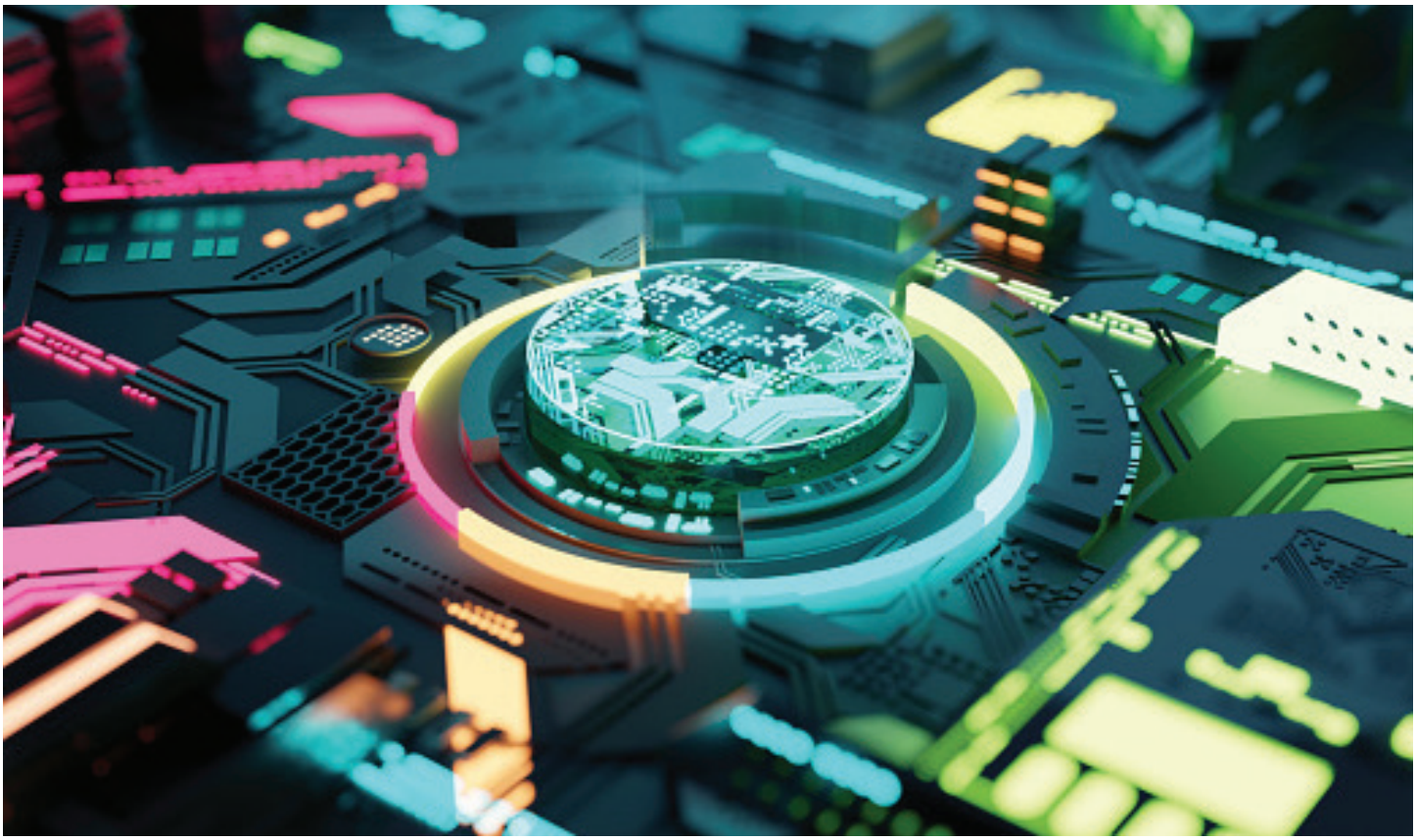
Cleo®

A Cleo White Paper

WHY THE FUTURE OF B2B IS ECOSYSTEM INTEGRATION

INTRODUCTION



Unlocking Value Through Ecosystem Integration

These days, the term "ecosystem" has come to mean everything that revolves around the manufacturing and delivery of a company's products or services. Every digital connection … every B2B data exchange ... every business transaction ... that happens with your ecosystem of customers, suppliers, logistics providers, financial institutions, data providers, and more contribute to the customer experience your company ultimately delivers.

Yet for too many companies, B2B integration is broken.

Why's this important to talk about? Because there's value in the B2B processes that connect all these ecosystem entities. And today's companies are fast discovering ways to unlock it through an approach called "Ecosystem Integration."

In this white paper, we explore what Ecosystem Integration is, what it does, and, as a new category of integration software that can readily fix what's broken with traditional B2B integration solutions, what it means for business.

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ECOSYSTEM INTEGRATION: AN OVERVIEW

What is Ecosystem Integration?

Ecosystem Integration is a modern, business-process-driven approach to connect and integrate the core revenue producing business processes between a company and its ecosystem entities.

It's the modern response to two inevitable changes affecting businesses today:

1. The critical need for supply chain agility and responsiveness.
2. The irreversible shift to eCommerce that is now happening at an accelerated pace.

Given these twin market forces, Ecosystem Integration has emerged as both a business discipline and a new software category. It helps companies quickly build automated processes that can respond dynamically and intelligently to market disruptions.

A digital ecosystem is comprised of suppliers, customers, third-party data service providers, logistics providers and all their respective technologies.

