snapLogic

A comprehensive guide to the enterprise integration cloud

The 11 key criteria for selecting an enterprise integration platform

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Introduction: A perspective on the enterprise integration cloud

The rise of the digital enterprise is reshaping the enterprise application and data landscape. Digital initiatives are expected to deliver annual growth and cost efficiencies of 5 to 10 percent or more in the next three to five years,[1] yet the technology and talent barriers to transformation remain substantial.

The dramatic growth of the cloud is shifting the center of gravity for applications and data. Increasing digital data flows from rapidly deployed cloud apps, social media, and things (IoT) are creating a plethora of new integration opportunities. Data warehousing, the traditional foundation of analytics, is moving to the cloud, while business users are looking for more agile data flows to feed analytics tools.

The new battleground for mindshare in the digital economy is understanding the customer – now the #1 priority for analytics. This need is placing tremendous pressure on bringing data together from numerous customer touchpoints – marketing, sales, and service – to gain better insight.

Integration tools were meant to help organizations adapt their application and data landscape to change. But these tools too, haven't evolved, leaving organizations struggling to connect the dots on their digital initiatives. The Enterprise Integration Cloud, a new integration category, is designed to fill the void. In this comprehensive guide, you'll gain a perspective on the Enterprise Integration Cloud, and the 11 criteria needed to build an integrative foundation for the digital enterprise.

[1] ***Raising your Digital Quotient,*** McKinsey, June 2015

The integration challenge for the digitally disrupted

To respond to digital change, rapidly roll out new systems and processes, and be agile, enterprises are looking beyond IT. Now, business teams are increasingly deploying cloud applications and new analytics themselves to keep up.

Yet, both business and IT are faced with a new, unfamiliar hybrid landscape. Challenged with marrying old legacy on-premises applications to new cloud apps and machine-generated sources, organizations must create business processes and analytics that bridge both worlds.

Integration tools, the glue that was supposed to hold business processes and information together, have become calcified narrow, hard, and inflexible. Traditional Extract-Transform-Load (ETL) tools, first conceived back in the '90s, have become too complex and on-premises focused to adjust to business-centric integration and a hybrid landscape. Enterprise Application Integration (EAI) and Enterprise Service Buses (ESB) tools are simply too code-heavy for business teams to work with, requiring expert developers and hand-coded integration. Many immature cloud integration tools, meant to provide a solution, are often too lightweight to handle data volume, too immature to connect the variety of data in play, have limited access to on-premises data, and fail to provide a unified foundation for integrating both data and business processes.

> "Getting the engine in place to digitize at scale is uniquely complex."
>
> *Six Building Blocks for Creating a High Performing Digital Enterprise, McKinsey, September 2015*

The emergence of the enterprise integration cloud

In just the same way ETL tools materialized nearly three decades ago to enable organizations to deploy the first data warehouses, the Enterprise Integration Cloud has emerged to enable them to adjust to digital change.

The Enterprise Integration Cloud (EIC) is reimagining integration in the context of new data flows, new users, new agile development processes, new platforms for computing, and a new hybrid landscape.

Based on working with thousands of large enterprises, we've identified 11 criteria critical for creating a sustainable foundation of integration that supports enterprises in transition:

Enables the cloudified, hybrid enterprise

It's no secret that enterprises are adding cloud applications, data warehouses, and infrastructure to their landscape at a staggering pace. By 2020, at least a third of data will exist in or pass through the cloud.[2] A recent survey found that 93 percent of enterprises are using the cloud in one form or another,[3] whether private, public, or a combination. IDC sees worldwide spending on public cloud services growing to more than $141B in 2019,[4] more than doubling from just two years ago.

While the cloud is growing with cloud apps and databases replaces on-premises counterparts, it's rarely a zero-sum game – more often it's additive, creating a hybrid landscape. For example, pent-up demand means line of business teams are leading the deployment of cloud data warehouses or departmentally driven cloud applications – from point of sales and marketing apps to specific finance and accounting applications – that complement, but don't replace, on-premises systems.

A survey of 400 US companies by CompTIA[5] around their hybrid landscape revealed the shifting sands. A significant portion, 44 percent, said they are still effectively picking public cloud winners, moving their infrastructure or applications workload from one cloud to another. A quarter revealed they're taking back more autonomy by moving to the private cloud from the public cloud, while 24 percent even saw shifting to an on-premises environment from the cloud.

Integration in this environment remains a stubborn challenge on multiple fronts.

