Integrate.io

The Citizen Integrator Advantage

Empowering non-developer domain experts to build their own data integrations, while optimizing data agility, reducing IT costs, and ensuring data compliance requirements

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EXECUTIVE SUMMARY

McKinsey & Company reports that most organizations could unlock tremendous value with better data analytics, and some sectors are leaving as much as 90% of their analytics value on the table.

Beyond analytics, increasing the flow of data to and from core business systems — like Salesforce and other non-analytics applications — is another way to unlock value and boost operational efficiency.

In both cases, liberating the untapped value of analytics and data requires new and sophisticated data integrations. In fact, most modern organizations need to upgrade and revise existing data flows on a regular and continual basis — a process that is essential for maintaining analytics accuracy and providing a continual flow of real-time data to and from third-party vendors.

Creating and maintaining the data integrations for these scenarios is complicated, time-consuming, and expensive. To make matters worse, most IT departments are too overworked and understaffed to complete data integrations in a timely fashion. This leaves business teams — like operations, marketing, finance, and sales — waiting weeks or months to establish the urgent data connections that their analytics use cases and new business partnerships require. During this downtime, businesses lose opportunities.

To overcome data integration bottlenecks, line-of-business teams are turning to low-cost no-code/low-code data integration platforms to achieve zero-delay data integration development. These tools empower data agility and the liberation of untapped value. However, their safe and responsible use requires a new role in business departments: “The role of the citizen integrator.”

Citizen integrators serve two important purposes: (1) they work in line-of-business departments developing data integrations independently of core IT; and (2) they serve as the guardians of data governance, security, and compliance within each business department. In this way, citizen integrators offer the following benefits:

- **Data agility**: Reduced delays, faster implementations, and more flexibility for data integrations.

- **Control**: Greater control of data pipelines by individual business departments and stakeholders.

- **Cost-effectiveness**: Lower costs related to data integration development, implementation, maintenance, and IT labor across an organization.

- **Independence**: Reduced reliance on core IT and CDO (Chief Data Officer) units to overcome data integration bottlenecks.

- **Security and compliance**: Careful adherence to data security and compliance concerns by working closely with IT and adhering to their rules and standards.

This white paper makes a case for citizen integrators as a modern requirement for absolute data agility. It begins by defining the citizen integrator role, the IT challenges it solves, and the high ROIs it offers. The white paper also explains how to create a hybrid/decentralized organizational model that leverages citizen integrators while satisfying data compliance and governance requirements. Finally, it explores how no-code/low-code platforms — like Integrate.io — support citizen integrators in their role.

02

WHAT IS A CITIZEN INTEGRATOR?

First coined by Gartner, approximately 8 years ago, the role of "citizen integrator" has become increasingly important in recent years — mostly as a result of easy-to-use, enterprise-grade data integration platforms like Integrate.io.

These systems have made it possible for non-tech-savvy users to create data integrations without assistance from core IT.

The following characteristics generally apply to the citizen integrator position:

1. **Non-tech-savvy users** who operate easy-to-use data integration platforms.

2. **Business department team members** are responsible for the success of data integration and analytics initiatives.

3. **Non-developer staff members with more business domain knowledge than tech skills** who create and implement data integrations for their respective business departments.

4. **Staff responsible for working closely with core IT and/or CDO units** to ensure adherence to necessary data compliance and data security rules.

With a no-code/low-code data integration platform, citizen integrators overcome the most common pain points, costs, and workflow bottlenecks related to traditional data integration work — while freeing up IT to focus on more business-critical tasks.

03

WHO CAN BE A CITIZEN INTEGRATOR?

Some citizen integrators have a considerable amount of tech experience.

They could be developers with backgrounds in app development and app configurations. This kind of citizen integrator would have a good understanding of different endpoints and how data flows operate from sources to destinations.

Other citizen integrators have technical backgrounds in data analytics or data science. Often holding CS degrees and PhDs, these integrators know precisely what their departments need from a business and technical standpoint. These citizen integrators may appreciate the speed of using point-and-click controls, but they may also want to program sophisticated data transformations and data pipelines using their coding skills. Integrate.io offers hundreds of prebuilt functions for this purpose. See the “Optimizing Data Agility” section for more information on this (below).

Finally, virtually anyone in a business department — with or without technology experience — can be a citizen integrator when a point-and-click integration platform is available. Nevertheless, citizen integrators usually have some background in data. For example, citizen integrators could be digital marketers with strong Excel skills and extensive experience accessing sensitive data from various business systems.