PART I. ECOSYSTEM INTEGRATION: AN OVERVIEW

Ecosystem Integration is the digital fabric that helps companies in a digital ecosystem tie together all the business processes and systems at play, so they can respond swiftly to supply chain disturbances -- be they pandemics, hurricanes, or geopolitical events -- as well as to market opportunities such as increased eCommerce buying and fulfillment.

Because Ecosystem Integration software enables end-to-end multi-enterprise B2B integration (i.e., this is not just about internal application integration or front-end integration solutions for eCommerce), it opens seamless integration pathways for connecting trading partners, applications, systems, and marketplaces, ultimately delivering real-time visibility and far greater control.

What's So Different About It?

Ecosystem Integration is different from traditional "internal" integration approaches because it brings an "outside-in" approach to integration. Traditional integration was always enterprise-centric, concerned primarily with connecting a company to a standard set of business partners and internal applications through common technologies such as EDI, and usually in a batch (i.e., not real-time) manner.

All the thinking was inside-out, not outside-in. This has changed to keep up with modern market forces.

As a technology paradigm, Ecosystem Integration is about opening up a company to as many suppliers, customers, marketplaces, service providers, and SaaS applications as necessary so that it can conduct frictionless business -- any time, anywhere.

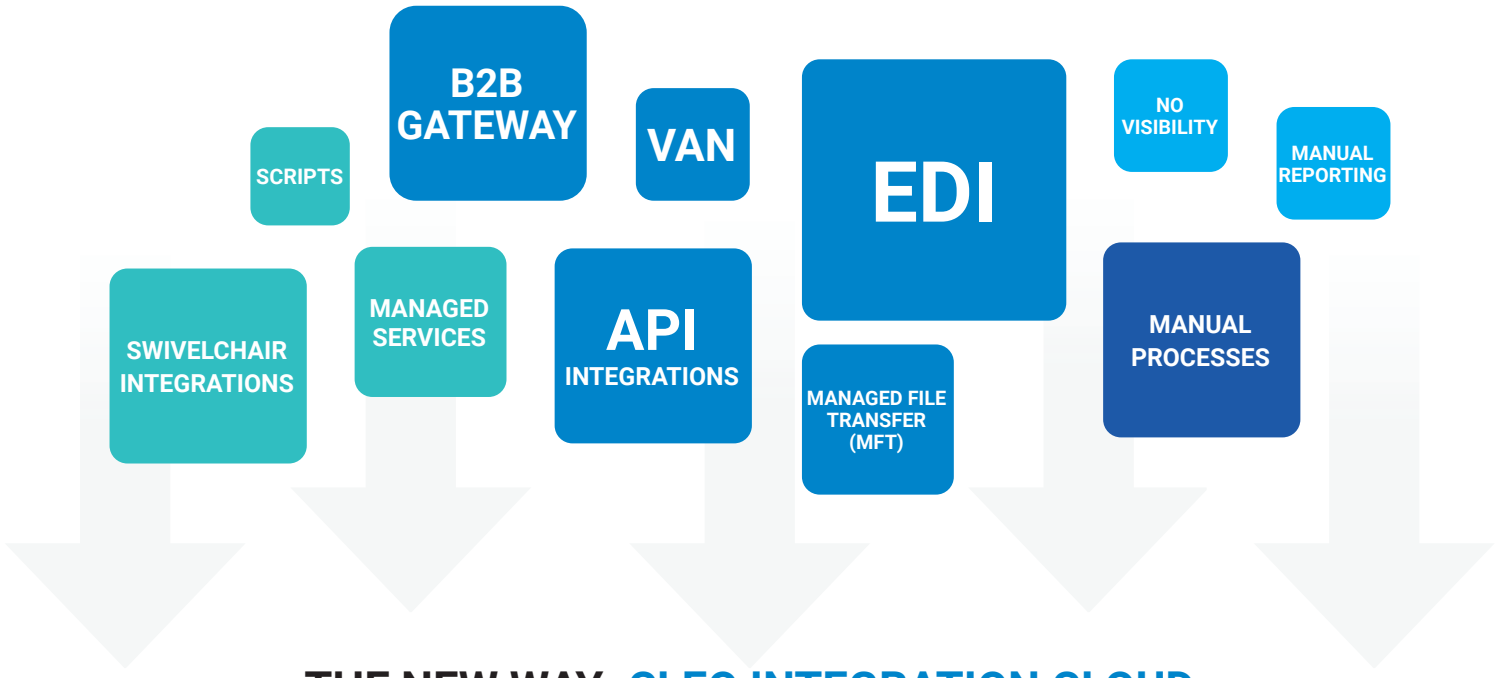
Imagine how fluidly your business would run if all the revenue-producing processes that emanate outside the company's four walls were connected to your mission-critical internal applications through an agile technology platform -- enabling you to seamlessly respond to changes in market conditions and business mandates from your ecosystem.

That's what Ecosystem Integration does. And it does it by adopting an API-first approach, which blends new-age real-time APIs with traditional batch-based EDI to provide seamless orchestration across core business processes such as Order-to-Cash and Procure-to-Pay.

It's about replacing the "old way"with a "new way" ...

THE OLD WAY

Siloed B2B integration technology results in a lack of control, agility, and insights.