> **"The bulk of the cost and effort for any IT project is typically consumed by integration and cloud computing is no different – if anything, cloud integration may be even more challenging, as it requires web APIs that may be unfamiliar to the technical team."**
>
> Seth Robinson
> Senior Director, Technology Analysis,
> CompTIA McKinsey, September 2015

Marrying data and business processes across public and private clouds, on-premises systems, through firewalls, across different authorization and authentication schemes is often painful. And integration of cloud data sources is often a less familiar area to many IT teams, dealing with vendor-specific RESTful APIs, JSON data sources, or legacy SOAP-based web services, and XML sources.

Overcoming the hybrid integration challenge

Traditionally, the location of data within the enterprise for data and application integration was a non-issue. In almost all cases, apps and data were on-premises. In rare cases, the location of the data meant a VPN connection

[2] *Surprising Statistics About Big Data*, Baseline Magazine, February 2014

[3] *State of IT,* Spiceworks, March 2016

[4] *Worldwide Public Cloud Services Spending Forecast to Double by 2019*, IDC, January 2016

[5] *Cloud adoption soars, but integration challenges remain*, CIO Magazine, January 2016

was required to access the data or an application that was hosted by a provider, in a business partner's system, or perhaps an S/FTP download or upload from/to a remote source. On-premises enterprise integration tools were designed with this mix in mind, primarily connecting to ageing, proprietary client-server APIs of on-premises applications, connectors that assumed that firewalls weren't in play between endpoints, and if they were, it would be incumbent on IT to provide a networking path.

These tools simply were never designed for connecting and merging hybrid endpoints whether integrating an on-premises ERP to a cloud data lake or building a lead-to-cash process connecting Salesforce to back to the same on-premises ERP.

> **"The Enterprise Integration Cloud enables the cloudification of the enterprise, a process that enables enterprises to connect newer, cloud-based services with older software applications currently in use in order to drive value to the business."**
>
> Gaurav Dhillon
> Founder and CEO, SnapLogic

The Enterprise Integration Cloud is an acknowledgement that hybrid is the new landscape for data integration, by:

- Treating both on-premises and cloud sources as equal, first-class endpoints
- Delivering an architecture that provides a gateway for on-premises endpoints to exchange data with the cloud, or other on-premises endpoints without sacrificing security, scalability, or creating network issues
- Providing native API support for on-premises applications and databases like SAP, or Oracle to increase performance and reduce risk, while also providing direct integration with a growing array of cloud sources, user authentication schemes, and web API standards

Harmonizes integration across apps, data, and IoT

The three worlds of application integration, data integration, and the integration of IoT have historically been separate.

Application integration has typically been provided by point ESB/EAI vendors or API platforms, designed to support the real-time flow of data and messages. While ESBI/EAI tools have fallen into disrepute, API platforms promise a solution based on coding and web interfaces, yet also rely on developers, raising the specter of change management issues in the future. Alternatively, point-to-point solutions often provide packaged support for specific business processes, such as lead-to-cash or procure-to-pay, and while quick to deploy, become a headache as the number of point-to-point integrations grows.

Data integration tools are typically designed for analytics, whether providing disposable end-user preparation, or IT centralized data warehouse loading and data and dimension management. These tools often provide specific connectors to databases and common ERP and CRM sources and provide important dimension-management functions, such as supporting slowly changing dimensions. While designed for volumes of data, with support for bulk and incremental data loading, these tools are typically a poor choice for application integration, with an inability to easily stream data from endpoint to endpoint.

Machine-generated data, or IoT is responsible for more than a third of data in cloud environments.

Enterprise Management Associates, Tableau: The Cloud Data Brief

Finally, the integration of machine-generated data and IoT, is becoming increasingly important. Yet integrating this class of data, e.g., for analytics, is still the preserve of a separate class of IoT integration tools, requiring support for specific protocols like MQTT or the scale to support parsing of vast logs and message streams.

The need for a common integration platform for apps, data, and things

Digital business transformation is a creating the need to bring integration tools together. The majority of enterprises are looking to get to a single architecture for application and data integration.

The benefits are manifold. Less maintenance, a single tool across integration patterns, more reuse, and, if there's low/no-code development, a platform that both IT and business users can collaborate on.

Initially, organizations are looking to get a single hybrid integration platform, just by standardizing a set of integration tools, effectively creating a standard internal operating platform. The Enterprise Integration Cloud takes standardization a step further, by supporting apps, data, and things in one integration platform. Rather than leaving it to organizations to wrangle together an internal standard set of tools and to create their own hybrid integration platforms, it's about a single unified toolset for app and data integration flows, while also providing the right level of integration for IoT, too, i.e., an all-in-one hybrid integration platform.

