attributes through a series of expanding statements, from which companies are asked to select the response most reflective of their operation.

Companies at step 1 of the integration maturity journey (transactional) will reflect a decidedly tactical mentality, by which B2B integration will exist only out of necessity. These minimalist operations will allow for a continuation of status quo, but are extremely limited in their ability to do much else.

At step 5 of the journey (generative), truly advanced organisations approach B2B integration with a mindset that pursues value creation and opportunity within its own walls and throughout its integrated B2B network. Its prioritisation of B2B integration is obvious.

Key indicators of structure and people advancement include:

- resources that are both highly skilled and entirely dedicated to the operation;

- collaborative relationships and aligned decision making; and

- emphasis of B2B integration as a driver of overall business growth.

2 | Key identifiers of B2B integration maturity: people

Attribute	Transactional	Informative	Analytical	Relational	Generative
Business justification	Transactional necessity	Cost management	Scalable partnerships	Real-time responsiveness	Collaborative business growth
Business emphasis	Completion of tasks	Consistency and accuracy	Internal performance awareness	Internal improvement opportunities	Shared value creation
Decision alignment	Siloed internally	Centralised internally	Centralised with structured ownership	Aligned with key partners	Multi-enterprise decision alignment
Integration expertise	Limited skills	Foundational skills	Functional expertise	Cross-functional expertise	Highly-skilled resources
B2B staffing	No dedicated staff	>50% shared	Dedicated and shared	>50% dedicated	100% dedicated

Source: SCM World

TECHNOLOGY

Advancements in tools and technology maturity are evident in the physical interfaces accessed by users to manage operations, as well as the unseen attributes that ensure system fluidity and reliability.

Companies setting out on the B2B integration path initially invest in tools and technology, but often those are perceived as piecemeal and disconnected. These tools are functional, but require significant manual effort to compile data and solve the problems faced by today's businesses.

Advanced companies will capitalise on the rapid expansion of data availability, by using tools and technology to manage the increased information flow, creating opportunity by connecting partners across the value chain, and integrating data within existing ERP environments.

Examples of opportunities enabled by advanced tools and technology include:

- real-time end-to-end data availability;

- automated compliance and audit capabilities; and

- predictive network analytics.

PROCESS

Overall progress along the B2B integration path is influenced by process maturity. These measures are reflective of the depth to which B2B integration influences an expansive network of customers and suppliers. They are also indicative of organisational agility in managing daily operations, in addition to future opportunities.

Sustainable generative (step 5) process maturity results from the concerted efforts of a network of well-coordinated partners who commit to all phases of integration advancements.

Advancing process maturity is signalled by:

- a growing number of digitally enabled partners and transactions;

- rapid response times and decreased processing costs; and

- repeatable process synchronised internally and externally.

3 | Key identifiers of B2B integration maturity: technology

Attribute	Transactional	Informative	Analytical	Relational	Generative
Information exchange with trading partners	Informal and unstructured	One way to trading partners	Bilateral with largest trading partners	Bilateral with most trading partners	Collaborative, continuous with all partners
Supply chain data collection and organisation	Manual collection, disaggregated data	Systems of record and master data management	Single-tier reporting and analytics	Collaborative data network +/- 1 tier	Multi-enterprise data integration
Transactions with non-digital partners	Manual, non-standard technology (phone/fax)	Manual transactions, standardised template	Manual transactions, shared portal (scan, keyed)	Manual, digitised transactions for selected partners	Digitised for all partners
Metrics calculation and analytics	Manual recording of transaction data	Automated, archived, simple	Standardised KPIs published	Calculative analytics for limited partners	Predictive analytics, multi-tier network
Compliance and audit capabilities	Warehoused paper records	Locally stored digitised records	Networked digital records	Networked compliance management	Automated risk identification and resolution
B2B/ERP integration	No integration	Integrated for a few transaction types	Integrated for most transaction types	Fully integrated, some locations, some transactions	Fully integrated, all locations, all transactions

Source: SCM World

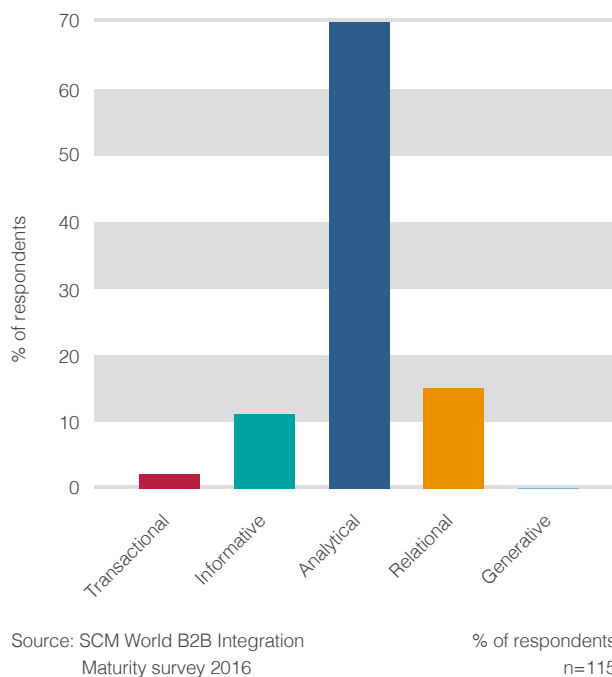## 4 | Key identifiers of B2B integration maturity: process

Attribute	Transactional	Informative	Analytical	Relational	Generative
Extent of process integration	Siloed, disaggregated	Minimal, manual connectivity	Customer and supplier processes calibration	Some integration with suppliers and customers	Integrated, demand and supply synchronisation
Error reporting and exception management	Simple, via manual request	Simple, automated and scheduled	Descriptive, real time	Automated exception management	Predictive risk assessment
% of digital trading partners	<20%	20-39%	40-69%	70-90%	90-100%
Digital partner on-boarding time	>4 weeks	2-4 weeks	1-2 weeks	2-7 days	0-2 days
% of all transactions digitally processed	<25%	25-49%	50-69%	70-89%	90-100%

Source: SCM World

THE CURRENT B2B INTEGRATION MATURITY LANDSCAPE

SCM World's B2B integration maturity survey yielded over 100 responses from companies representing the automotive, consumer packaged goods (CPG), hi-tech, industrial and life sciences industries, among others.
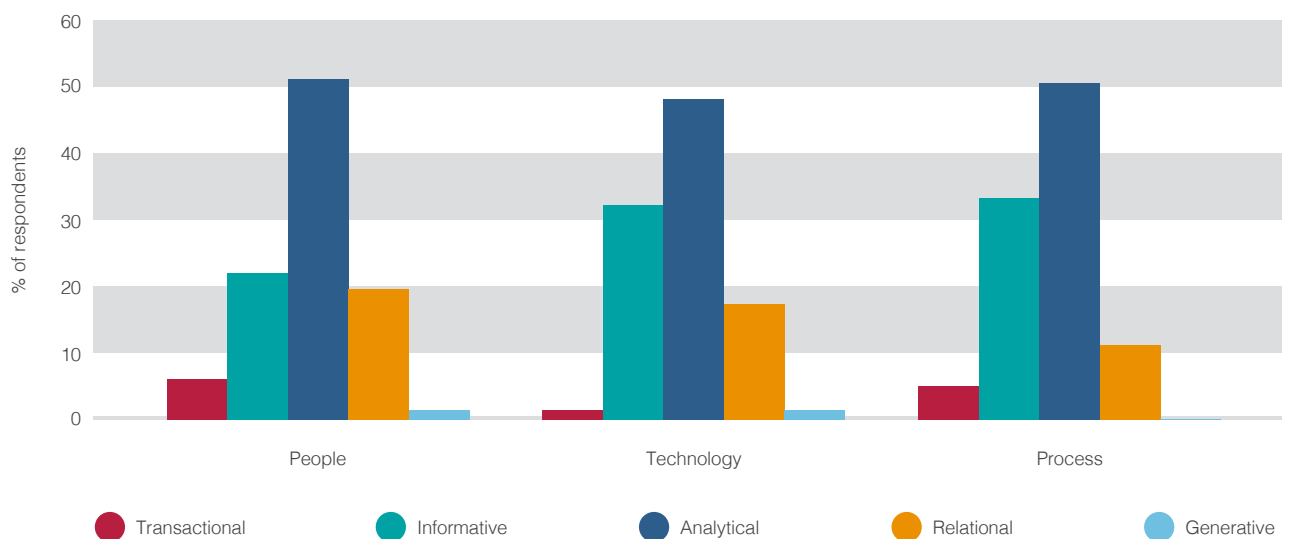
The percentage of responses by maturity level represents a relatively normal distribution, centred on an overall average maturity of 2.8, as shown in Figure 5.

The largest group of respondents falls in the analytical (step 3) step on the B2B integration path. Here, demand and supply use cases come together, beginning the multi-tier integration found in progressive steps. The supply chain data available is more than just simple information, and can be analysed more extensively to generate new business insight.

Similar to the overall maturity scaling, the maturity level for each element follows a normal distribution, as shown in Figure 6. The people element has the highest percentage of relational (step 4) and generative (step 5) capabilities, but simultaneously has the greatest percentage of laggards still stuck at the transactional (step 1) level. Process has the highest percentage of responses that fail to reach even the analytical (step 3) phase, while technology represents the tightest grouping between the informative and relational (step 4) steps.

5 | Distribution of overall responses for each step

Source: SCM World B2B Integration Maturity survey 2016

% of respondents
n=115

6 | The maturity level for each element follows a normal distribution

Source: SCM World B2B Integration Maturity survey 2016

% of respondents, n=115

Few companies have separated themselves from their peers at the lead along the B2B integration path.
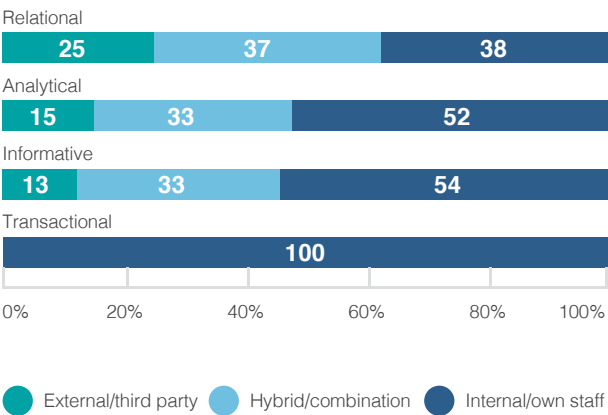
16% of responding companies achieved an overall score greater than 3.4; only 2% scored at or above 4.0.

What separates these companies is their relational (step 4) approach to B2B integration. Here, the focus shifts towards a real-time approach that keeps pace with what is driving the business. Common toolsets and processes are leveraged to drive collaboration upstream and downstream across a growing network of suppliers and customers. Also notable is the move toward partnerships in managing B2B integration operations.