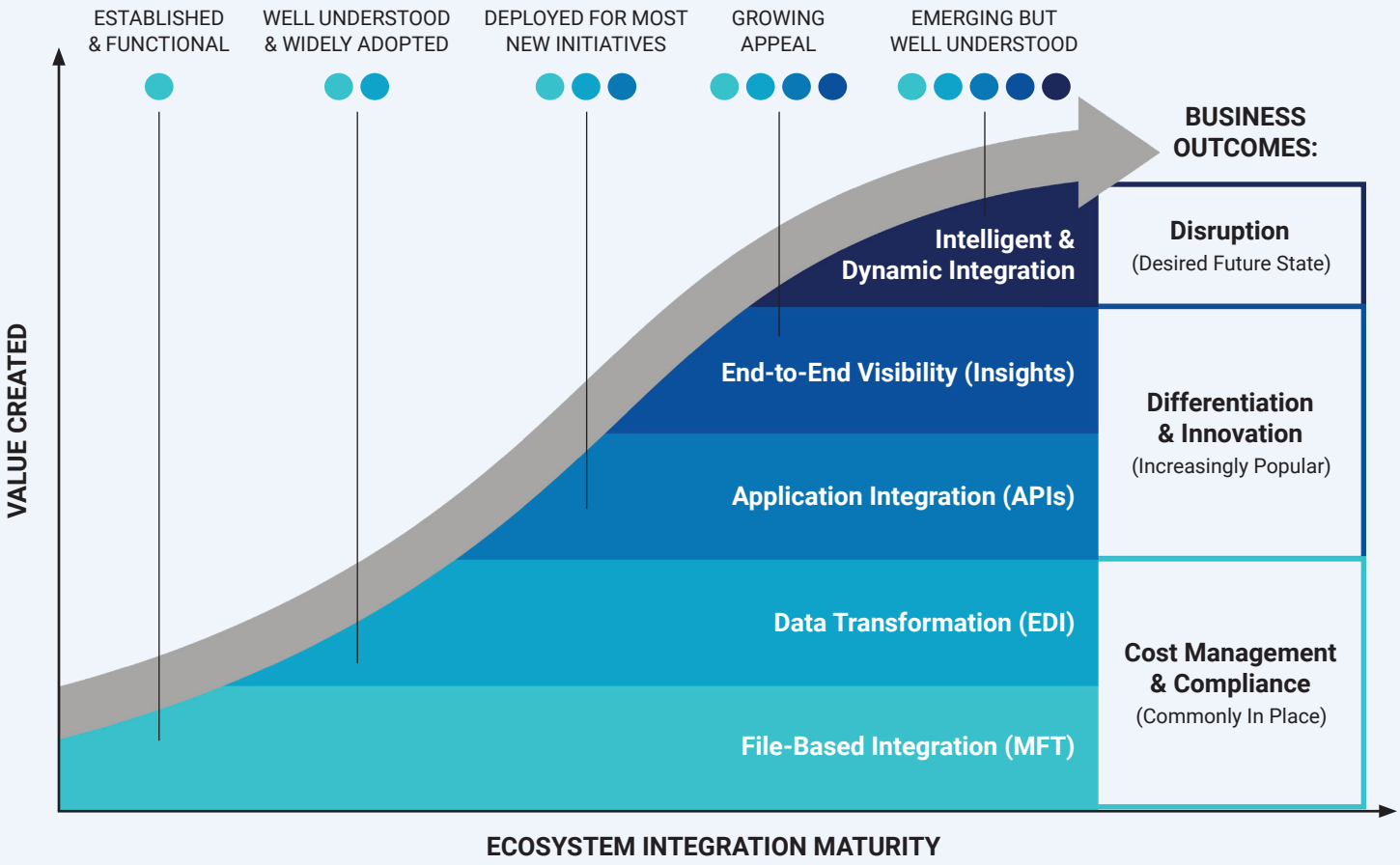
THE NEW WAY: CLEO INTEGRATION CLOUD

Blend the best B2B integration capabilities onto a single platform to deliver business outcomes faster.

Blueprint for Ecosystem Integration

You may be wondering where's the best place to start as your business incorporates an Ecosystem Integration approach. The best answer is to start from wherever you are. Every company evolves in its own way, but there are generally five sequential stages of digital transformation businesses go through to add value to their organization's supply chain.

ECOSYSTEM INTEGRATION MATURITY MODEL



Each higher stage reflects improving business processes through the adoption of real-time integration capabilities and technologies -- driving toward a more ecosystem-driven business model.

At the most fundamental, or first stage of maturity, is file-based integration, through Managed File Transfer (MFT) solutions, which are commonly in place. The second stage consists of EDI which adds data transformation and real-time integration with APIs rounds out the third stage. These are common investments and becoming increasingly popular. You're now entering the realm of ecosystem enablement because the third stage is about gaining end-to-end integration visibility, principally through APIs into back-end systems. At the next, or fourth stage you're able to leverage your newfound end-to-end visibility to glean real-time data insights that help inform important business decisions. Automation scales up (Stages 1-4) as companies adopt more cloud capabilities to open their systems to greater end-to-end process visibility and control. Stages 3 and 4 are critical because everything a company does to become more digitalized necessarily involves APIs.

Then the fifth or final stage is true ecosystem enablement, where you've achieved dynamic and intelligent integration capabilities. This is where a company's ability to dynamically sense and intelligently respond to situational change via integration technology becomes a reality.

Why Ecosystem Integration's Time Has Come

No company today can overlook what makes their ecosystem tick. And because Ecosystem Integration enables end-to-end visibility across the extended ecosystem of a company's business partners, it provides the confidence and trust today's digital-dependent businesses need to foster enduring business relationships.