FIGURE 1: The enterprise integration cloud integrates applications, data, and things across on-premise, hybrid, and cloud landscapes

For digital enterprises looking for a single integration platform for their transformation initiatives, the Enterprise Integration Cloud must provide these capabilities:

- Real-time support for business process and things integration
- Bulk and incremental data volume required for loading data warehouse and data lakes
- API connectivity such as for REST APIs, etc.

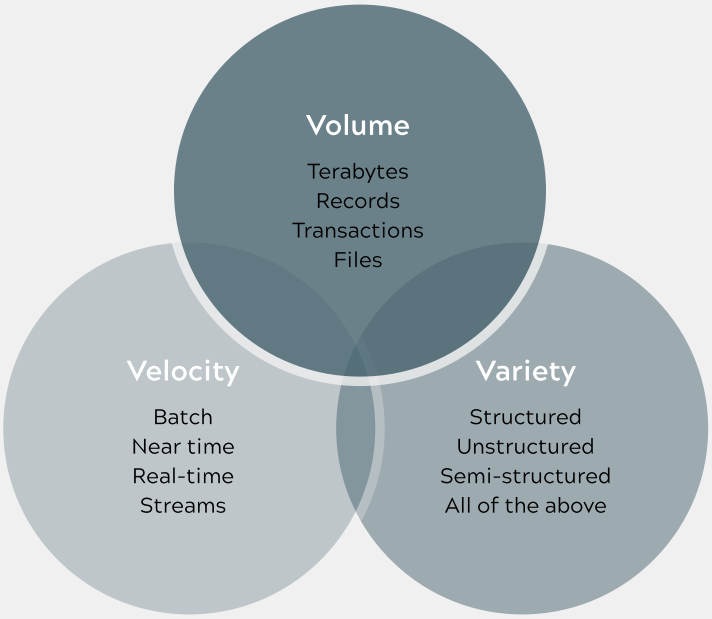
Keeps pace with an increasing volume and variety of data

The volume and variety of data are growing at an astounding pace. From a pure volume standpoint, a commonly shared statistic is that as much that 90 percent of the data in the world today has been created in the last two years.[6]

But while growth is well documented, it's the variety of data that poses an equal, or perhaps greater challenge. Tableau[7] analyzed their own users' usage patterns. They found in aggregate they typically tapped over 40 different types of data sources, ranging from traditional databases to unstructured sources, open-source tools like Hadoop, through to cloud and on-premises applications across sales, marketing, service and finance, to machine-generated sources like application logs and files.

In fact, a survey of enterprises found the typical large enterprise has just below 500 different applications,[8] each a potential source for analytics or application integration, while around 15 percent of European organizations use more than 1,000 cloud apps.[9]

FIGURE 2: The 3 Vs of data (Source: TDWI)



6 Source: SINTEF: *Big Data – For Better or Worse, May, 2013*

7 Source: *The cloud data brief. Big Data Transitions to the Cloud*, Tableau

8 *Number of cloud apps in the enterprise declines for first time is IT fighting back?,* CloudTech, June 2015

9 *Worldwide Cloud Report*, NetSkope, January 2017

The growth of sources has a profound implication for analytics. For example, customer lifecycle data can easily be spread across dozens of point applications and databases. It's set to increase in complexity with much of the growth driven by business teams deploying their own applications.

Regaining control amidst volume and variety

A landscape of increasing volume and variety can place a significant burden on integrators within the enterprise. On the one hand, it can often lead to hand-coded point-to-point integrations, based on JavaScript, Python, or the scripting or query language of choice. In other cases, it can mean business users are adopting proprietary data-prep tools to create integrations for one-off projects, with little governance or control to harden the integration and upgrade it from a one-off prep to an enterprise integration.

More typically, it means there is significant user demand for integrations, creating business user frustration that new data sources and types simply aren't available for analysis. Legacy data-integration tools were often built for scale but not for variety and agility.

The emergence of the Enterprise Integration Cloud is the acknowledgement that the growing diversity of sources, application integrations, and volume of data require:

- Support for unstructured and structured data, from apps to databases, to things
- Connectivity to hundreds of data sources – without being dependent on hand-coding
- A constantly growing library of new connectors without requiring onerous IT upgrades to gain access to them

Provides a foundation for IT and business users to co-integrate

Integration has consistently been a substantial bottleneck for application and data integrations alike. With the advent of visual data prep tools, and direct integrations using data-discovery tools like Tableau, business users have broken free of the data warehouse.