CAPABILITY ADVANCEMENT REQUIRES PARTNERSHIPS FOCUSED ON DEVELOPING COMPETENCIES

Outsourcing at least part of your B2B integration operations accelerates the expansion of partner networks, enabling collaborative relationships with other leading companies that drive advancement of all elements in parallel.

7 | Location of B2B integration operations across steps of maturity

Relational

| 25 | 37 | 38 |

Analytical

| 15 | 33 | 52 |

Informative

| 13 | 33 | 54 |

Transactional

| 100 |

0%   20%   40%   60%   80%   100%

● External/third party   ● Hybrid/combination   ● Internal/own staff

Source: SCM World B2B Integration   % of respondents
Maturity survey 2016   n=115

Of the relational (step 4) companies, 63% of operations are either fully outsourced (25%) or utilise a hybrid of external and internal resources (38%), leaving less than 38% to be run solely with internal staff.

Figure 8 plots the three companies with leading scores for each of the elements, showing how they compare across people, technology and process. One company demonstrates a significant strength in technology, with a score approaching 5.0, but lacks consistency with weaker scores in process and people.

8 | Leading scores for each element
How they compare against people, technology & process
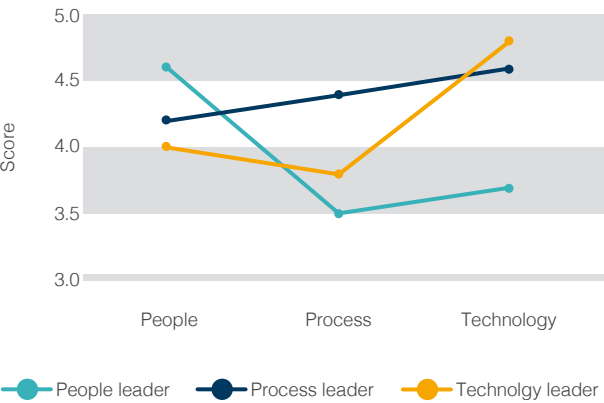
Source: SCM World B2B Integration Maturity survey 2016

Not all respondents have elevated their capabilities to this generative level, but a score of 4.8 confirms that it is possible.

The people element has the highest percentage of relational (step 4) companies reaching the generative (step 5) step, and a high score of 4.6, against an average of 3.9.

Process achieved a high of 4.4, with a subtler progression of capabilities for relational (step 4) companies, leading to an average of 3.4.

The most consistently present qualities across all of the leaders on the path show that:

• B2B integration is justified by real-time collaboration with trading partners.

• Cross-functional B2B expertise is more evident within IT and/or the line of business.

• Supply chain data is collected and organised via
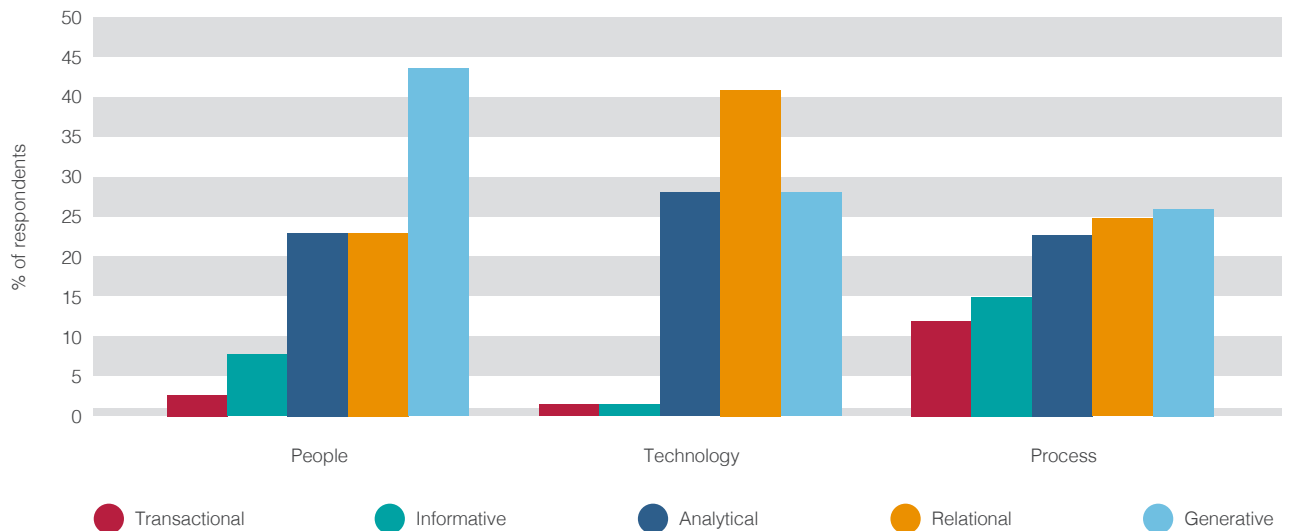
Source: SCM World B2B Integration Maturity survey 2016

% of respondents, n=115

a collaborative network reaching to at least direct customers and suppliers.

- Fully integrated processes exist with customers and/or suppliers.

- More than 70% of all B2B transactions are processed digitally.

LAGGING OR LEFT BEHIND?

Across all industries, there are a small group of companies that are trailing behind on the B2B integration path. These 14% of companies have overall scores near 2. At this scoring, very few of these companies have begun to take advantage of advancing maturity through outsourcing, which can accelerate maturity at a faster pace than internal development.

The element scoring in Figure 10 shows relative group strengths, with one group people-dominant in scoring, while those that are technology and process-dominant lacking in people development, as shown by a people score of 1.5.

ACROSS INDUSTRIES

The characteristics of advancing B2B integration maturity in five key industries are compared in Figure 11.

10 | Comparison of lagging companies
These are grouped by relative strengths
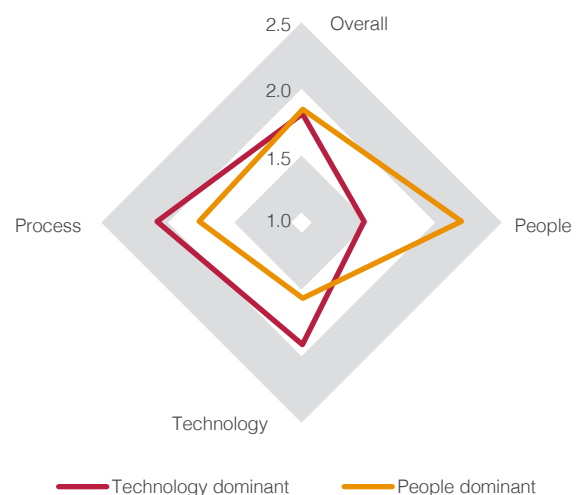
Source: SCM World B2B Integration Maturity survey 2016

Automotive is the leader with an overall score of 3.1 that is propelled by the highest technology and process scores. The lowest scoring element within the automotive sector is people, but at the relational (step 4) level, people achieves a higher average than both technology and process.

Notable among the strongest characteristics of automotive respondents is that more than 70% of

11 | Progress on the B2B integration path in five key industries
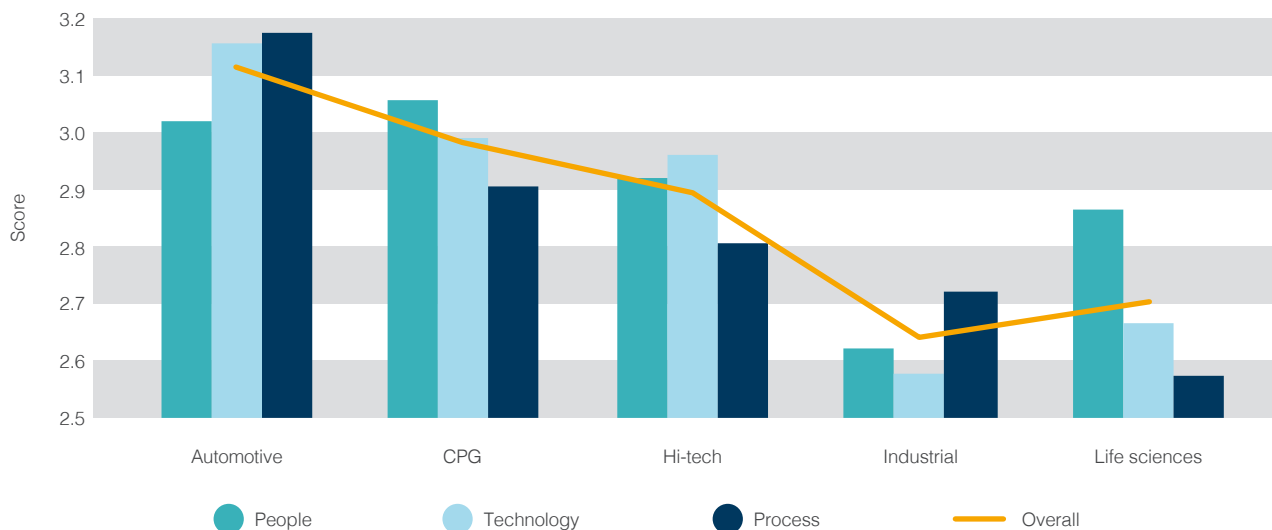
Source: SCM World B2B Integration Maturity survey 2016

% of respondents, n=115

order, invoicing and logistics transactions and tracking is managed digitally, most often via EDI or web-EDI (ie portal). Also, automotive respondents demonstrate consistency in the identification of core tools and centralisation of decision making, and 67% of leading automotive respondents utilise a hybrid or external B2B integration operation.

The scoring of the four remaining industries indicates two distinct groups among those chasing the automotive industry. In the first grouping, hi-tech and CPG achieved similar overall scores, albeit with slight variations in method.