Right now, we're witnessing an acceleration in digital transformation, spurred by the pandemic and evidenced by the explosion in eCommerce, increase in automation, and rapid adoption of cloud-based SaaS applications.

As a new category of software, Ecosystem Integration has arrived at just the right time, providing critical digital business-process integration to help companies become digital enterprises. Now, organizations are able to provide the exceptional customer experiences required to achieve growth and profitability.

> *"To keep up with the high-opportunity stakes of today's eCommerce explosion, we knew we needed to employ a B2C & B2B strategy that streamlines the flow of data between all channels and platforms, while minimizing the touchpoints along the way ... Cleo is enabling us to throttle our eCommerce business growth on our own terms as we control and manage all these different revenue streams through one centralized integration platform, Cleo Integration Cloud."*
>
> **- Jon Baker, Vice President IT at Ripple Junction Design Company**

PART II.

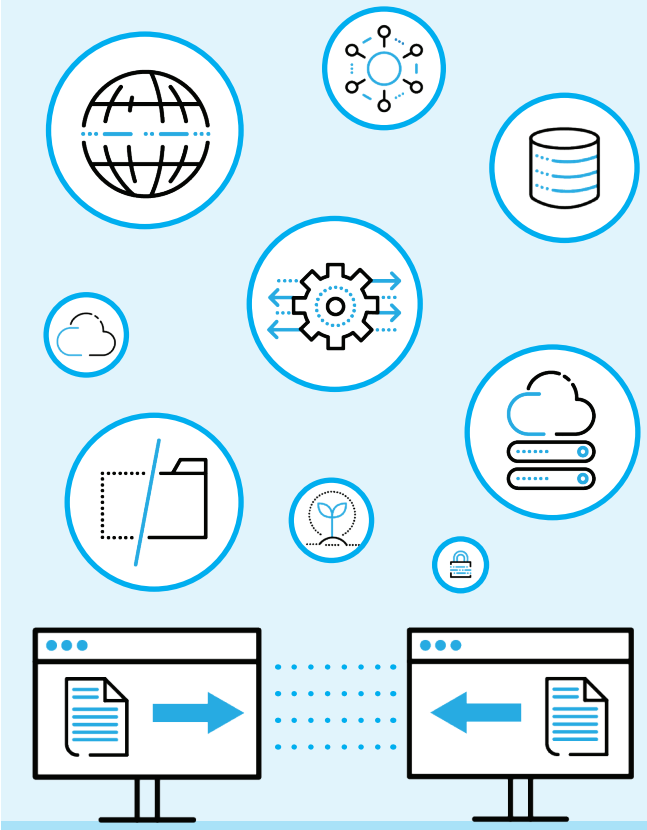
HOW WE GOT HERE

The Evolution of B2B Integration for Digital Business

Every company has core revenue-producing business processes such as Order-to-Cash and Procure-to-Pay that govern how business gets done with customers, suppliers, logistics firms and financial institutions. These processes stipulate how a company receives orders, buys supplies, manages goods in its supply chain, issues invoices, and receives payments.

Enterprises adopted a standard called Electronic Data Interchange (EDI) in the 1960s. This allowed companies to electronically exchange information based on predefined syntaxes and formats.

In the 1970s, companies adopted Value Added Networks (VANs) to exchange EDI documents. The EDI translator market spawned as a response to the growing complexity of custom-coded, homegrown applications that enabled EDI translation.



PART II. HOW WE GOT HERE

Soon, VANs began offering their services for a fee. The internet and applicability standards such as AS2 (Applicability Statement 2) further accelerated EDI adoption by drastically reducing the need for VANs. To lower costs and leverage their buying power, retailers like Walmart mandated AS2, eliminating their reliance on VANs. To stay relevant, VANs started offering integration services for then-modern standards and formats — e.g., adapters for common ERP applications and a new thing called "web services." VANs soon morphed into Integration Brokerages as more B2B integration projects, say for supply chain or cloud services integration, got outsourced.

Simultaneously, EDI translator software got packaged with AS2, rudimentary process management, and basic monitoring capabilities. These packages were sold as "B2B Gateways," a centralized entry-exit point for all B2B communications.

The Rise of eCommerce

While eCommerce has existed in some form since the dawn of the internet, in the late 2000s Amazon Marketplace irreversibly shifted the paradigm of some B2B interactions to APIs. Customers and partners changed how they ordered goods and services, preferring the more real-time interactivity of APIs.

This fundamentally changed the concept of a purchase order and how it should be processed. B2B Gateways and Integration Brokerages, optimized for "batch" processing, lacked the architectural and technical requirements for this new, real-time activity.

Integration Brokerages are "one size fits all," and only make sense when their existing library of processes and transformations reach economies of scale. If you depend on even the smallest amount of customization, their entire business model is thrown off; the only valid use case is when there is absolutely no differentiation on how you manage your digital relationship with your partner – which is rare.

> *"Cleo Integration Cloud provides a powerful platform to support real-time and batch transactions, enabling us to extend our platform's benefits to include new partners and customers, leveraging their existing integration environments, and deliver on our promise of eliminating empty miles, increasing capacity, and reducing risk."*
>
> **- Jesh Kapoor, President & CEO of SemiCab, Inc.**

PART II. HOW WE GOT HERE

Two fundamental flaws with Integration Brokerages that limit agility & growth:

1 Outsourcing causes loss of control and visibility of core revenue-producing processes. Every inquiry, change order, or support request is by phone call or email, which is cumbersome and time-consuming.