As one-off integrations sprout up, organizations increasingly run the risk of inconsistent data, being driven by inconsistent data flows, reduced productivity through reduced reuse, and performance issues with repeated duplicative extracts from source systems.

Per a Deloitte survey, 62 percent of respondents said that integration for analytics was unintegrated data in functional or process silos – or adequate – versus 34 percent who described it as good or excellent.

Deloitte
The Analytics Advantage:
We're just getting started

The need to bring business and IT together on a common integration platform

In the '90s, data warehouse initiatives were IT-led, spawning a generation of complex IT-geared data integration tools like Informatica. With long development cycles, and complex interfaces, they weren't – and still aren't – designed for business users. The rise of powerful data discovery tools like Tableau, Microsoft BI, or Tibco Spotfire, created a need for agile data prep tools that were designed for one-off integrations for analytics projects, but not designed for enterprise data lake, warehouses, and governance.

The reality is that organizations need both Mode 1 and Mode 2 on the same platform.

Doing so ensures business users can create the integrations they need, while IT can then build those integrations into a cohesive data warehouse. Further, a common platform ensures reuse with IT flows that can be picked up by business users, and vice versa. Finally, it enables controls and governance, enabling business users to work inside an integration sandbox, limiting the risk of rogue integrations that may impact performance or deliver the wrong results.

The Enterprise Integration Cloud should be designed for both business and IT with:

- Pre-built connectors to enable adoption by business users
- Scalability, usage monitoring, and sophisticated transformation capabilities for IT
- Centralization of metadata, integrations, and business rules to ensure reuse across the organization

Ensures agile, no-code development

In a code-intensive environment, there simply aren't enough developers to meet the needs of the organization. Dealing with complex APIs, writing, and maintaining integrations in Java, Python, Perl, and a host of other languages can become a choke point for new integrations, and an ongoing management nightmare.

Integration platforms that provide low/no-code development can provide a solution. Forrester Research defines a low-code development platform as a "platform that enables rapid application delivery with a minimum of hand-coding, and quick setup and deployment."[10]

> **"To fully contribute to digital transformation efforts, business process management teams must cast off legacy practices and platforms in favor of new, low-code approaches that accelerate digital process innovation."**
>
> *Brief: A low code manifesto for speeding up BPM initiatives, Forrester Research, July 2016*

10 *New Development Platforms Emerge For Customer-Facing Applications*, Forrester Research, August 6 2014

No-code development foundational to accelerating integrations

The state-of-the-art is taking a click-not-code approach. A visual environment to define sources, transform, and target endpoints enables more line of business teams to develop integration with minimal training required. No-code development also accelerates integrations that would otherwise take months to develop using a small core group of developers.

FIGURE 3: SnapLogic's click-not-code development accelerates integration initiatives

> **"Application and data integration is historically a time-consuming and code-intensive activity dominated by a small group of experts. Change is inevitable, and a modern integration platform that is powerful, yet easy-to-use and expand allows organizations to respond to change faster and future-proof their application and data infrastructure."**
>
> Gaurav Dhillon,
> Founder and CEO, SnapLogic

While visual interfaces for developing integrations are not new, many still rely on desktop clients, substantial training, and often, are designed for the few, not the many. In the Enterprise Integration Cloud, no-code development is about ease of access and lowering the bar for development by providing:

- A browser-based visual, easy-to-access, development environment
- Drag and drop assembly of integration objects: sources, transformations, conditional operations, and targets
- Primary configuration of workflow components using parameterization to ease development

Facilitates collaborative development

Collaborative data integration ensures that technical and business people can collaborate on specific initiatives, as well as across teams. A recent TDWI survey found collaboration as a vital driver for success for data integration initiatives.[11]

Two-thirds of organizations surveyed reported that collaboration is a requirement for data integration.

TDWI Checklist Report: Top Ten Best Practices for Data Integration, Philip Russom

Yet separate integration environments, IT-geared data-integration tools, API management apps, data-prep, and direct-to-source analytics integrations are a barrier.

Often it isn't just multiple systems that are in play, but multiple departments. And within each department, typically there are individuals who understand the application configuration, data, and customizations. Within larger organizations, integration stakeholders can reside in different teams and different geographies.