12 | How the elements score across steps of maturity: automotive
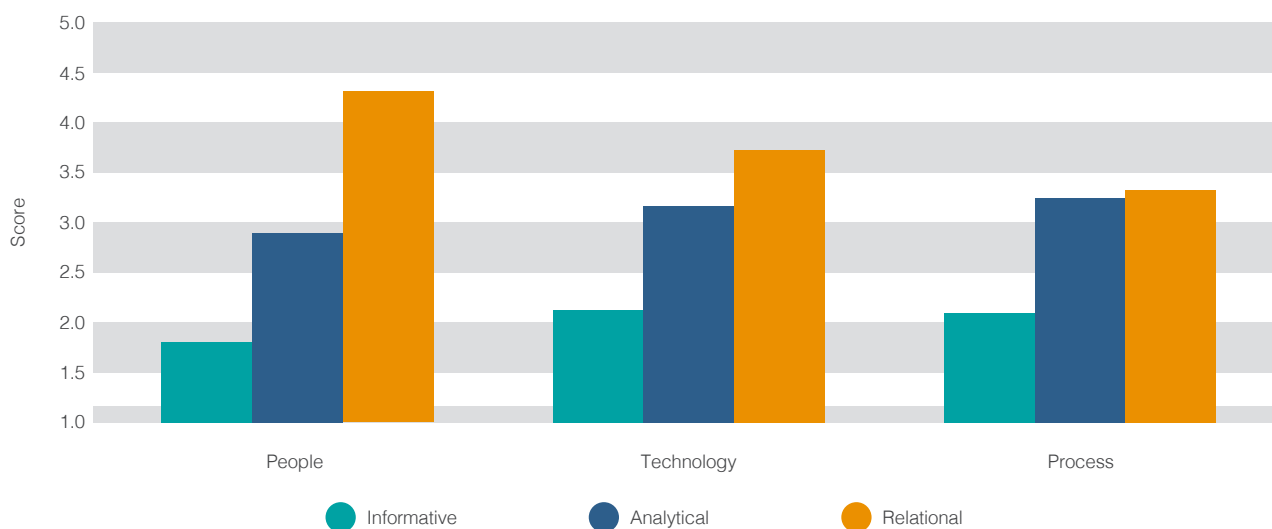
Source: SCM World B2B Integration Maturity survey 2016

% of respondents, n=115

13 | How the elements score across steps of maturity: hi-tech

Informative   Analytical   Relational

% of respondents, n=115

The highest scoring elements for hi-tech varies by level, with process leading at the informative (step 2) stage and people leading for analytical (step 3) responses. Technology fares no worse than second in any step and significantly leads at the relational (step 4) step.

CPG's people score is more advanced for the considerable number of responses at the informative (step 2) step, and holds a slight lead at the balanced analytical (step 3) step. Like hi-tech, CPG leaders are significantly more advanced in technology. The CPG sector also demonstrated more outsourcing of operations, with 50% employing a hybrid or external approach.

14 | How the elements score across steps of maturity: CPG

Informative   Analytical   Relational

% of respondents, n=115

The lowest scoring grouping of industrial and life sciences utilises outsourcing options less than half the time, and is largely comparable in overall score and relative elemental scoring. However, like hi-tech and CPG, industrial's advancement is more influenced by technology maturation, with a more pronounced spread, shown by scoring as low as the transactional (step 1) step.

15 | How the elements score across steps of maturity: life sciences
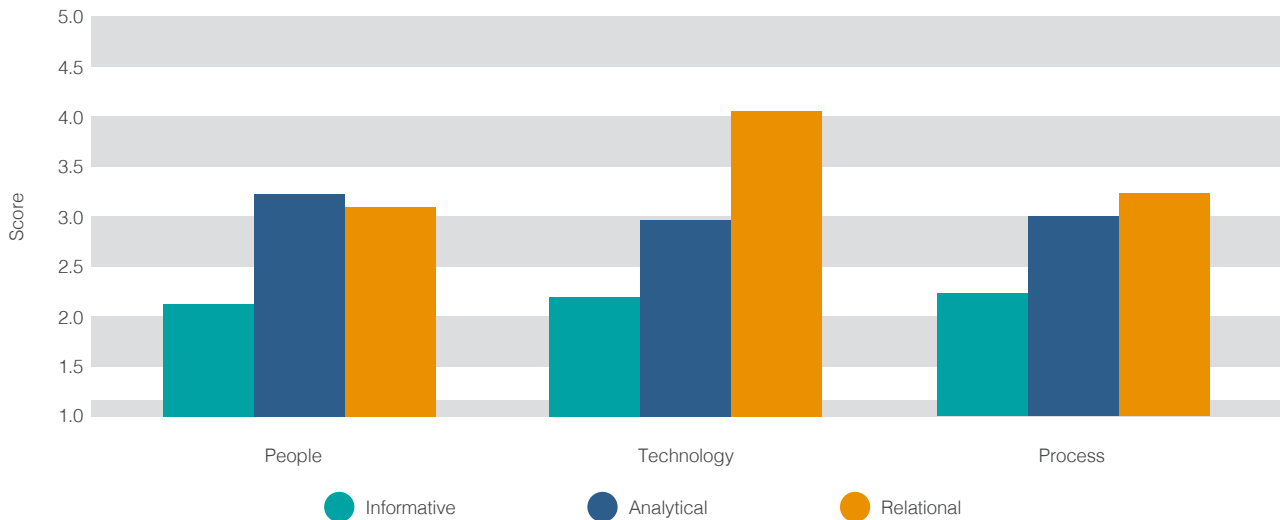

Source: SCM World B2B Integration Maturity survey 2016   % of respondents, n=115

16 | How the elements score across steps of maturity: industrial
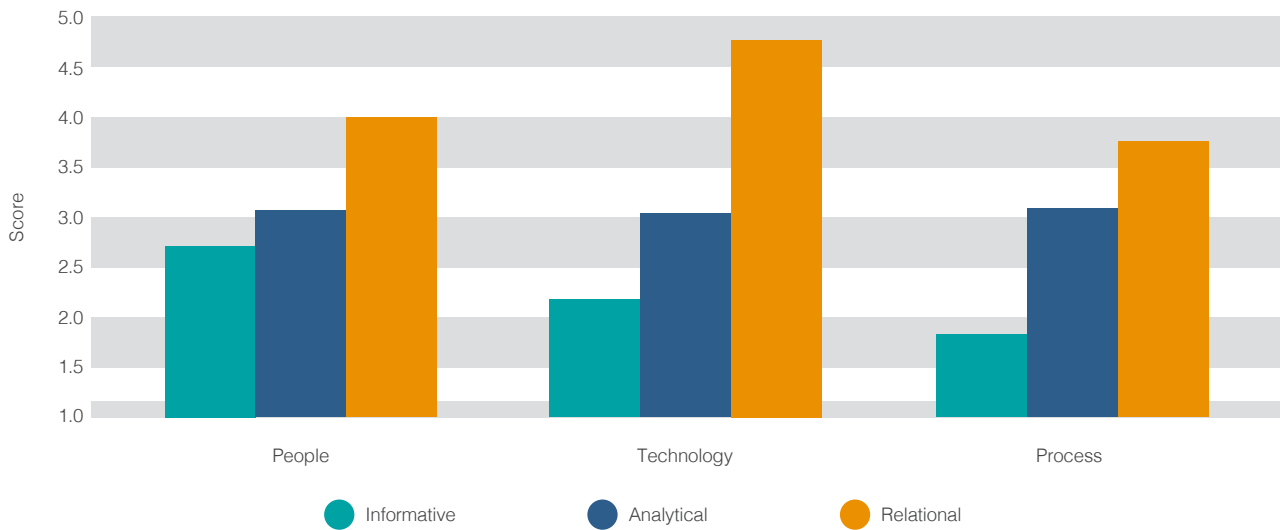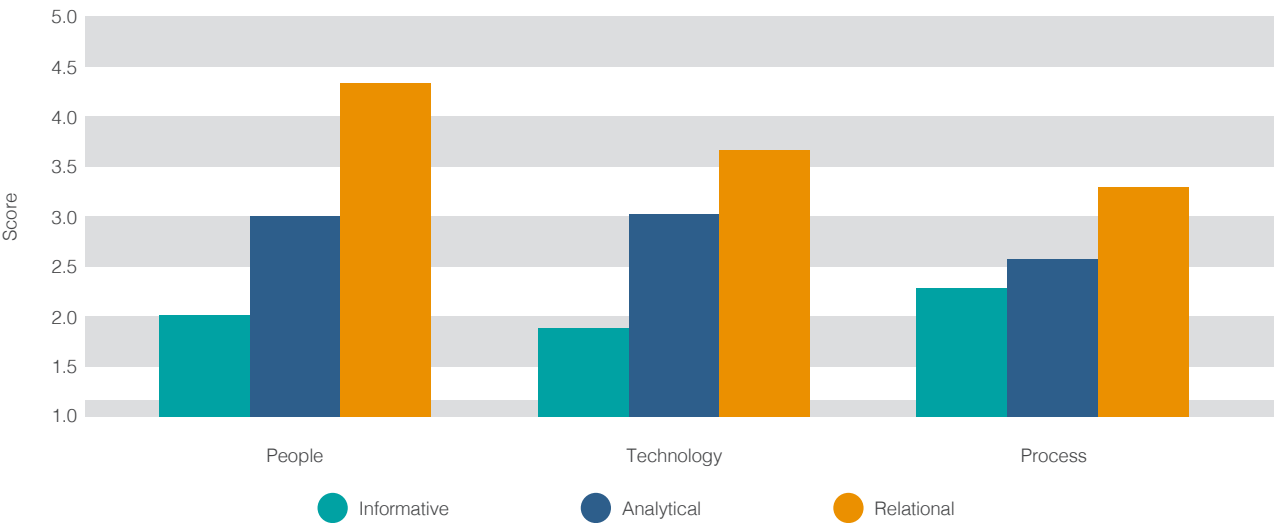

Source: SCM World B2B Integration Maturity survey 2016   % of respondents, n=115
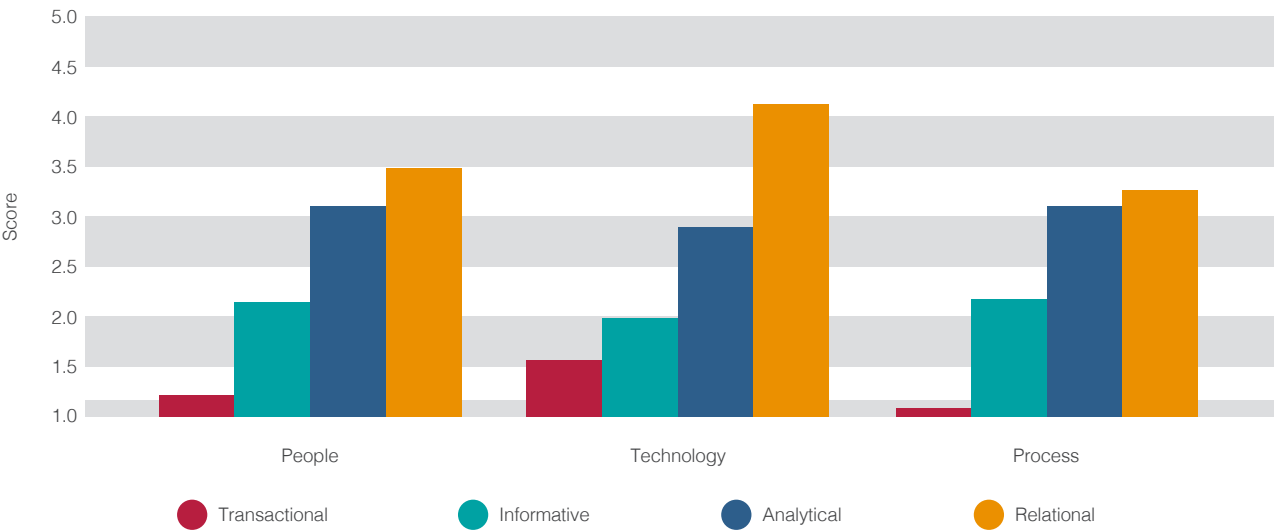
Cargill

Cargill's business integration and data management is an essential part of driving maturity advancements and setting its strategic direction for the future.