2 They provide little help supporting integrations between cloud applications and services that power eCommerce and marketplaces, ERP, TMS or WMS systems, forcing reversion to manual execution or worse — custom code and scripting.

Widespread adoption of eCommerce ushered in cloud software like Shopify and Magento/Adobe, which automate the "order capture" portion of an Order-to-Cash process. The so-called “Amazon Experience" has set expectations with buyers around speed, accuracy and instant responses.

But it's what happens after the order is placed – i.e., order is captured, inventory is checked, accounts are debited, items are pulled, packed, and shipped, shipping notices are issued, logistics gets involved, etc. -- that has caused companies to rearchitect data flows and modernize their integration technology. All these new points of interaction require new points of integration.

Additionally, while digital sales channels generally require a new fulfillment process, inventory systems may stay the same -- requiring integration between modern and legacy systems.

To meet these challenges, Ecosystem Integration platforms deliver API-based integration capabilities along with traditional EDI to deliver robust orchestration and governance to business processes. Consumed via the cloud, these "as a service" platforms represent the most viable opportunity to ensure compliance, agility and revenue expansion.

EDI Versus API

One prevailing misperception is that EDI and API are an “either-or” proposition, but actually today they are necessarily complementary. Companies need both integration capabilities – preferably on the same platform.

An EDI-based process is a bilateral relationship where suppliers work with an implementation guide to connect to a retailer. It’s optimal for maintaining and scaling existing relationships that are large or seasonal, such as grocery stores, food and beverage, consumer durables and automotive parts, all of which involve predictable, large-scale demand.

API-based processes are more unilateral, i.e., both parties have more agility. For example, a supplier can get into the Amazon platform by leveraging APIs while following clear specification guidelines from Amazon. The rules of engagement are clear, providing more agility to both parties. As consumers today demand increasingly personalized experiences, the value of APIs becomes apparent.

WHY YOU NEED EDI & APIs

Both EDI and APIs transfer data from one system to another, but it’s not always easy to know which to use. Unfortunately, there isn’t always a clear-cut answer to that question, as its often dependent on each unique ecosystem of trading partners and applications. Organizations need to support both mechanisms in one aggregated place if they intend to grow their business, or even remain competitive in today’s mixed landscape of businesses that leverage cloud and/or on-premise systems.

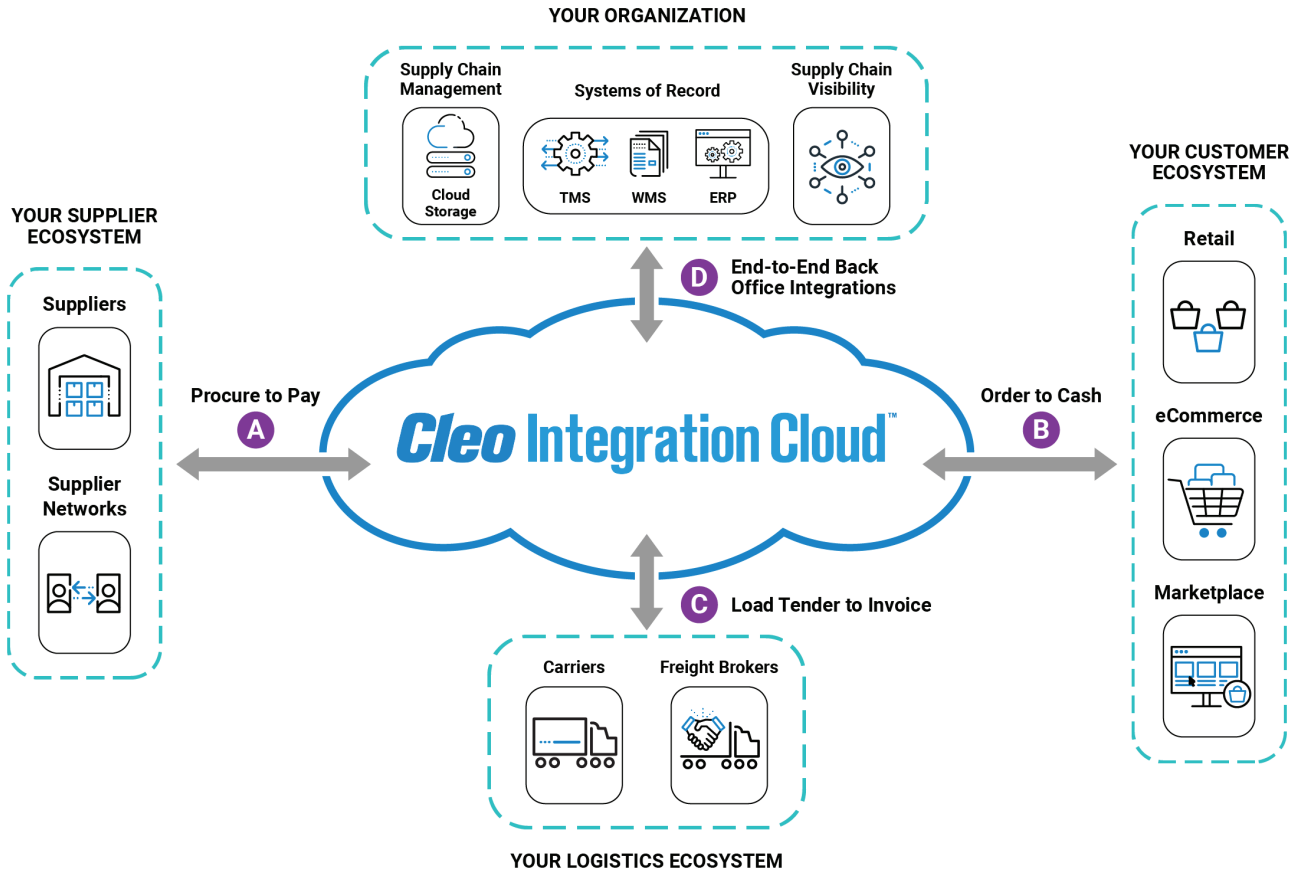
This is where the idea of an “outside-in” approach to EDI/API integration comes from, as the data exchange requirements are often dictated by a business’ external ecosystem. For example, industries that exchange a lot of financial data may require more security, governance, and compliance layers than non-standardized API integrations can provide.