Examples of citizen integrators include:

1. **A data scientist** who lacks pipeline coding skills but uses a no-code/low-code platform to establish required data connections.

2. **A data engineer** who takes advantage of prebuilt connectors and point-and-click data transformations to speed through mundane data integration tasks.

3. **A marketing specialist** who is integrating data from the marketing platform into a CRM.

4. **A customer support manager** who uses point-and-click tools to integrate data from the helpdesk ticketing system with the sales system.

5. **A sales team member** who wants to use a low-code/no-code data integration platform to synchronize data from Salesforce into a data warehouse for better business intelligence.

6. **A finance manager** who uses a drag-and-drop interface to integrate data from multiple systems to form an interactive metrics dashboard.

7. **An IT director** who wants to offer self-service data integrations to less tech-savvy users in business departments.

8. **A business analyst or technical business subject matter expert (SME)** who wants new data to better understand current and future trends.

9. **An app developer** that wants to embed a new integration into existing apps.

10. **Any non-developer** domain expert who needs to create data integrations but does not know how to code.

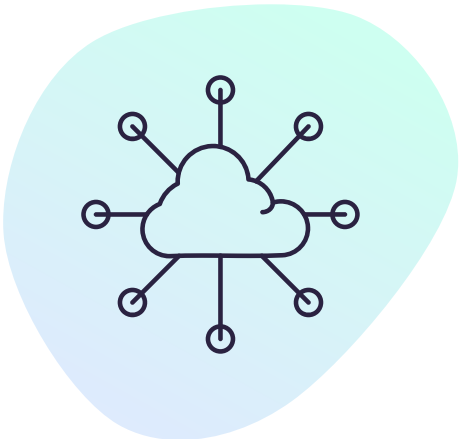
11. **An executive assistant** who is working on a new dashboard of metrics for a CMO.

12. **Virtually anyone** who is tasked with creating data integrations for his or her respective business department.

04

THE CHALLENGES AND COSTS OF DATA INTEGRATION THAT CITIZEN INTEGRATORS SOLVE

When non-developer citizen integrators use data integration platforms, they help overcome three of the most pressing challenges faced by IT departments today (1) the high level of IT skill required for traditional data integrations; (2) data integration workflow delays caused by overworked tech staff and IT burn out; (3) economic stresses that demand workforce reduction and staffing cuts; (4) the high financial cost of poor quality data and data integration delays for business departments; and (5) misunderstood data integration requirements.



1

TRADITIONAL DATA INTEGRATIONS REQUIRE HIGH-LEVEL, DIFFICULT-TO-SOURCE IT SKILLS

Traditional integration processes require teams of highly trained technical staff, engineers, and developers. These team members generally need deep training, skills, and experience in the following areas:

- Enterprise application integration (EAI)
- Enterprise service buses (ESBs)
- Services-oriented architecture (SOA)
- Extract, Transform, Load (ETL) processes and coding
- Enterprise data warehousing (EDW)
- Business intelligence (BI)
- Domain knowledge about how different departments use the above technologies

- Extensive knowledge, training, and experience regarding various data integration hardware and solutions — such as MuleSoft, Informatica, Talend, etc.
- Experience with some or all of the most common programming languages used in data integration — such as C++, Java, JavaScript, C#, Objective-C, PHP, Python, and Perl

How citizen integrators help: The above skills are difficult and expensive to source and train for in-house IT departments. The costs are even higher when turning to third-party integration developers. However, modern solutions mean that none of the above skills are required by citizen integrators to build nuanced, safe, scalable, and legally compliant data integrations.

2

OVERWORKED TECH STAFF AND IT BURNOUT CAUSE DATA INTEGRATION DELAYS

IT workers with the above skills tend to be in short supply — and expensive to hire and retain — which means that IT departments are continually short-staffed, overworked, and burnt out. According to a recent study from Yerbo, The State of Burnout in Tech report, that surveyed 36,200 IT professionals in 33 counties, “Two in five [tech] workers are at high risk of burnout, prompted by longer hours, more demanding workloads and conflicts in work-life balance.

Image source: https://report.yerbo.co/

The overworked nature of IT departments causes crippling workflow delays for non-critical tasks like updating and creating new data integrations. To this effect, Forbes contributor, John Everhard writes:

> *[Businesses] are stuck in a catch-22. Their IT teams are being stretched to the maximum as they spend 60% of their time just keeping current systems working. There aren't enough skilled individuals to step up to the plate. Simply, businesses are lacking the resources to implement the necessary systems and processes to transform while keeping the lights on."*

In a 2019 study from Dimensional Research, 77% of IT and 71% of businesses said that IT solution requests consistently go unmet, and 61% of business stakeholders said that less than half of their IT ideas are implemented. Moreover, the 2021 "State of Low-Code" report from Mendex showed that 62% of organizations have a growing IT backlog.

