EDI Modernization: Five Decision Factors
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EDI Modernization refers to the process of extending business-to-business (B2B) integration and automation capabilities beyond classic EDI, in support of modern business requirements.

Modern B2B integration reflects changes in the way companies are connecting, automating business processes, and exchanging data. Its value lies in expanding integration capabilities while reducing the cost and complexity of partner onboarding and operations. Classic EDI remains essential, but is no longer able to fully satisfy modern business-to-business integration needs.

By answering the five questions to the right, any business can identify and prioritize its modernization objectives and create an action plan to realize them. This paper offers a roadmap and methodology for achieving that outcome.

**Reasons to Modernize**

Figure 1 shows the main use cases and change drivers that Cleo has tracked over hundreds of EDI modernization engagements. Among mid-sized and larger businesses, fewer than 10% of cases are new EDI implementations. Replacement of legacy EDI solutions dominates.

In addition to the reasons listed in Figure 1, modernization drivers can include boosting partner service levels, reducing charge-backs and other penalties, integrating trading partners with limited technical capabilities, improving visibility, auditability and manageability, reducing service outage risks, consolidating infrastructure, and addressing application and data integration needs.

**Five Questions That Pinpoint Key Decision Factors**

1. How do a business’s value network and role drive B2B integration priorities?
2. What additional requirements apply to businesses that are large, fast-growing, or complex?
3. How can integration capabilities and assets be leveraged to increase value?
4. What factors apply when deciding to outsource infrastructure, trading partner onboarding, operations, and/or other services?
5. What strategies and trade-offs apply when adopting a new B2B integration solution?

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**Figure 1: Reasons for EDI Modernization.**

- **Replacing EDI Service Provider - 42%**
  - Slow service response
  - Lack of flexibility
  - Lack of control
  - Ongoing cost

- **Replacing Homegrown Solution - 18%**
  - Functional limitations
  - Slow/costly partner onboarding
  - Inability to scale with growth
  - Maintenance cost/effort

- **Replacing or Augmenting EDI Infrastructure - 31%**
  - Unsupported documents or protocols
  - Unsupported application interfaces
  - End-of-life announcement by legacy vendor
  - Slow/costly partner onboarding

- **New to EDI - 9%**
  - Trading partner mandates
  - Manual processing costs
  - Business growth strategy
Five EDI Modernization Decision Factors

1. Value Network and Role

The first and most important factor in modernization strategy is the nature of the business's value network and its role in that network. A value network consists of the combination of a business's sell-side (customers) and buy-side (vendors / suppliers) trading partners.

Value network characteristics dictate important B2B integration priorities. For example, large businesses usually set the terms for B2B integration with suppliers, including document content, connection protocols, response windows, etc. So if a supplier sells to many large customers, the B2B integration requirements it must meet can be diverse and complex.

On the other hand, when a business is large and sets the terms of engagement with many suppliers, B2B integration requirements can be rather narrow. But transaction volume, service availability, event monitoring, and other scale-related requirements become critically important.

2. Business Size, Growth, and Complexity

Outgrowing a limited or underpowered EDI solution is one of the most common drivers for modernization. Symptoms of this problem include lengthening processing windows, trading partner onboarding and change backlogs, increasing response latency, demand-related outages, and slow exception detection and resolution.

Many of these are problems of scale. Businesses that are larger and faster growing generally deal with larger value networks, higher transaction demand, and more frequent changes. But complexity and growth issues can also challenge small and mid-sized businesses. For example, a smaller business that must respond to integration terms set by many customers may face more complex onboarding requirements and service level compliance issues than a larger business. So even if size, growth, and complexity aren’t dominant factors for your business today, they belong on your EDI modernization roadmap.

3. Asset Leverage Goals

EDI modernization offers a rare opportunity for a business to achieve broader integration goals. At a minimum, EDI modernization targets unmet B2B integration needs. But it can also address application integration, data integration, and other non-B2B integration requirements. Efficient achievement of both B2B and non-B2B integration goals depends on careful planning and application of asset leverage.

Meeting asset leverage goals requires planning at two stages. Capabilities planning must occur prior to selection of a B2B integration solution, to ensure that features necessary for leverage are included or are licensable later. And reuse planning must occur prior to first project delivery, to ensure creation of reusable integration assets and compliance with reuse policies.

4. Sourcing Preferences

The way a business decides to deliver and manage B2B integration infrastructure and services can affect budgeting, staffing, service levels, and the ability to respond to new requirements. So revisiting sourcing options is an important part of every EDI modernization decision.

Replacing an EDI service provider due to performance or cost reasons is the most common EDI modernization use case, so it is important to make sourcing decisions carefully. Consider not just your current sourcing preferences but also how they might change in the future. And understand the feasibility and cost of switching before committing to either arrangement.

5. Business Size, Growth, and Complexity

The final EDI modernization factor to consider is how the business will adopt new B2B integration capabilities. The most common adoption pattern is replacement. This entails acquiring a new B2B integration solution to address an urgent, unmet need, migrating other trading partners from the legacy system(s) to the new solution, and retiring the legacy solution(s).

However, other adoption patterns are possible. The “Augment” pattern leaves legacy system(s) in place and uses the new solution(s) to satisfy unmet needs. A third pattern, “best-of-breed”, combines brokering, process automation, data transformation, and other services from multiple sources. Modernization entails selective replacement of those services.
The adoption patterns listed above offer different trade-offs. Replacement necessitates migration of trading partners from the legacy system(s), but offers the lowest infrastructure, onboarding, and operations costs and complexity. Augmentation is less disruptive initially, but increases licensing, training, maintenance, and other back-end costs. And best-of-breed, while powerful in concept, requires a level of IT skills and investment that puts it out of reach for many businesses.

Due to the number and magnitude of time, cost, staffing, licensing, and other impacts, adoption strategy should be defined in concert with solution criteria and sourcing strategy.

Summary

EDI modernization is not a one-size-fits-all proposition. The best strategy for a given business depends on its value network and role, size and complexity, staffing and skills, sourcing preferences, broader integration goals, and adoption strategy.

The same principle holds when choosing a B2B integration solution to replace or augment legacy EDI capabilities. Modernization strategy drives solution evaluation and selection, not the opposite. Success hinges on choosing a solution that delivers the capabilities required to meet modernization goals and future integration requirements.

Reviewing the five EDI modernization decision factors covered in this paper prior to evaluating solution options maintains a focus on business priorities and outcomes. Observing this best practice can prevent wasted effort and reduce the risk of modernization project failure.
About the Author

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Jim O’Leary is an expert on strategic business and IT project planning, with published articles in IBM Systems Magazine, SupplyChainBrain, and Supply & Demand Chain Executive.

Jim has over 20 years of senior and executive management experience with software companies, and holds a deep understanding of current technological drivers across multiple industries, with primary subject matter expertise in integration middleware and tools, with applications in Business-to-Business Integration, Application Integration, Data Integration, and SOA.

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