While it isn’t always black and white when you should use one or the other, it is clear that leveraging both EDI and API in tandem is a superior approach. API integration augments EDI and gives deeper context to the B2B integrations with your digital ecosystem, while EDI helps enable downstream business processes and data orchestration.

- John Thielens, Chief Technology Officer, Cleo

Source: MSP Insights, November 5, 2020

PART II. HOW WE GOT HERE



A Purchase of raw materials / goods from suppliers

B Receiving & processing orders from customers

C Delivery & fulfillment of finished goods through logistics partners

D Complete end-to-end integration into back-end systems

The Impact on Business Processes

Historically, at most companies anyway, supply chain planning processes have continually evolved. Supply chain integration processes however – which are vital for integrating information and data across extended business ecosystems – have not kept up. Improving supply chain integration processes is essential for modern digital transformation.

While in the past you could get away with layering one solution on top of another, or adding tool after tool, what results is a "spaghetti bowl" of disconnected business processes that yield weak visibility, low agility, more compliance violations, lost revenue, and poor customer experiences.

Simply put, poor integration hinders successful supply chain operations whereas superior supply chain integration can enhance business performance.

Today's digital ecosystems need to be connected – suppliers, customers, logistics providers, as well as people, applications, and data.

Given the opportunity frontier that a connected ecosystem presents, supply chain integration processes are arguably more important than traditional supply chain planning and optimization strategies.

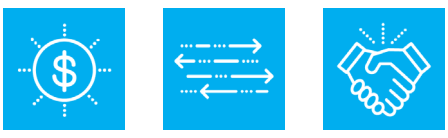
From a business process perspective, integration gives companies the flexibility and agility to turn on a dime, quickly respond to shifts in customer demand, and deliver the type of experience customers expect. Plus, richer visibility into your data gives you absolute control over your integration solutions so your company can make faster, better, more insightful business decisions.

To get such visibility, companies are turning to a new category of solutions called "Ecosystem Integration" software.

Emergence of Ecosystem Integration as a New Software Category

Ecosystem Integration platforms choreograph B2B processes and integrations with full data orchestration and are rapidly becoming core to managing entire ecosystems and accelerating commerce in the era of the cloud and digital business.

So how would business leaders know if an ecosystem integration approach is right for them, and what implementation challenges might they encounter?



The simplest tell-tale signs are around revenue, efficiency, and relationships.

If revenue velocity is being impeded due to inefficient integration processes, or there's a lack of end-to-end visibility across your supply chain, and if these shortcomings are negatively impacting valuable business relationships, then an ecosystem integration solution could help.

As for implementing such a platform, think of it as a technology maturation process that builds on what you already have; there's no need to throw the baby out with the bathwater just to open your business to the cloud, because ecosystem integration platforms leverage your already-in-place technology infrastructure investment.

So, rest assured that if you use an on-premise file-based integration solution today (MFT), you can steadily progress to add EDI, APIs, and gain better governance and visibility, until you achieve a completely dynamic and intelligent integration solution.

PART II. HOW WE GOT HERE

Ecosystem Integration was born through a “best of breeds” approach to create a modern integration platform that provides real-time visibility across a fully end-to-end business processes. This new approach to integration not only empowers business and technical users on your team, but also future-proofs your organization against new requirements that are yet to be determined. Whether you need to support eCommerce or direct-to-consumer revenue, a new ERP, marketplaces or unforeseen changes from trading partners – Ecosystem Integration has the capabilities to ensure agility and control.

KEY CAPABILITIES	TRADITIONAL B2B INTEGRATION	EDI MANAGES SERVICES	APPLICATION INTEGRATION	ECOSYSTEM INTEGRATION
Single SaaS Platform for EDI, API, Visibility and Governance	Disparate Products Glued Together & Hosted	EDI & Custom Code Fully Managed	Limited Governance & EDI Capabilities	Full integration SaaS platform with Ecosystem Integration & Governance Capabilities
EDI Engine	Legacy Product	Blackbox Fully Managed	Limited Native Capabilities or Domain Expertise	Any-to-Any & Data Transformation and Integration
API Integration Framework	Separate Product	Custom Code	Library of Internal Application Connectors Only	Rich library of Application Connectors & APIs
Self-Service, Managed Services or Blended Operational Model	Self-Service On Premise or Managed Cloud	Managed Service Only	Require Partners for Managed Service	Full Self-Service, Managed Service or Blend
End-to-End Ecosystem Integration Governance	Disparate Product(s)	EDI Only	Integration Only	Full EDI, Partner & API Integration Governance

As an organization progresses through each stage, they progressively adopt additional integration capabilities and technologies.