Time zone differences are another challenge. Many firms have IT teams working in different time zones — and it is common for them to wait for the core IT team to come online and complete the urgent data integrations they require.

As a result of these factors, business departments endure tremendous opportunity losses while waiting for their IT teams to establish, update, and maintain data integrations for business intelligence and new business partnerships. They also incur large expenses for new IT workers or contractors to develop the integrations that existing IT staff are unable to manage.

How citizen integrators help: Citizen integrators are easier to source than data engineers and IT experts with specialized coding experience. Plus, citizen integrators work in the line of business, which means that it is the responsibility of business departments to staff them. This relieves the IT department of (1) needing to staff these employees and (2) needing to develop the integrations. Finally, citizen integrators work closer to the business, so they have a deeper understanding of the data integration requirements and can be more responsive to change.

In this way, citizen integrators eliminate data integration workflow delays and free up overburdened and burnt-out IT staff — all while leveraging their business domain experience to create more effective data integrations.

3

LOOMING ECONOMIC CHALLENGES REQUIRE IT DOWNSIZING AND COST CUTTING

A recent PwC Pulse survey showed that "90% of executives are concerned (34% moderately and 56% very) about macroeconomic conditions — more than any other issue. Four of five (81%) believe a recession is coming within the next six months."

This economic climate is compounding data integration challenges related to overworked tech staff and IT burnout. All industries are facing pressure to downsize staff. Crunchbase has tracked the tech layoff trend throughout 2022, offering the following data:

- "As of late October [2022], more than 52,000 workers in the U.S. tech sector have been laid off in mass job cuts so far in 2022."
- Twitter laid off approximately 3,700 employees (half its workforce) as of Nov. 4, 2022.
- Stripe laid off 1050 employees as of Nov. 3, 2022.
- Lyft laid off 750 employees (15% of its workforce) as of Nov. 3, 2022.
- Peloton laid off 4,084 as of Oct. 6, 2022.

On Nov. 9, 2022, the New York Times reported that Meta (Facebook) laid off approximately 11,000 employees (13% of its workforce).

Statistics from PwC Pulse further confirm that layoffs and staff reductions are a reality for most industries:

> *"26% of executives are planning to reduce the number of full-time employees over the next 12 to 18 months. In our August 2022 Pulse Survey, 50% said they had either implemented overall headcount reductions or had a plan in place to do so. At that time, 23% said they had already implemented headcount reductions."*

> *"When we asked CHROs [Chief Human Resource Officers] to provide more details in our current survey, 81% told us they're implementing at least one tactic to reduce their workforce to a great extent. In addition to layoffs, these include voluntary retirement, making performance-based cuts, not replacing people who leave, and hiring freezes."*

In an October 2022 tweet, Amazon's Jeff Bezos also advised businesses to brace for impact, "Yep, the probabilities in the economy tell you to batten down the hatches."

How citizen integrators help: Because executives and HR departments are (1) lacking enough IT staff to complete data integrations, and (2) facing hiring freezes and pressure to reduce staff, businesses need technologies and organizational strategies that allow them to achieve more (with fewer team members and less experienced staff). On the data integration front, citizen integrators and no-code/low-code data integration platforms offer an easy solution to reduce IT staff burdens as the threat of a recession looms.

4

HIGH FINANCIAL COSTS OF POOR DATA QUALITY AND DATA INTEGRATION DELAYS

Whether a business is waiting for a data connection to a lucrative new business partner or missing out on valuable business intelligence, the costs associated with data integration bottlenecks are significant. According to Gartner analyst Ted Friedman:

> *"As organizations accelerate their digital business efforts, poor data quality is a major contributor to a crisis in information trust and business value, negatively impacting financial performance."*

Gartner research also showed that surveyed organizations believe that poor data quality can cause businesses as much as $15 million per year in losses. Several years ago, IBM claimed that U.S. firms were losing $3.1 trillion annually because of poor data quality — a number that is likely significantly higher today.

The negative impacts of slow IT departments and integration bottlenecks are compounded when firms need to develop connections for multiple new business partners, or when they need to set up and manage new data integrations for multiple departments at the same time.