To facilitate collaborative development, the Enterprise Integration Cloud must provide:

- Shared real-time development on integration flows
- A visual, web-based IDE to enable collaborative, iterative, continuous development
- Lifecycle and change management of workflows

Provides security and data governance

Governance provides IT with centralized visibility into integration usage across the enterprise – an understanding of what endpoints are integrated and by which teams. This kind of visibility enables IT to proactively identify opportunities to standardize some integrations across teams, as well as see fruitful areas for data lake initiatives that could meet the shared needs of multiple teams. This visibility provides a path to upgrade business user-driven integrations to shared, hardened integrations for the enterprise.

Security and governance adds another important benefit: providing a managed environment for business users to create their own integrations from permissioned connectors, workflows that they can parameterize, to specific data sources they can access. Essentially, it enables the autonomy to source and prep data, without risking unforeseen queries and integrations.

Governance, often an ingredient missing from data prep tools and integration environments bundled that with analytics tools, is a critical ingredient to efficiently scaling an agile integration initiative. Look for:

- Centralization of security and permissions for integration workflows
- Ability to monitor integration and user activity across the integration landscape
- Integration platform and endpoint utilization
- Audit trails and data lineage to increase trust

11 TDWI Checklist Report: ***Top Ten Best Practices for Data Integration,*** Philip Russom

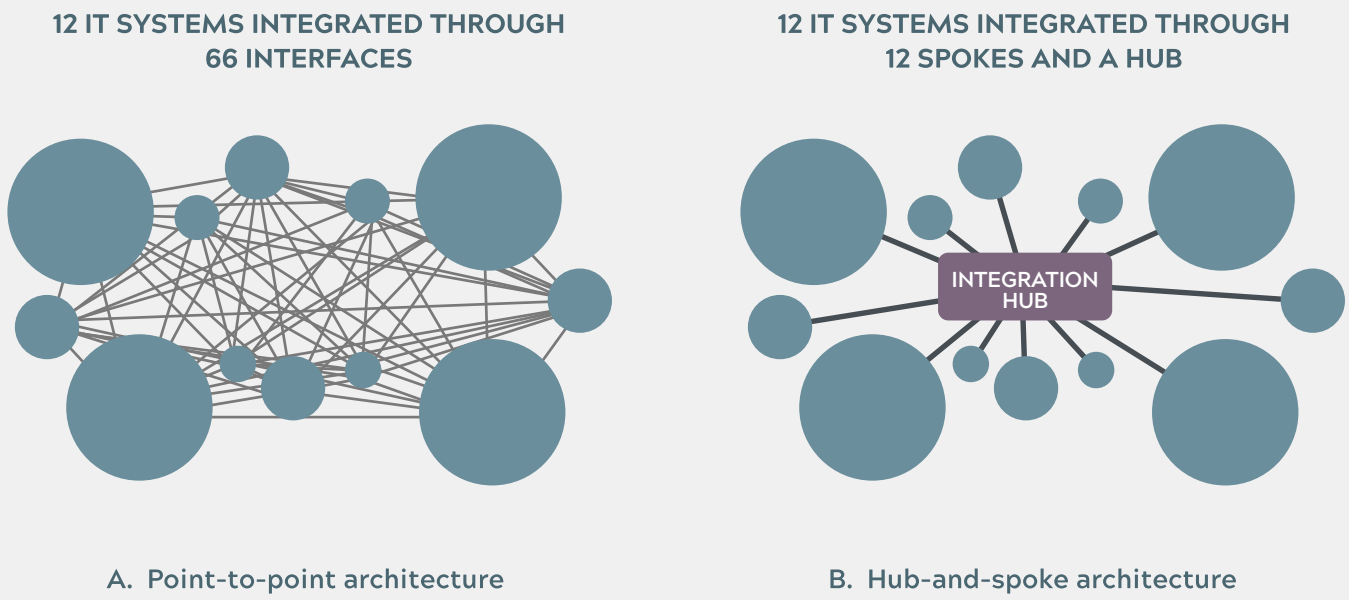
Maximizes reuse to minimize risk

Centralized metadata, workflows, and integration patterns are essential to improve productivity through reuse, and ensure consistency.

Often, data prep tools and hand-coded integrations operate on a point-to-point principal. While easy to configure initially, a point-to-point integration can quickly get out of control. For example, the diagram from TDWI below, shows that just 12 applications can morph into tens of integrations, carrying substantial risk of error and hampering performance:

Without a centralized repository and a library of integration flows that can be shared and reused or the ability to promote end-user developed flows into shared managed flows, integrations can quickly multiply.