Cargill's B2B integration maturity is rooted in the capture of everyday data flowing across the supply chain. Customer, supplier and internal operational data is exchanged and then monitored through a series of business intelligence reports.

These reports exemplify advancing maturity, as they allow business leaders to monitor and diagnose potential problems through a series of performance indicators (KPIs). From such an informed position, leaders can then take swift action to eliminate risks or disruptions to the company's operations or to the services provided to customers.

Another indicator of business maturation is that the information flows and data reporting available throughout the network also form the basis for future focused leadership decisions made during Cargill's Integrated Business Planning process.

Through the maturation of its business integration, Cargill has capitalised on the data and processes available to create business opportunity.

Key benefits of their process include:

- **A true picture of the business.** Data provides the truth about the state of the company's supply chain; it underpins business efficiency and enables visibility. Without it, the result is a lack of feasible plans, schedules or transactions, ultimately leading to a loss of trust with both customers and suppliers.

- **Business alignment through accountability.** Accountability and responsibility for this continuous improvement and alignment lie in the appropriate places within the organisation, for example with planners (for materials data), the sourcing team (for vendor data), and customer service and the commercial team (for customer data).

- **Trust and wider supply chain visibility.** Data management is essential for building trust across the supply chain. This is achieved by connecting and sharing data with key customers and critical suppliers, thereby enabling even greater visibility upstream and downstream through the supply chain.

Cargill's goal throughout its process is to empower growth by connecting with its trade partners to keep its data clean, accurate and reliable, ensuring not only the robustness of its own supply chain, but also of its connections with customers and suppliers.

Source: SCM World webinar, Minimising supply chain disruptions: risk management at Cargill Animal Nutrition, August 2014

HOW TO ADVANCE ALONG THE B2B INTEGRATION PATH

A specific path to greater B2B integration maturity can be plotted by using survey data to map key strategic advancements for each element.

These advancements identify the most significant increases in individual characteristics when comparing one maturity step to another. By making such relative adjustments, the B2B integration path framework can be expanded upon to act as a guide for companies at each step of the maturation process.

People. Any hesitancy in establishing a broader people strategy and in prioritising advancements can immediately limit progress to further steps on the B2B integration path. Building appropriate linkages, creating a communicative environment and setting specific expectations are essential factors in advancing B2B maturity. Efforts like these are both indicative of the foundation created by the other elements, and the desire of an organisation to use B2B integration to create value.

Technology. An end-to-end supply chain capable of real-time sensing and responding requires the upgrading of B2B integration tools and technology. To make technology improvements possible, 63% of the leaders on the B2B integration path have invested in affiliations with outside partners, whether via a fully outsourced B2B integration operation or via a hybrid combining internal and outsourced resources.

Process. Advancing process maturity is the result of both the elemental actions taken and the overall integration capabilities developed in conjunction with the other elements. Specific actions must be taken to speed process advancement on the B2B integration path; but in many cases, prerequisites must be met to ensure that those actions are productive.

> "
> The B2B integration path framework can be expanded upon to act as a guide for companies at each step of the maturation process.
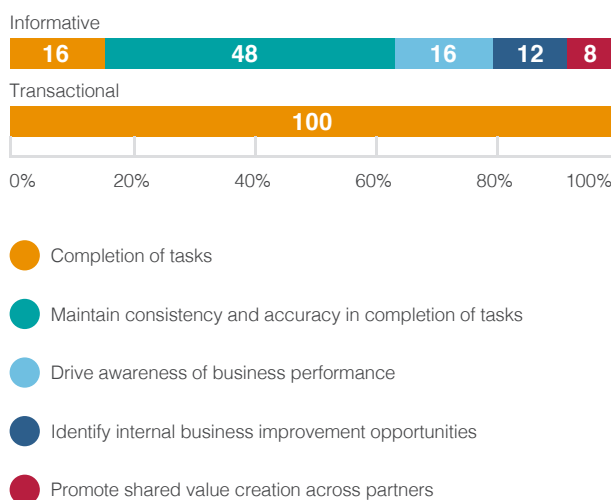> "

BEGINNING FROM THE TRANSACTIONAL STEP

PEOPLE

Two actions highlight how organisations move from the transactional (step 1) step by beginning to emphasise and justify B2B integration internally, while also assessing how to establish dedicated expertise.

1. The organisation must evolve from emphasising only the completion of tasks to maintain consistency and accuracy in completion of tasks (48% increase in respondents from step 1 to step 2), and driving awareness of business performance (+16% from step 1 to 2) (see Fig 17).

2. Siloed internal decisions must, at a minimum, become centralised internally (22% more respondents at step 2 vs step 1), possibly with structured ownership (+26% from step 1 to 2) (see Fig 18).

17 | What is the business emphasis for integrated B2B activities?

Informative

| 16 | 48 | 16 | 12 | 8 |

Transactional

| 100 |

0% 20% 40% 60% 80% 100%

● Completion of tasks

● Maintain consistency and accuracy in completion of tasks

● Drive awareness of business performance

● Identify internal business improvement opportunities

● Promote shared value creation across partners

Source: SCM World B2B Integration   % of respondents
        Maturity survey 2016   n=115

18 | How aligned is B2B integration decision making?

Informative

| 39 | 22 | 26 | 13 |

Transactional

| 100 |

0% 20% 40% 60% 80% 100%

● Integration decisions are siloed internally

● Integration decisions are centralised internally

● Integration decisions are centralised with structured ownership

● Decision alignment extends to key partners

● Comprehensive multi-enterprise decision alignment
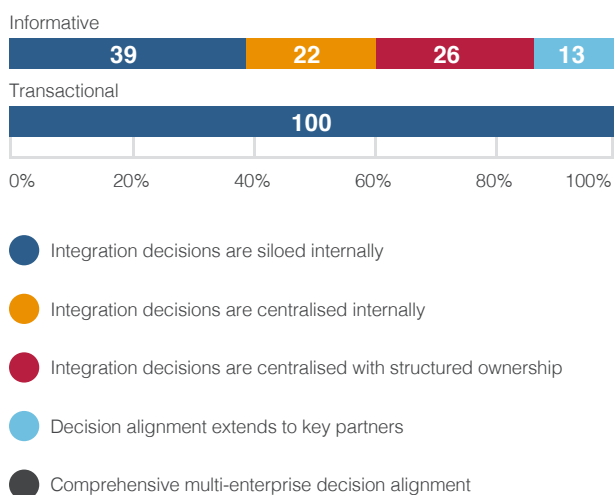
Source: SCM World B2B Integration   % of respondents
        Maturity survey 2016   n=115

TECHNOLOGY

Two tools and technology advancements play a significant role in advancing from the transactional (step 1) step of the B2B integration path.

3. Move from informal and unstructured information exchanges to unilateral exchanges. In our survey, 39% of companies have taken this first action in moving from the transactional (step 1) to the informative (step 2) step, with another 26% taking more advanced actions (see Fig 19).

4. Move from manual transactions with non-digital partners via non-digital, such as a phone or fax machine to a standardised template (53% increase in respondents from step 1 to 2) or some level of digitisation (12% more responses at step 2 vs step 1) (see Fig 20).

19 | What approach is your company currently using to exchange information with trading partners?

Informative

| 35 | 39 | 13 | 9 | 4 |

Transactional

| 100 |

0%   20%   40%   60%   80%   100%

- Informal and unstructured - simple business model doesn't need complicated transactions to be managed
- Unilaterally send information to trading partners with instructions required to fulfil our needs
- Automated a bilateral exchange of information with largest trading partners
- Bilateral communication bilaterally with most trading partners (and smaller partners via web)
- Continuously exchange information with all trading partners to ensure business agility

Source: SCM World B2B Integration Maturity survey 2016 — % of respondents n=115

20 | How are transactions managed with non-digital partners?
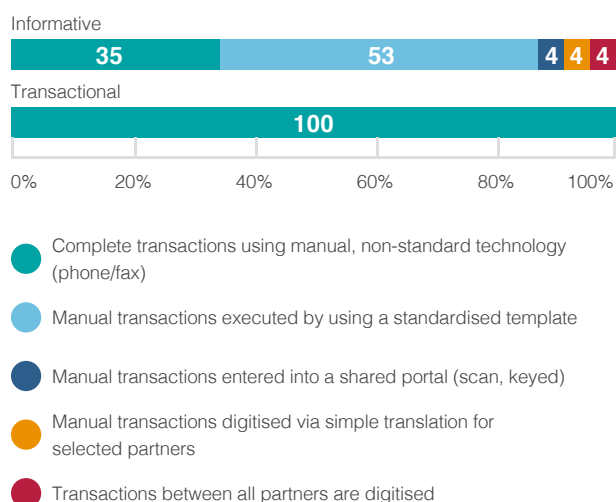
Informative

| 35 | 53 | 4 | 4 | 4 |

Transactional

| 100 |

0%   20%   40%   60%   80%   100%

- Complete transactions using manual, non-standard technology (phone/fax)
- Manual transactions executed by using a standardised template
- Manual transactions entered into a shared portal (scan, keyed)
- Manual transactions digitised via simple translation for selected partners
- Transactions between all partners are digitised

Source: SCM World B2B Integration Maturity survey 2016 — % of respondents n=115

PROCESS

The steps to move from transactional (step 1) to informative (step 2) integration represent both independent and interdependent actions.

5. B2B processes need to start being connected (82% of companies have done so at step 2 vs 0% at step 1); at a minimum, they should be connected manually (see Fig 21).

6. With proper tools and technology, and structure and people in place, the frequency of process digitisation needs to increase beyond 1 in 4 (at step 2 41% of companies process between 25-89% of transactions digitally vs 0% at step 2) (see Fig 22).
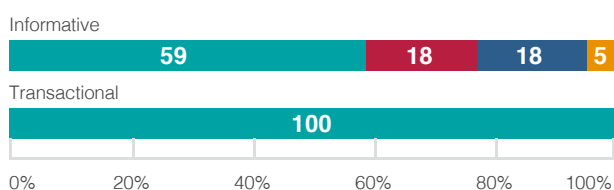
21 | What is the extent of B2B process integration?
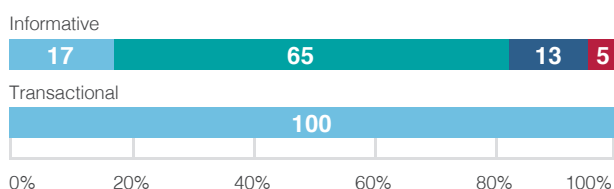
Informative

| 17 | 65 | 13 | 5 |

Transactional

| 100 |

0%   20%   40%   60%   80%   100%

- Processes are siloed and disaggregated
- There is minimal, manual connectivity between processes
- Processes are calibrated between both customers and suppliers
- Some processes are integrated with suppliers and/or customers
- All processes are integrated for demand and supply synchronisation

Source: SCM World B2B Integration Maturity survey 2016 — % of respondents n=115

22 | What percentage of all B2B transactions are processed digitally?