PART III.

ANSWERING THE CALL: AN ECOSYSTEM-DRIVEN APPROACH

Managing Supply & Demand Volatility

During the last thirty years, increased manufacturing outsourcing to emerging economies has led to a high level of supply chain sophistication, with manufacturers, suppliers, logistics providers, and end consumers spread across continents. Supply chain leaders have handled the ensuing variability in demand and supply from such globally distributed supply chains by optimizing demand planning, inventory management, and logistics fulfillment.

However, while supply chain professionals have primarily focused on managing *variability* and lead times, it is the increasing *volatility* in supply and demand that's creating new economic risks for businesses. One stark reality about today's global economy is its chronic volatility and the uncertainty that comes with it.

Put another way, volatility is the new variability. Because continuous data flows yield more current and accurate information, those companies that can enable real-time harmonization of data flows and orchestration of the business processes in concert with changing business conditions can effectively manage in the face of volatility.

In addition to supply-side risks, volatility in demand will also increase.

It's safe to say volatility will only be increasing, for a good number of reasons:

Accessibility of information in the digital era prompts companies to make rapid changes to their demand and supply needs

Social media influence can generate trends which trigger sudden shifts in demand, causing massive inventory risks

Customer experience is shaped by companies like Amazon, whose availability, choice, and same-day delivery put pressure on other retailers and manufacturers.

Geopolitical, environmental, and health crises can cause supply shocks that cripple supply chains for extended periods

Given these trends, the only two "levers" supply chain leaders have to effectively manage and thrive in the face of uncertainty are visibility and agility.

VISIBILITY

Enables supply chain leaders to identify demand signals in data earlier (such as consumer buying trends) and inform rapid operational decisions around production and inventory based on accurate real-time information.

AGILITY

Supply chain leaders can act more quickly to implement changes in light of dynamic business conditions, such as switching suppliers based on tariffs or oil prices, offering promotions based on point-of-sale data, optimizing dynamic pricing, etc.

Continued evolution in supply chain strategy and planning has driven innovation in demand planning, inventory optimization, fulfillment optimization, dynamic pricing, and promotions planning. However, these advances only tell companies what to do; they don't tell them how to get it done. And here's where Ecosystem Integration comes in.

Ecosystem Integration & Value Creation

With the shortcomings of existing technology well understood by today's integration professionals, and with the detrimental impact outdated approaches are proving to have on revenue and productivity, the market's desire for a better approach to integration is gaining traction. But where does it all lead, and what might the future of integration look like?

Ecosystem Integration is a modern-day approach to help businesses plan and execute strategies for managing volatility. It does so by helping them achieve supply chain visibility and agility, so they can rapidly respond with the required shift in strategy and succeed in the face of uncertainty. As such, Ecosystem Integration is seen by 98% of integration experts surveyed as hugely beneficial to sustainable value creation.

98% **Indicated they would expect to gain strategic business value from an Ecosystem Integration approach**

Source: 2021 Ecosystem & Application Integration Report

PART III. ANSWERING THE CALL: AN ECOSYSTEM-DRIVEN APPROACH

Many companies have adopted an Ecosystem Integration approach and are now thriving in the face of business volatility. For example, one large food distributor recognized well before the Covid-19 lockdowns that its business would experience volatility. Using an Ecosystem Integration platform, they rapidly identified the gaps in their supply chain, and quickly designed and instrumented new integrations and facilitated new relationships, consequently strengthening their business. And this company is not alone.

According to the 2021 Ecosystem and Application Integration Report, in which integration technology experts, operations staff, and C-level executives were surveyed, the promise of Ecosystem Integration translates into significant business value:

FUTURE BUSINESS BENEFITS RESPONDENTS SAID AN ECOSYSTEM INTEGRATION APPROACH WILL BRING:

66%	57%	53%	51%	37%	34%
Cost Savings	Improved SLAs	Happier Customers	Faster Order Processing	Violation Reduction	Fewer Lost Orders

Volatility is not going away. Subject to ever increasing geopolitical and climate-driven disturbances, uncertainty will only increase.

The winners and losers in today's supply chain environment will be determined not by traditional supply chain management, but by the ability to embrace Ecosystem Integration processes and technologies to focus on anticipating and managing volatility.

Where to Start

First understand this as a BUSINESS problem, then prioritize your cloud integration initiative this way:

1. Know what your customer expects & what kind of experience you can deliver
2. Fix weak spots in end-to-end processes such as order-to-cash, procure-to-pay, load-tender-to-invoice
3. Eliminate whatever is hindering you from being adaptable & agile
4. Fail fast & steadily improve

CASE STUDY

Firing Up Growth with Ecosystem Integration

To better manage its business through seasonally driven demand spikes where key retail partners increased orders for its popular manufactured firelog products, Duraflame, Inc. needed to consolidate four disparate integration solutions onto a single-platform solution. The goal? Drive security, flexibility, and efficiency into their business operations.

THE CHALLENGE

Mix of four different integration technologies yielded limited visibility and lack of control. Accommodating trading partner updates and onboarding was difficult due to rigidity and siloed solutions.