FIGURE 4: Reuse eliminates redundancy, maintenance, and risk (source: *TDWI*)



Underpinning integrations with reusable patterns

As integrations multiply, having a centralized metadata catalog, a searchable set of flows, and the ability for business users to tap into, create, and share these flows, provides a platform for sustainable growth as integrations multiply. Effectively an integration hub, it provides the vital shared metadata foundation across the integrating enterprise. The keys to reuse include the ability to:

- Provide reusable building blocks to minimize duplication and risk of error
- Enable business users to easily create workflows and share them with, and across teams
- Empower IT to identify duplicative workflows and create reusable building blocks
- Organize workflows, so they are easy to find, searchable, and business-user oriented

"When development standards and architectural patterns are applied to multiple data integration projects, the result is simplicity (at least, compared to ad hoc methods), which fosters the reuse of data integration development artifacts (like jobs, routines, data transforms, interfaces), which in turn increases consistency in the handling of data."

TDWI

"Growth of public cloud IaaS has also created new service opportunities around adoption and usage of public cloud resources. With changes at the infrastructure, architectural, and operational layers, public cloud IaaS is slowly transforming the enterprise IT value chain."

Deepak Mohan
IDC Research Inc.

Integrates with enterprise IaaS platforms

Organizations are increasingly building their cloud infrastructure strategies to support their digital transformation efforts on the leading cloud platforms such as Amazon Web Services (AWS) and Microsoft Azure.

Amazon and its popular IaaS/PaaS, together with Redshift for cloud data warehousing, provides a cloud platform for enterprise data and applications.

Microsoft Azure and its lineup of cloud databases such as SQL Database, HDInsight, and Data Lake, is providing a potent cloud platform, with its rich array of analytics provided by Cortana Intelligence Suite (CIS).

With the dominance of these IaaS/PaaS, enterprises are often standardizing on them to benefit from their elasticity and cost benefits. In turn, they've invested in a rich bench of developer and administrative expertise, as well as management tools so they can effectively deploy apps and data on these platforms.

By running integration processes natively on these platforms, enterprise IT can effectively administer integration, capacity plan, and manage overall utilization, as well as enjoy elasticity, cost-of-compute and storage for their integration processes.

Integration can maximize the value of IaaS platforms by using them to:

- Route incoming requests to the appropriate component based on the type of incoming request
- Manage the authorization and authentication of users
- Manage scheduled tasks and jobs of integration flows
- Manage elasticity, lifecycle, software updates, etc. of all runtime components
- Store workflow metadata
- Store system files and generated log files

Scales up across old and new digital data flows

When integrating applications, data, and things, there are many dimensions of scale, from the number of messages such as communication from things to issuing and responding to real-time application-level API calls, to the sheer flow of transactions.

In many cases, integration tools are only optimized for one of these elements. Some have high-performance message buses, designed for business process integrations. Others, optimized for analytics scenarios for incremental data loading, are designed to shift large volumes of data.

However, shifting to a single platform requires an integration platform that can manage both elements: real-time message streams and batch data volumes.

Shifting to a common language for integration flows

A streaming architecture is the enabler as is using modern universal document formats. Older integration technologies are record-oriented in nature, which fit well into the relational database world when they were first designed. API integration tools use a newer format such as JSON and XML as the transport for REST- and SOAP-based services, but often are only optimized for messaging.

However, using document-based communication based on JSON as the universal vehicle for any kind of workflow, whether for app-to-app or traditional data warehousing flows, provides powerful benefits. A modern universal document format for integration facilitates ease of development and reuse, as well as efficiency.

- Documents are a superset of records, improving efficiency by providing one format for both record- and object-based streams.
- Documents result in more concise and efficient workflows because it is not necessary to translate JSON or XML into flat records, do the processing, and convert the records back.
- Documents are aligned with modern web services. This means that there is no requirement to flatten data into records or turn a JSON document in a string or BLOB type, document model making it easy to process modern web data in its native format.
- Documents facilitate reuse of workflows, which ease the creation of nested workflows, and typically leads to more compact workflows.

For streaming data, documents can flow independently. Such streaming flows have low resource requirements because documents can exit once they have reached the last point in the flow.

Using a modern integration approach, Box connected 23 business processes in just 14 months with only 1.5 developers, and are processing over 15 million transactions daily.

SnapLogic
Box case study

Data workflows that require that all data be collected, such as for sort, join, and aggregation flows typical for analytics, may have higher resource requirements, but can also be handled on the same underlying document based architecture.