Informative

| 59 | 18 | 18 | 5 |

Transactional

| 100 |

0%   20%   40%   60%   80%   100%

- <25%   ● 25-49%   ● 50-69%   ● 70-89%   ● 90-100%

Source: SCM World B2B Integration Maturity survey 2016 — % of respondents n=115
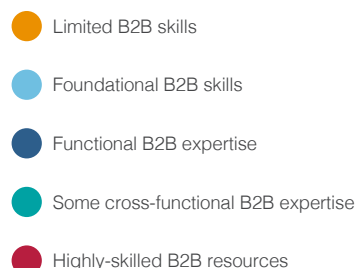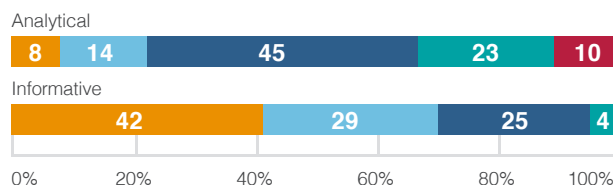
MOVING FROM INFORMATIVE TO ANALYTICAL

PEOPLE

Moving from the informative (step 2) to the analytical (step 3) step creates capabilities by growing B2B integration expertise and a refined staffing structure.

1. The level of expertise must grow from primarily limited or foundational skills, to functional B2B expertise (45% of respondents at step 3 vs 25% at step 2) and even some cross-functional B2B expertise (18% of respondents from 4% at step 2 to 23% at step 3) (see Fig 23).

2. It is essential that the B2B integration staffing structure progress from no dedicated staff (or resources also responsible for non-B2B related activity) to include at least a few dedicated staff (56% of respondents at step 3, representing a 39% increase from step 2), and even a mostly dedicated staff supplemented by shared resources (16% at step 3 vs 0% at step 2) (Fig 24).

23 | What is the level of organisational B2B integration expertise?

Analytical

| 8 | 14 | 45 | 23 | 10 |

Informative

| 42 | 29 | 25 | 4 |

0% 20% 40% 60% 80% 100%

- 🟠 Limited B2B skills
- 🔵 Foundational B2B skills
- 🔵 Functional B2B expertise
- 🟢 Some cross-functional B2B expertise
- 🔴 Highly-skilled B2B resources

Source: SCM World B2B Integration
         Maturity survey 2016

% of respondents
n=115

24 | What is your staffing structure for B2B integration support, including contractors and outsourcers?

Analytical

| 6 | 16 | 56 | 16 | 6 |

Informative

| 61 | 22 | 17 |

0% 20% 40% 60% 80% 100%

- 🔵 No dedicated B2B staff – all resources have other responsibilities
- 🟢 Mostly shared resources
- 🔵 A few dedicated staff plus shared resources
- 🟠 Mostly dedicated staff supplemented by shared resources
- 🔴 Dedicated B2B team
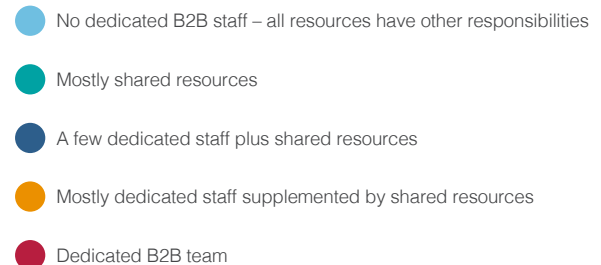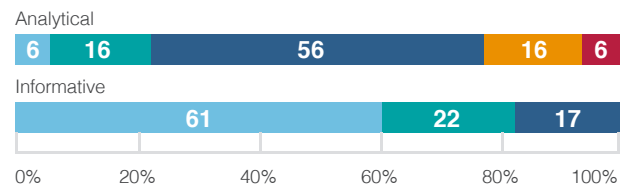
Source: SCM World B2B Integration
   Maturity survey 2016

% of respondents
n=115

TECHNOLOGY

Three important technology advancements are particularly empowering in the move from informative (step 2) to analytical (step 3).

3. The nature of tools must evolve from an undefined but consistently used local toolset, to core tools that have been identified and are used consistently locally. An additional 11% of companies have taken this action as compared to the previous step, and across multiple locations (a 37% increase to 42% of responses at step 3) (see Fig 25).

4. B2B and ERP integration should progress toward across the board integration for most transaction types (41% of respondents at step 3 vs 5% at step 2), with full integration for all transactions types, in at least some locations (combined 20% of responses at step 3, as compared to 5% at step 2) (see Fig 26).

5. Deploy web-EDI (a 36% increase in respondents from step 2 to 3, with 50% total) integration to allow for transactions to be completed via those methods (see Fig 27).

25 | What is the nature of tool usage in your B2B network?
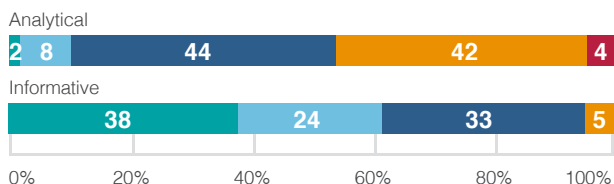
Analytical

| 2 | 8 | 44 | 42 | 4 |

Informative

| 38 | 24 | 33 | 5 |

0% 20% 40% 60% 80% 100%

- ● Toolset is undefined and used inconsistently across all teams
- ● Toolset is undefined, but usage is locally consistent
- ● Core tools are identified and usage is locally consistent
- ● Core tools are identified and used consistently across multiple locations
- ● A single toolset is unified and cloud-based

Source: SCM World B2B Integration   % of respondents
Maturity survey 2016   n=115

26 | How is B2B integrated with your ERP system?
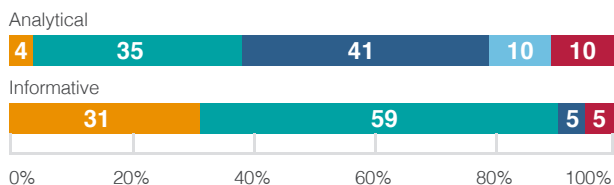
Analytical

| 4 | 35 | 41 | 10 | 10 |

Informative

| 31 | 59 | 5 | 5 |

0% 20% 40% 60% 80% 100%

- ● No integration
- ● Integrated for a few transaction types
- ● Integrated for most transaction types
- ● Fully integrated in some locations for all transaction types
- ● Fully integrated in all locations for all transaction types

Source: SCM World B2B Integration   % of respondents
Maturity survey 2016   n=115

27 | How are transactions modelled across your B2B network?
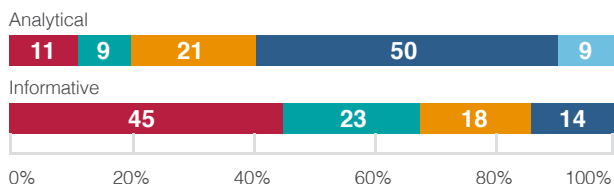
Analytical

| 11 | 9 | 21 | 50 | 9 |

Informative

| 45 | 23 | 18 | 14 |

0% 20% 40% 60% 80% 100%

- ● Paper, fax, phone, email
- ● We are automated, but most of our partners are not
- ● Most transactions occur via EDI VAN
- ● Most transactions occur via EDI or web-EDI (portal)
- ● We use cloud-based collaborative tools

Source: SCM World B2B Integration   % of respondents
Maturity survey 2016   n=115

PROCESS

Increasing digital connectivity with trading partners is imperative in advancing from informative (step 2) to analytical (step 3).

6. Further develop process capabilities by engaging with at least half of capable trading partners digitally (57% of respondents trade with at least 40% of partners digitally at step 3, compared to only 21% at step 2) (see Fig 28).

7. Speed the advancement of process maturity by expediting the on-boarding of new digital partners from longer than a month, to a few weeks or faster (at step 3 60% of respondents on-board in four weeks or less compared to 32% at step 2) (see Fig 29).

28 | What percentage of partners do you trade with digitally?

Analytical

| 17 | 26 | 29 | 26 | 2 |

Informative

| 66 | 13 | 21 |

0% 20% 40% 60% 80% 100%
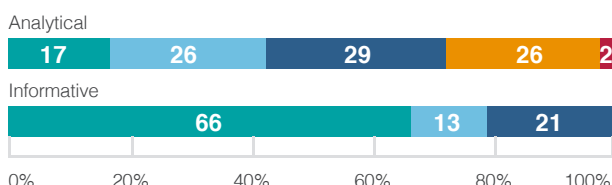
- ● <20%
- ● 20-39%
- ● 40-59%
- ● 70-90%
- ● 90-100%

Source: SCM World B2B Integration   % of respondents
Maturity survey 2016   n=115

29 | What is your timeframe for on-boarding new digital partners?

Analytical

| 40 | 37 | 17 | 2 | 4 |

Informative

| 68 | 32 |

0% 20% 40% 60% 80% 100%
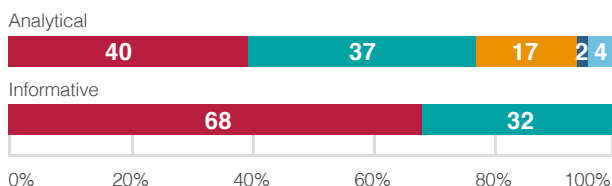
- ● >4 weeks
- ● 2-4 weeks
- ● 1-2 weeks
- ● 2-7 days
- ● 0-2 days

Source: SCM World B2B Integration   % of respondents
Maturity survey 2016   n=115

REACHING THE RELATIONAL STEP

PEOPLE

The elements of structure and people that separate leaders at the relational (step 4) step on are business justification, and again decision making.

1. Transform the business justification from one that simply facilitates scalable partnerships to one that encourages innovative and collaborative business growth among partners (60%) (see Fig 30).

2. Decision making must continue to evolve, growing centralised, owned decision making, and extending to comprehensive multi-enterprise decision alignment (32%) (see Fig 31).