THE SOLUTION

Duraflame strategically decided to move to a cloud-based Ecosystem Integration platform – Cleo Integration Cloud (CIC). The project consolidated Cleo LexiCom (AS2 connectivity and file transfers), an on-premise deployment of IBM Gentran (EDI and data transformation), SPS Commerce and Edict Systems.

Duraflame also was able to eliminate dedicated external EDI consultants to help drive operational efficiency.

THE RESULT

"The Cleo Integration Cloud platform is secure, easy to use, and highly flexible to meet our business requirements. Today, more than 98% of our B2B transactions are running through CIC, and we can see everything that's going on. Cleo's ecosystem integration platform and their unique blend of self-service and managed services, plus their team's drive, commitment, and attention to detail, all made our migration easy and successful. We experienced zero problems or issues even though we implemented CIC during our peak business time, not to mention pandemic."

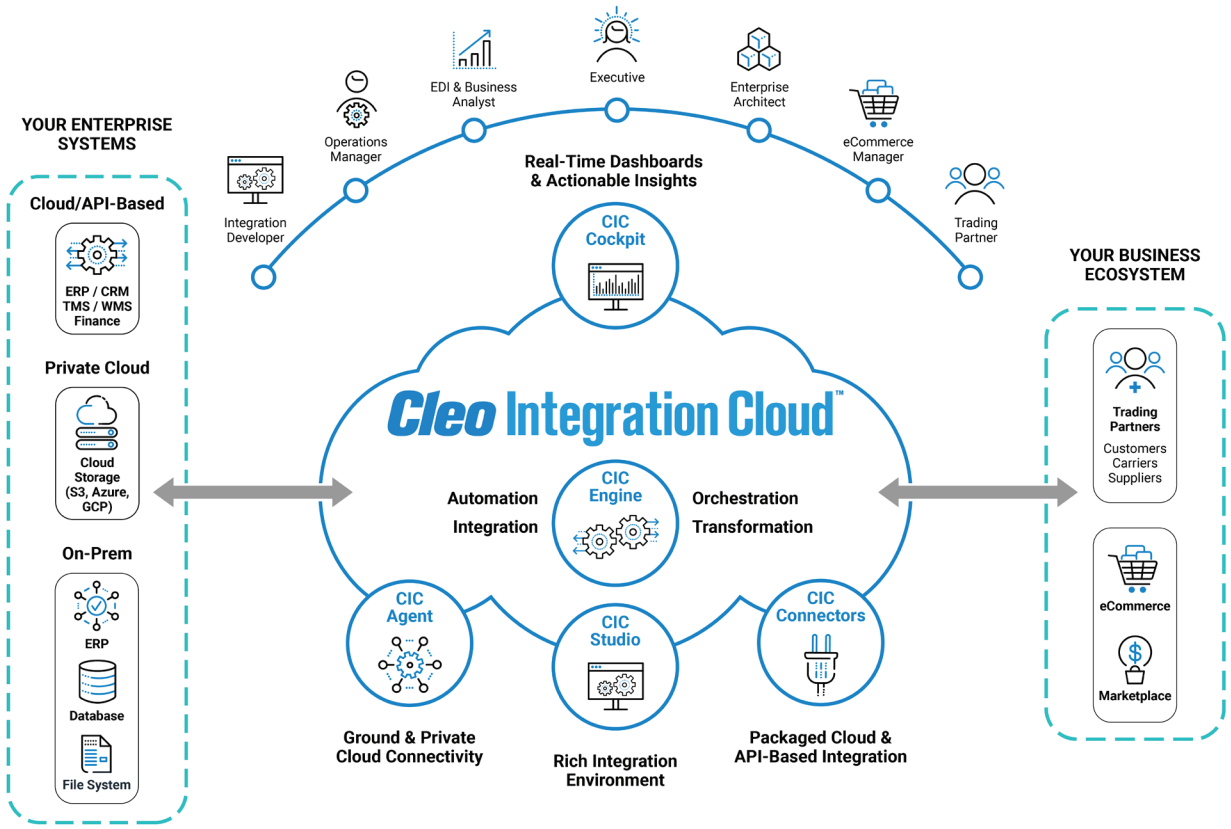
- John Hwee, Director of IT, Duraflame, Inc.

PART III. ANSWERING THE CALL: AN ECOSYSTEM-DRIVEN APPROACH

Is there a technology platform that can get you the visibility and control you need? Yes!

Cleo Integration Cloud

Cleo Integration Cloud is a modern, cloud-based integration platform for today's B2B business. We put API, EDI, and File-based integration technology on the same platform. Then we enabled true end-to-end, B2B integration all the way into your back-office systems – completing the last-mile of any business transaction.



Next, we eliminated inefficiencies and key-person dependencies by automating manual processes, orchestrating business processes, and supporting any-to-any data transformations. And we empowered both business and technical users with real-time, end-to-end integration visibility for any transaction and trading partner – enabling powerful insights that drive better business decisions.

Cleo Integration Cloud brings you into the new world where the best B2B integration capabilities unify onto a single platform to help you thrive in this ever-changing world.

What business outcomes will Cleo Integration Cloud deliver for you?

- Faster Trading Partner Onboarding
- Eliminate Manual Business Processes
- Meet SLA Requirements
- Exceed Your Customer Expectations

Learn More About Cleo Integration Cloud and How an Ecosystem Integration Approach Can Repair Any Broken B2B Integration Strategy

SCHEDULE A DEMO WATCH THE VIDEO

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