Applies analytics and predictive intelligence

Analytics and predictive intelligence are no longer just for enabling end-user insights on data.

Desktop tools and hand-coded integration usually provide little integration data for easy collection. Typically based on multiple tools and methods, these tools make it virtually impossible to easily extract and apply insight from.

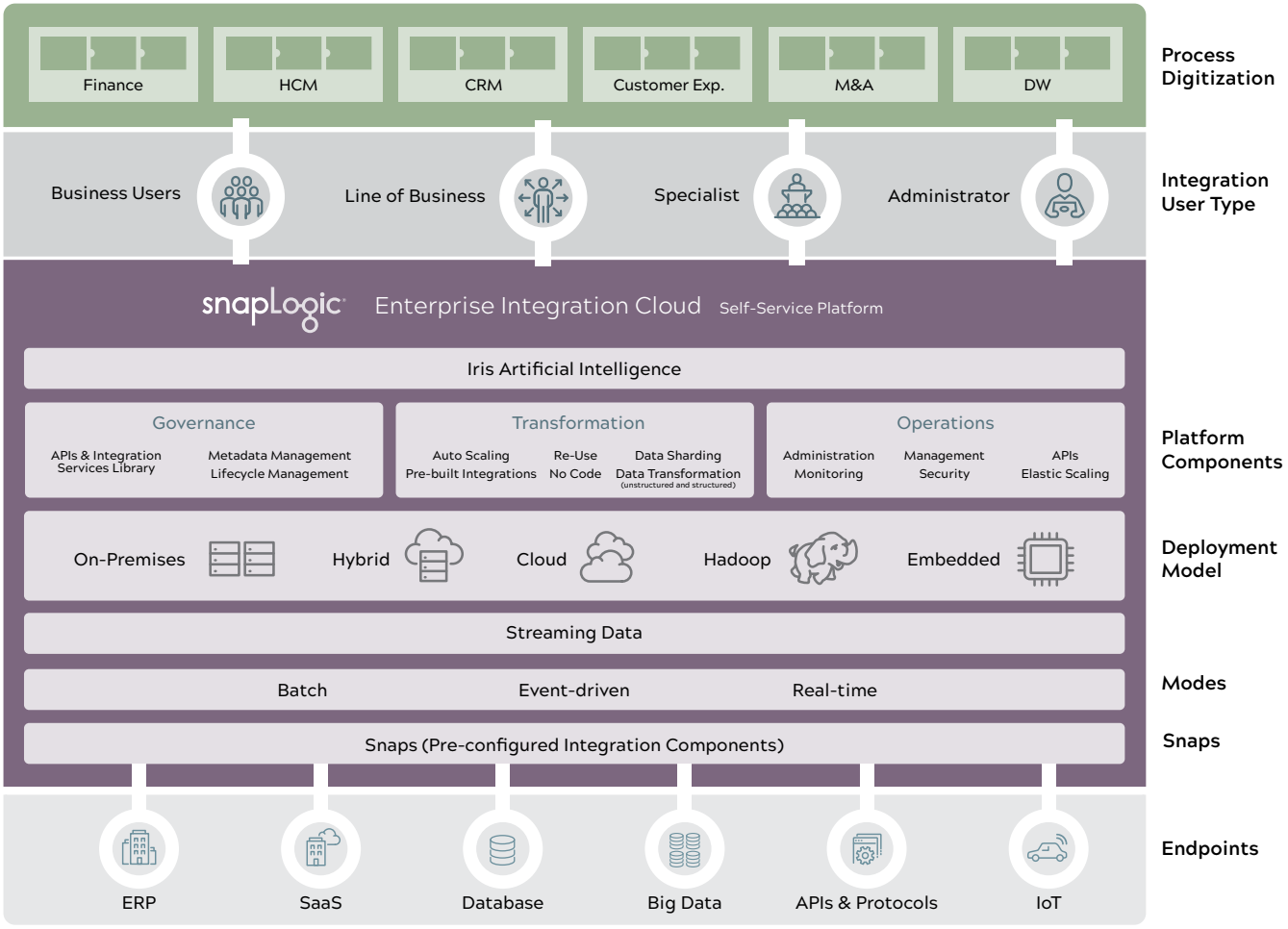
However, when business users and IT are collaborating and developing on a single cloud integration hub – an enterprise integration cloud – every integration itself generates meaningful data to improve integration effectiveness.

For example, with the right analytics, integration activity can provide insights into the flow of data across the organization, the endpoints, and lines of business. Data integration experts can then gain a better understanding of what opportunities exist to centralize integrations, which endpoints are being overused, and where the center of gravity is around data integration initiatives.