30| What is the business justification for integrated B2B activities?
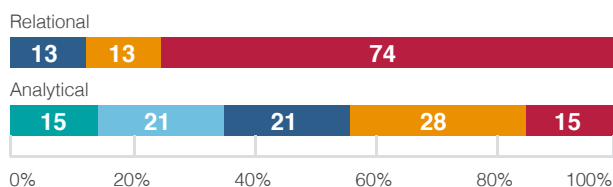
Relational

| 13 | 13 | 74 |

Analytical

| 15 | 21 | 21 | 28 | 15 |

0% 20% 40% 60% 80% 100%

- 🔵 Necessity for transaction completion
- 🔵 Cost management opportunity
- 🔵 Facilitates scalable partnerships
- 🟠 Enables real-time partnership responsiveness
- 🔴 Encourages collaborative business growth among partners

Source: SCM World B2B Integration   % of respondents
Maturity survey 2016   n=115

31 | How aligned is B2B integration decision making?
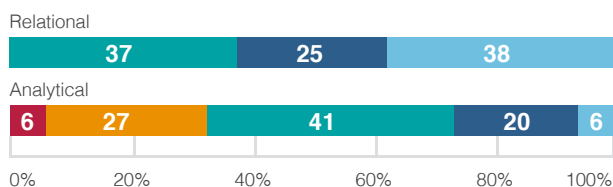
Relational

| 37 | 25 | 38 |

Analytical

| 6 | 27 | 41 | 20 | 6 |

0% 20% 40% 60% 80% 100%

- 🔴 Integration decisions are siloed internally
- 🟠 Integration decisions are centralised internally
- 🔵 Integration decisions are centralised with structured ownership
- 🔵 Decision alignment extends to key partners
- 🔵 Comprehensive multi-enterprise decision alignment

Source: SCM World B2B Integration   % of respondents
Maturity survey 2016   n=115

TECHNOLOGY

Moving to the relational (step 4) step on the B2B integration path is marked by three prominent tools and technology improvements.

3. Increase the availability of metrics reporting from standard KPIs published at scheduled intervals, to calculative analytics available on demand for limited partners (an additional 8% of companies have made this advancement from the previous step), or even predictive analytics spanning a multi-tier demand and supply network (25% of respondents at step 4, increased from 4% at step 3) (see Fig 32).

4. Improve data capabilities from single-tier reporting and analytics to comprehensive multi-enterprise data integration (at step 4, 75% of respondents vs 18% at step 3) (see Fig 33).

5. Provide increased compliance capabilities that allow advancement beyond a dedicated network storage for digital records, to a networked compliance management system (a 35% increase in respondents to 50% at step 4), or even automated compliance risk identification and resolution capabilities (13% of respondents at step 4, compared to 4% at step 3) (see Fig 34).

32 | How are metrics calculated and analysed?
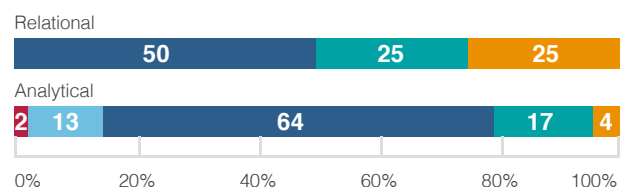
Relational

| 50 | 25 | 25 |

Analytical

| 2 | 13 | 64 | 17 | 4 |

0% 20% 40% 60% 80% 100%

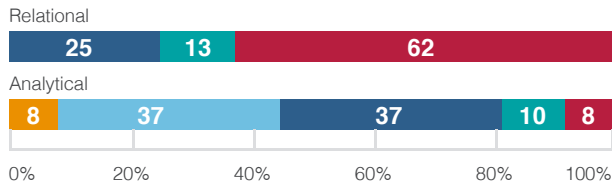- 🔴 Transaction completion data manually recorded
- 🔵 Automated archival of lagging, simple metrics
- 🔵 Internal standard KPIs published at scheduled intervals
- 🟢 Calculative analytics available on demand for limited partners
- 🟠 Predictive analytics spanning a multi-tier demand and supply network

Source: SCM World B2B Integration   % of respondents
Maturity survey 2016   n=115

33 | How is supply chain data collected and organised?

Relational

| 25 | 13 | 62 |

Analytical

| 8 | 37 | 37 | 10 | 8 |

0% 20% 40% 60% 80% 100%

- 🟠 Data is disaggregated and requires manual collection
- 🔵 Identify systems of record use master data management
- 🔵 Single-tier reporting and analytics available via best-of-breed technology suite
- 🟢 Collaborative data network +/- 1 tier
- 🔴 Comprehensive multi-enterprise data integration

Source: SCM World B2B Integration % of respondents
Maturity survey 2016 n=115

34 | What compliance and audit capabilities are available?
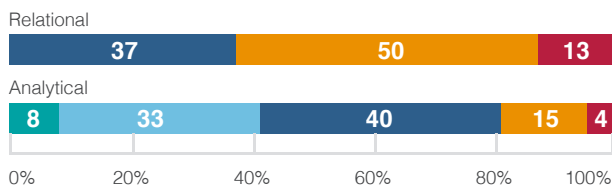
Relational

| 37 | 50 | 13 |

Analytical

| 8 | 33 | 40 | 15 | 4 |

0% 20% 40% 60% 80% 100%

- 🟢 Paper transaction records are warehoused
- 🔵 Digitised transaction records are stored locally
- 🔵 Dedicated network storage for digital records
- 🟠 Networked compliance management system
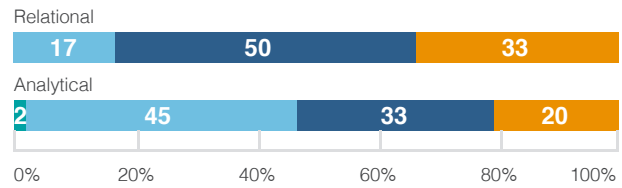- 🔴 Automated compliance risk identification and resolution capabilities

Source: SCM World B2B Integration % of respondents
Maturity survey 2016 n=115

35 | What types of error reporting and exception management are available?

Relational

| 17 | 50 | 33 |

Analytical

| 2 | 45 | 33 | 20 |

0% 20% 40% 60% 80% 100%

- 🟢 Lagging, simple error reporting is avaliable via manual request
- 🔵 Lagging error reporting can be automated and scheduled
- 🔵 Descriptive reporting is avilable real time
- 🟠 Exception management processes are automated
- ⚫ Real time risk assesment is completed using predictive analytics

Source: SCM World B2B Integration % of respondents
Maturity survey 2016 n=115

36 | On average, how long does it take to process an inbound invoice for payment?

Relational

| 14 | 14 | 29 | 43 |

Analytical

| 30 | 28 | 30 | 9 | 3 |

0% 20% 40% 60% 80% 100%

- 🔵 >1 day
- 🟠 12-24 hrs
- 🔵 2-12 hrs
- 🔴 1 hr
- 🟢 Real-time

Source: SCM World B2B Integration % of respondents
Maturity survey 2016 n=115

PROCESS

The ability to use overall capabilities to enable real-time processing enables advancing from analytical (step 3) to relational (step 4) maturity.

6. Improve error reporting from a reactive process to real-time reporting (50% of respondents at step 4 against 33% at step 3) and possibly automated exception management (a 13% increase from steps 3-4, to 33%) (see Fig 35).

7. With capabilities in place, automate digital transactions to reduce processing time. Seek to achieve real-time processing (41%) (see Fig 36).
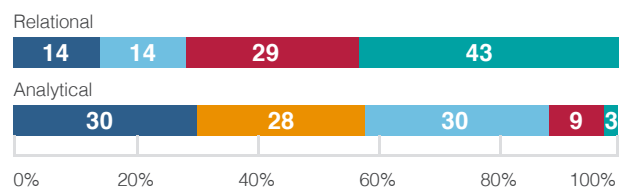
GENERATIVE POSSIBILITIES

Companies reaching the relational (step 4) step are leading their peers on the path, but clearly none have differentiated themselves enough to be called generative (step 5). At the generative (step 5) stage, people and process have caught up with the technology investments of leading companies, enabling real-time orchestration opportunities with their trading partners.

Reaching generative (step 5) B2B integration has proven to be especially elusive because while independent advancement of elements is possible, the balanced growth between people, technology and process has been inconsistent.

As an example, the most advanced toolsets are not likely to be fully utilised with uncommitted and/or untrained resources managing them. Alternatively, process measures will fail to achieve desired targets without establishing B2B integration as an organisational driver for business growth.

Furthermore, interconnected technology, a firmly people strategy and robust processes can enable the best of internal opportunities. But driving for the generative (step 5) step also means developing relationships with progressive trading partners who are also advancing on the B2B integration path.

When the best possible resources available internally and externally are implemented together, the result is much needed predictive visibility into what lies ahead. With technology, people and process all aligned internally and with partners, the trajectory of advancement is likely to be steep and the possibility of reaching generative (step 5) B2B integration is real.

THE BENEFITS OF ADVANCING B2B INTEGRATION CAPABILITIES

As stated in SCM World's report, *Metrics 2020: The Next Bull's Eye*, creating overall business value is an aspirational target in that it can be demonstrated with one or more strategic metrics.[2] This SCM World study identifies such improvements that are commensurate with the commitment of time, capital and resources needed to advance B2B integration maturity.

Initially, business need is understood, but often companies have yet to see sizeable improvements in business performance. For example, at the beginning of the B2B integration path:

- 61% have monthly inventory turns of one, or less;

- 66% of companies at the lowest step have 61 days of sales outstanding (DSO), or more;

- 33% are shipping outside of standard process by expediting at least 10% of orders.

As companies begin their advancement, they are accompanied by metrics improvements, as shown in Figure 37.

The trajectory of these metrics suggests that performance metrics are positively impacted as B2B integration matures. As companies advance to the analytical (step 3) and relational (step 4) steps on the B2B integration path, key improvements drawn from our study include:

- 72% of respondents experience savings of at least 20%, as compared to the costs of manual transactions;

- More efficient order management, with 54% of companies expediting 5% of orders, or less;

- Faster inventory turns, with 68% of companies achieving at least two inventory turns per month;

- Better cash management, as 78% of companies at the highest step have 60 days of sales outstanding, or fewer.

Improvements in stock-out rate and perfect order percentage are also beneficial for advancing companies, as these metrics are reflective of supply chain agility and efficiency. This data coincides with decreased expediting costs, but more importantly creates revenue and profit opportunities by minimising lost sales and optimising product flow throughout the value chain.

Where metrics have the potential to prove significant value to the business is in calculative metrics such as cash conversion cycle (CCC). The CCC is a conventional metric that, according to Investopedia, "indicates how efficiently management is using short-term assets (eg inventory) and liabilities to generate cash".[3] This is an especially important measure in volatile market conditions, as organisations are under intense pressure to maintain healthy balance sheets and strong cash flows.

Ideally, a company's CCC is a low as possible, with exceptional companies operating at a negative value, by effectively leveraging their supply chains to convert sales to cash prior to the actual transaction. Historically, only a few supply chain stalwarts have sustained a long-term negative CCC – among them Dell, Apple and Amazon.

Using SCM World study data, the CCC is calculated for each step of the B2B integration path, based on the range of company responses. The results are quite clear: with each progressive step on the B2B integration path, there is an associated 2-3x improvement in cash conversion cycle.

37 | Improvement of metrics with advancing maturity
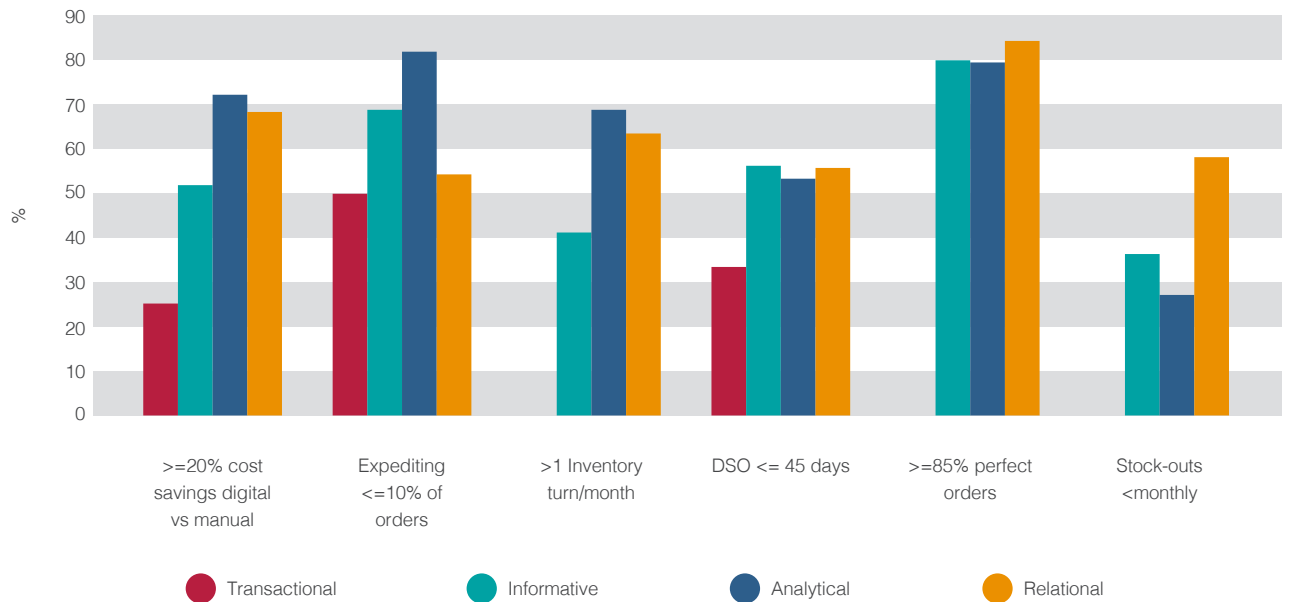
Source: SCM World B2B Integration Maturity survey 2016

% of respondents, n=115

38 | Cash conversion cycle calculation

	Inventory turn range	Days sales outstanding range	+ Days inventory outstanding	+ Days sales outstanding	- Assumed days payable outstanding	CCC
Transactional	<1	61-80	60	70	45	85
Informative	0-2	30-80	30	55	45	40
Analytical	1-3+	30-60	15	45	45	15
Relational	2-3+	0-60	12	30	45	-3

Source: SCM World

CONCLUSIONS & RECOMMENDATIONS

When advancing business-to-business integration, an organisation's focus must be on the journey as much as it is on the destination. The B2B integration path framework is designed with this journey in mind, helping organisations to define and measure progress for themselves.

A well-planned B2B integration deployment concurrently addresses issues such as working capital and process efficiency by aligning the three elements of people, technology and process to create tangible business value.

The SCM World survey demonstrated that respondents are only partially along their journey of B2B maturity, with respondents stratifying along the five steps of the B2B integration path.

Steps 1 and 2. 14% of respondents are at the beginning of the journey, where transactional (step 1) and informative (step 2) integration is a minimum need to surviving today's information-reliant marketplace.

To move from this step companies must begin to:

- move from informal and unstructured information exchanges to unilateral exchanges;

- transition from manual transactions with non-digital partners via non-standard technology to a standardised template or digitisation;

- emphasise not only the completion of tasks, but also stress consistency and accuracy, and drive awareness of business performance;

- centralise decision making internally, possibly with structured ownership connect B2B process, at least manually;

- extend digitisation to more than 25% of processes.

Step 3. 70% of respondents reside at the analytical (step 3) stage, where a deeper understanding of the business materialises, and demand side and supply side use cases come together.

To advance to this step, companies must demonstrate:

- the identification and consistent use of core tools;

- across the board B2B and ERP integration for most, or all, transaction types;

- deployment of EDI VAN or web-EDI integration;

- functional and cross-functional B2B expertise;

- dedicated B2B integration staffing, at least partial, supplemented by shared resources;

- digital engagement with at least half of capable trading partners;

- expedited on-boarding of new digital partners to a few weeks, or faster;

Step 4. 16% of respondents are building relational (step 4) business networks, capable of real-time sensing and responding.

At this stage, the supply chain is capable of:

- calculative analytics available on demand for limited partners, or even predictive analytics spanning a multi-tier demand and supply network;

- collaborative and networked data capabilities, or even comprehensive multi-enterprise data integration;

- networked compliance management, or even automated compliance risk identification and resolution capabilities;

- encouraging innovative and collaborative business growth among partners;

- comprehensive multi-enterprise decision alignment;

- real-time error reporting and possibly automated exception management;

- automated digital transactions;

Step 5. No one has yet reached the generative (step 5) stage that is the starting point for future capabilities like machine learning.

Companies approaching this step have driven:

- advancement of individual elements, but have yet to reach the highest levels for all elements;

- internal advancement, but have rarely collaborated with trade partners at levels that orchestrate improvements throughout the entire value chain.

Recommendations

1. Start the process. To begin the journey, companies must develop segmented business integration strategies that allow for immediate execution, as well as further advancement potential in the future.

2. Build capabilities and track progress. Mechanisms are available to accelerate progress and build the key capabilities needed to create sustainable advancements in B2B integration. In evaluating how building these capabilities enables future business growth, consider whether is it best to build and maintain in-house capabilities? Or is it better to partner with, or outsource to, specialists who focus on B2B integration tools and technology?

3. Extend the network. The very nature of B2B integration requires working with extended business networks. Purely introspective perspectives lead to the continuation of the status quo, whereas broadened perspectives create mutually beneficial opportunities to lead now, and in the future.

It is important to:

- learn and grow together with trading partners;

- leverage experts outside your business; and

- embrace the dynamism and fluidity of B2B integration as a long-term growth opportunity.

APPENDIX: FULL DIAGNOSTICS QUESTIONNAIRE

A1 | People

Attribute	Transactional	Informative	Analytical	Relational	Generative
What is the business justification for integrated B2B activities?	A necessity for transaction completion	Cost management opportunity	Facilitates scalable partnerships	Enables real-time partnership responsiveness	Encourages collaborative business growth among partners
What is the business emphasis for integrated B2B activities?	Completion of tasks	Maintain consistency and accuracy in completion of tasks	Drive awareness of business performance	Identify internal business improvement opportunities	Promote shared value creation across partners
How aligned is B2B integration decision making?	Integration decisions are siloed internally	Integration decisions are centralised internally	Integration decisions are centralised with structured ownership	Decision alignment extends to key partners	Comprehensive multi-enterprise decision alignment
What is the level of organisational B2B integration expertise?	Limited B2B skills	Foundational B2B skills	Functional B2B expertise	Some cross-functional B2B expertise	Highly-skilled B2B resources
What is the staffing structure for B2B integration support, including contractors and outsourcers?	No dedicated B2B staff – all resources have other responsibilities	Mostly shared resources	A few dedicated staff plus shared resources	Mostly dedicated staff supplemented by shared resources	Dedicated B2B team

A2 | Technology

Attribute	Transactional	Informative	Analytical	Relational	Generative
What approach is your company currently using to exchange information with trading partners?	The information exchange process is informal and unstructured, because our business model is simple and doesn't require complicated transactions to be managed.	We unilaterally send information to our trading partners so that they have the instructions required to fulfil our needs.	We have automated a bilateral exchange of information with our largest trading partners	We engage in bilateral communication with most of our trading partners, including smaller ones via web.	We exchange information with all our trading partners continuously and collaboratively, as we believe this is the best way to ensure business agility.
How is supply chain data collected and organised?	Data is disaggregated and requires manual collection.	Systems of record are identified and master data management is used.	Single-tier reporting and analytics are available via best-of-breed technology suite.	Collaborative data network +/- 1 tier.	Comprehensive multi-enterprise data integration.
How are transactions managed with non-digital partners?	Complete transactions using manual, non-standard technology (phone/fax).	Manual transactions executed by use of standardised template.	Manual transactions are entered into shared portal (scan, keyed).	Manual transactions are digitised via simple translation for selected partners.	Transactions between all partners are digitised.
How are metrics calculated and analysed?	Transaction completion data manually recorded.	Automated archival of lagging, simple metrics.	Internal standard KPIs published at scheduled intervals.	Calculative analytics available on demand for limited partners.	Predictive analytics spanning a multi-tier demand and supply network.
What compliance and audit capabilities are available?	Paper transaction records are warehoused.	Digitised transaction records are stored locally.	Dedicated network storage for digital records.	Networked compliance management system.	Automated compliance risk identification and resolution capabilities.
How is B2B integrated with your ERP system?	No integration.	Integrated for a few transaction types.	Integrated for most transaction types.	Fully integrated in some locations for all transaction types.	Fully integrated in all locations for all transaction types.

Attribute	Transactional	Informative	Analytical	Relational	Generative
How are transactions modelled across the B2B network?	Paper, fax, phone, email.	We are automated, but most of our partners are not.	Most transactions occur via EDI VAN.	Most transactions occur via EDI or web-EDI (portal).	We use cloud-based collaborative tools.
What is the nature of tool usage in your B2B network?	Toolset is undefined and used inconsistently across all teams.	Toolset is undefined, but usage is locally consistent.	Core tools are identified and usage is locally consistently.	Core tools are identified and used consistently across multiple locations.	A single toolset is unified and cloud-based.
How do you manage trading partner information?	Manually, with paper and spreadsheets.	Different systems are used to manage different types of information.	A single standalone database manages most information.	A single database with some process automation or integration with ERP.	A single database with process automation, integration to ERP, self-registration, and collaboration tools.