With increasingly user-led integration, machine learning provides a powerful opportunity to enhance business user integrator productivity and lower training requirements, too. Predictive intelligence can be applied to historical integration patterns to suggest likely integration patterns based on similar patterns that have been developed before, providing business users with cues on the next logical integration step based on the similar activities of peers. Suggesting concatenating first and last name fields in the next step of the flow, or joining multiple tables across Opportunities with Products, and Accounts are but two examples. Analytics and predictive logic can:

- Be achieved by centralizing integration activity and integration flow metadata to improve administration and developer productivity
- Provide a better understanding of usage of integrations, endpoint activity across users and teams
- Accelerate the development of new integration flows by suggesting next steps for business users

FIGURE 5: Centralized governance, metadata, reuse, and intelligence enables sustainable growth



Your 11-point checklist for the enterprise integration cloud

Realigning your integration strategies in an era of digitization is more important than ever. This 11-point checklist summarizes the key criteria for a sustainable integration platform that connects current and future business processes.

Checklist for enterprise integration	
Area	**Criteria**
Enables the cloudified, hybrid enterprise	• Treats on-premises and cloud sources treated as equal, first-class endpoints • Enables on-premises and cloud end points to exchange data with cloud, without creating scalability or network issues • Provides native support for primarily on-premises apps and databases, direct integration with cloud sources, user authentication schemes, and web API standards
Harmonizes integra-tion across apps, data, and things	• Supports real-time message volume for business process and thing integration • Requires bulk and incremental data volume for loading data volumes and data lakes • Supports API connectivity for REST/SOAP APIs
Keeps pace with an increasing volume and variety of data	• Supports unstructured and structured data • Provides pre-built connectivity to hundreds of data sources • Provides easy deployment of vendor-added, cloud-based connectors
A foundation for IT and business users to co-integrate	• Enables adoption of prebuilt connectors to enable adoption by business users • Provides scalability, usage monitoring, and sophisticated transformation capabilities for IT • Provides centralization of metadata, integrations, and business rules to ensure reuse across the organization
Ensures agile, no-code development	• Provides a browser-based visual development environment integrations • Allows drag and drop assembly of integration objects: sources, transformations, conditional operations, and targets • Eases development of primary configuration of objects using parameterization

Checklist for enterprise integration

Area	Criteria
Facilitates collaborative development	• Shares real-time development on integration flows • Enables a visual, web-based IDE for iterative, continuous development • Provides lifecycle and change management of workflows
Provides security and data governance	• Provides centralization of security and permissions for integration workflows • Monitors integration and user activity across the integration landscape • Understands integration platform and endpoint utilization • Provides audit trails and data lineage to increase trust
Maximizes reuse to minimize risk	• Provides reusable building blocks to minimize duplication and risk of error • Enables business users to easily create workflows and share them with, and across teams • Empowers IT to identify duplicative workflows and create reusable building blocks • Organizes workflows, so they are easy to find, searchable, and are business-user oriented
Integrates with enterprise IaaS platforms	• Routes incoming requests to the appropriate component based on the type of incoming request • Manages the authorization and authentication of users accessing the web applications • Manages scheduled tasks and jobs of integration flows. • Manages elasticity, lifecycle, software updates, etc. of all runtime components • Stores workflow metadata, system files, and generated log files
Scales up across old and new digital data flows	• Provides a documents-based foundation for record and object data • Provides an architecture to support streaming and accumulating data
Applies analytics and predictive intelligence	• Centralizes integration activity and integration flow metadata • Provides analytics on the usage of integrations and endpoint activity across users and teams • Applies machine-learning algorithms to historical integration activity to accelerate the development of new integrations

SnapLogic is the global leader in self-service integration. The company's Enterprise Integration Cloud makes it fast and easy to connect applications, data, and things. Hundreds of customers across the Global 2000 – including Adobe, AstraZeneca, Box, Capital One, GameStop, Verizon, and Wendy's – rely on SnapLogic to automate business processes, accelerate analytics, and drive digital transformation. SnapLogic was founded by data industry veteran Gaurav Dhillon and is backed by blue-chip investors including Andreessen Horowitz, Capital One, Ignition Partners, Microsoft, Triangle Peak Partners, and Vitruvian Partners.

2 West Fifth Avenue Fourth Floor San Mateo, CA 94402 +1 (888) 494-1570 info@snaplogic.com snaplogic.com

WP201703

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