A3 | Process

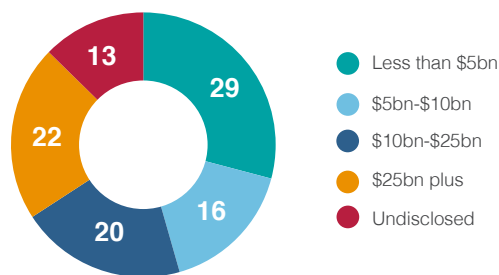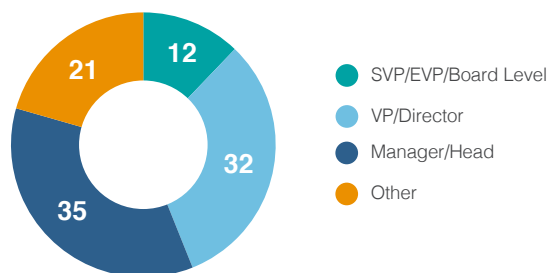| Attribute	Transactional	Informative	Analytical	Relational	Generative
What is the extent of B2B process integration?	Processes are siloed and disaggregated	There is minimal manual connectivity between processes	Processes are calibrated between both customers and suppliers	Some processes are integrated with suppliers and/or customers	All processes are integrated for demand and supply synchronisation
What types of error reporting and exception management are available?	Lagging, simple error reporting is available via manual request	Lagging error reporting can be automated and scheduled	Descriptive reporting is available real time	Exception management processes are automated	Real time risk assessment is completed using predictive analytics
What percentage of trading partners do you trade with digitally?	<20%	20-39%	40-69%	70-90%	90-100%
What is the timeframe for on-boarding new digital partners?	>4 weeks	2-4 weeks	1-2 weeks	2-7 days	0-2 days
What percentage of all B2B transactions are processed digitally?	<25%	25-49%	50-69%	70-89%	90-100%
What is the processing cost of a digital transactions, as compared to manually processed transactions (email, fax, phone)?	<19% lower	20-39% lower	40-59% lower	60-79% lower	80-100% lower
What percentage of order transactions are completed digitally?	<25%	25-49%	50-69%	70-89%	90-100%
What is the percentage of perfect orders (delivered in full, on-time, in perfect conditions and documented accurately)?	75-84%	85-89%	90-94%	95-98%	>=99%
What percentage of logistics (shipments) information is exchanged digitally?	<25%	25-49%	50-69%	70-89%	90-100%
What percentage of invoices are managed digitally?	<25%	25-49%	50-69%	70-89%	90-100%
How often are customers invoiced for completed orders?	> Monthly	1-2 times per month	Weekly	Daily	Real-time, on order completion
On average, how long does it take to process an inbound invoice for payment?	>1 day	12-24 hours	2-12 hours	1 hour	Real-time

ABOUT THIS RESEARCH

Invitations to complete an online survey were sent to members of SCM World and to a wider group of practitioners in supply chain and other functions globally. In total, 115 completed responses were received during the survey period. Closing in February 2016, the survey yielded 115 completed responses.

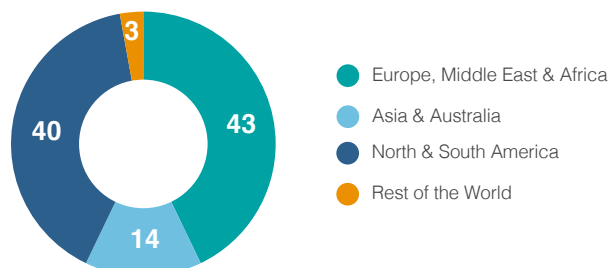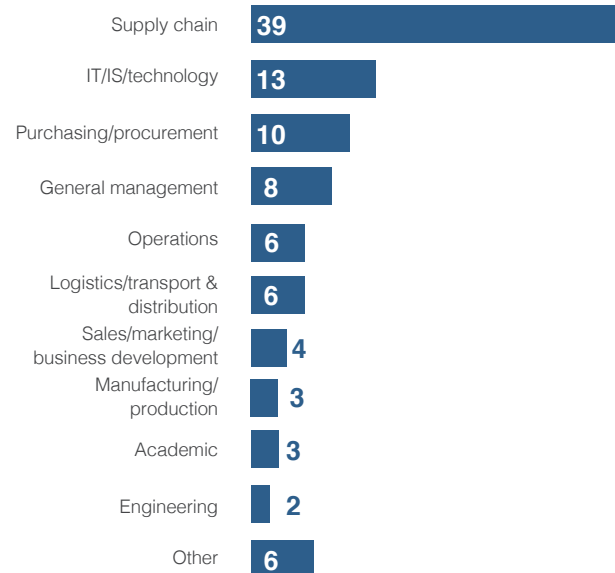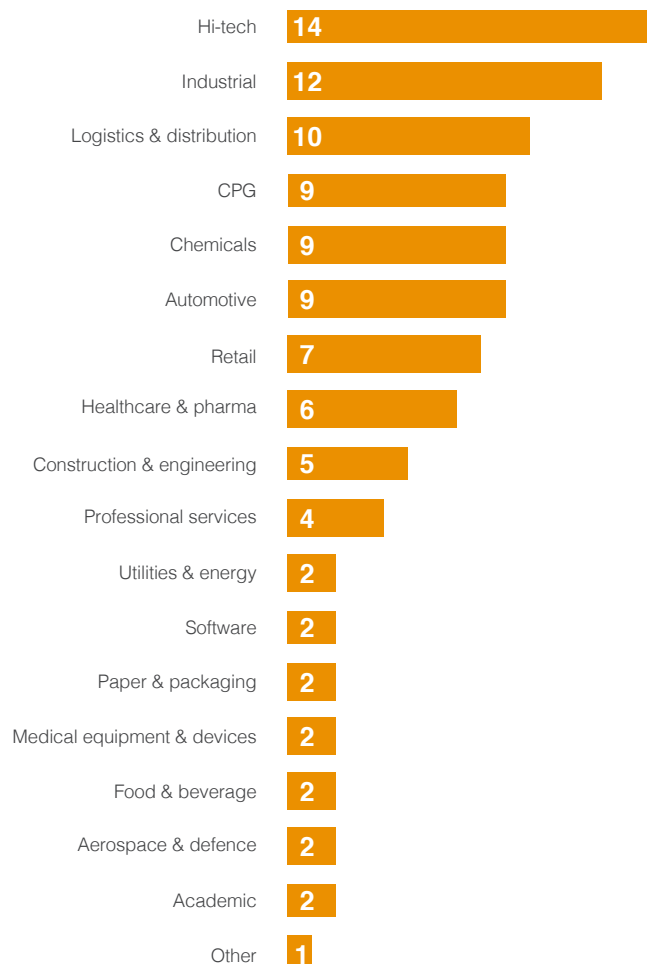Key demographics are as follows (all figures represent % of respondents):

Job function

Job function	%
Supply chain	39
IT/IS/technology	13
Purchasing/procurement	10
General management	8
Operations	6
Logistics/transport & distribution	6
Sales/marketing/business development	4
Manufacturing/production	3
Academic	3
Engineering	2
Other	6

Company size

Company size	%
Less than $5bn	29
$5bn-$10bn	16
$10bn-$25bn	20
$25bn plus	22
Undisclosed	13

Industry sector

Industry sector	%
Hi-tech	14
Industrial	12
Logistics & distribution	10
CPG	9
Chemicals	9
Automotive	9
Retail	7
Healthcare & pharma	6
Construction & engineering	5
Professional services	4
Utilities & energy	2
Software	2
Paper & packaging	2
Medical equipment & devices	2
Food & beverage	2
Aerospace & defence	2
Academic	2
Other	1

Job level

Job level	%
SVP/EVP/Board Level	12
VP/Director	32
Manager/Head	35
Other	21

Location

Location	%
Europe, Middle East & Africa	43
Asia & Australia	14
North & South America	40
Rest of the World	3

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2 *Metrics 2020: The Next Bull's Eye,* SCM World, December 2014

3 Jim Mueller, "Understanding the cash conversion cycle", Investopedia, 8 October 2015.

ABOUT SCM WORLD

SCM World is the cross-industry learning community powered by the world's most influential supply chain practitioners. We help senior executives share best practice insights in order to shape the future of supply chain.

As a member of the SCM World community, you have access to our predictive, groundbreaking research, which is focused on driving innovation in supply chain. Our agenda is set by an advisory board of the world's top supply chain leaders and the world's leading business schools. We also have our own team of expert researchers who are committed to providing insights into important trends affecting the profession.

We are passionate about making a difference to critical world issues like the distribution of food, delivery of healthcare, and environmental sustainability. Our mission is to help companies address these challenges within their supply chains.

We provide you with a powerful external perspective on supply chain through a combination of exclusive peer connections, practitioner-driven content and predictive research. Members of our community include Unilever, Amazon, Nike, Caterpillar, Cisco, Chevron, Dell, Nestlé and General Mills.

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ABOUT OPENTEXT

OpenText enables the digital world, creating a better way for organisations to work with information, on premises or in the cloud.

OpenText™ Business Network simplifies the inherent complexities in trading partner ecosystems, providing a single connection that digitises all information flows, whether they are suppliers, customers, banks or other valued partners. As a result, customer requirements are complied with and suppliers managed, while you focus on delivering your core business objectives.

OpenText™ Business Network is comprised of multiple solutions, from B2B integration, E-Invoicing, community management, procure-to-pay, fax, secure messaging, and notifications to complete B2B Managed Services solutions.

OpenText operates the largest B2B Integration network in the world, allowing us to provide better insight into exchanging and using information effectively. Leveraging the OpenText Trading Grid platform and Active Applications, our experienced team of specialists take a proactive approach to solving our clients' current and future challenges.

OpenText **Business Network** Enables:

BUSINESS NETWORK

$6,500,000,000,000 IN TRANSACTION DOLLAR VALUE PROCESSED

23/25 WORLD-CLASS SUPPLY CHAINS

600,000 BUSINESSES CONNECTED

65K CUSTOMERS

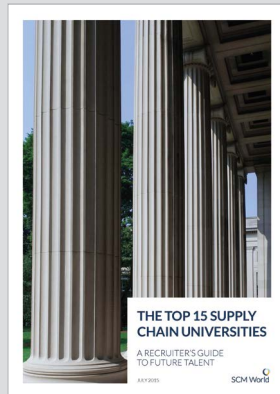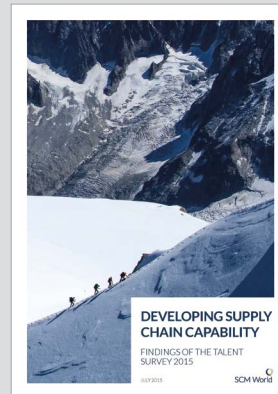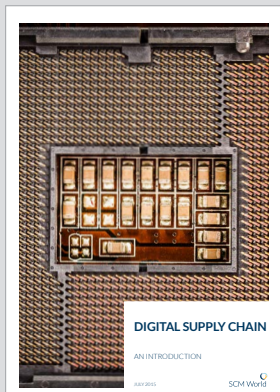**16 BILLION** E-COMMERCE TRANSACTIONS

2 BILLION FAXES

CORPORATE HQ WATERLOO, CA
EUROPEAN HQ MUNICH, DE
PRAHA, CZ
BROOK PARK OH
AMSTELVEEN, NL
US HQ SAN FRANCISCO, US
OTTAWA, CA
READING, UK
TOKYO, JP
PARIS, FR
HONGKONG, CN
TUCSON, US
BADEN, CH
AUSTIN, US
VIENNA, AT
SINGAPORE, SG
GAITHERSBURG MD
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