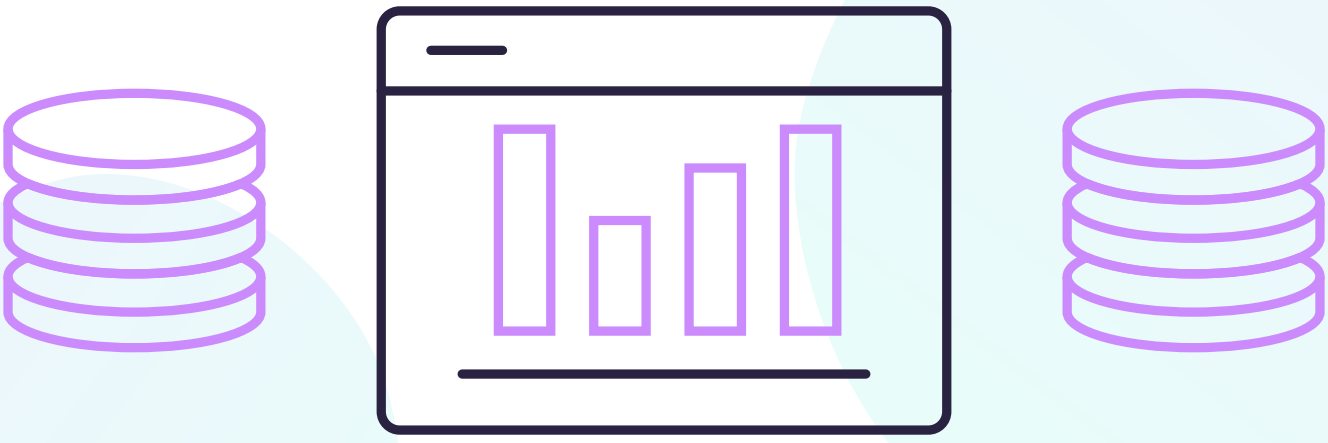
How citizen integrators help: By improving the speed and quality of all data integration development processes, citizen integrators help business departments get the data integrations needed without delays, and rapidly improve the overall quality of the analysis and business intelligence that departments have on hand.

3

MISUNDERSTOOD DATA INTEGRATION REQUIREMENTS

The IT departments and CDO units that traditionally develop data integrations do not always understand the full context of the data integrations required by business departments. This can result in misunderstood data integration requirements that can cause time-consuming and costly data integrations and analytics initiatives to fail.

How citizen integrators help: When citizen integrators with domain experience develop data integrations for their own business departments, the integrations tend to produce higher quality business intelligence, better data connections, and achieve higher rates of success. Also, since they are working directly inside business departments with easy-to-use tools, citizen integrators are faster to respond to ongoing changes.



05

THE ROIS OF CITIZEN INTEGRATORS

Citizen integrators at the helms of easy-to-use data integration platforms offer speed, agility, efficiency, quality, and affordability.

Here is a complete list of citizen integrator ROIs:

Eliminates integration delays and skyrockets data agility: Without citizen integrators on staff, business departments face delays of weeks or months before IT can fulfill their integration requests. By offloading the bulk of integration tasks to business departments, organizations can improve the speed and agility of integrations while responding to changing market conditions.

Forbes writer John Everhard describes how citizen developers at Vodafone used no-code/low-code tools to achieve a 75% improvement in time to market:

> *"Take Vodafone, for example. Their [Vodafone's] IT team was under burgeoning pressure to deliver new solution capabilities, faster, as competition increased. Powerless to meet this demand, they proposed a platform that would empower business users to "self-serve" and create solutions with minimal IT support. By championing the citizen developer, the company was able to build a guided troubleshooting tool in just 4 months. The result was a staggering 75% improvement on time to market."*

Businesses are 2.6 times more likely to accelerate digital transformation: Low-code/no-code data integration platforms and citizen integrators make digital transformation initiatives easier, less expensive, and faster for businesses to implement. To this effect, Gartner recently reported:

> *Technology is no longer reserved solely for IT departments, and four out of five technologists work in business areas outside of IT. Organizations that effectively support business technologists are **2.6 times more likely** to accelerate digital transformation."*

Supports more successful integrations due to the domain expertise of citizen integrators: Most data integration projects fail because IT departments do not understand the requirements. Citizen integrators are domain experts with deep knowledge of the data needs and workflows in their respective departments. They also understand how to use point-and-click technology to satisfy those data needs dramatically faster and more affordably than relying on the IT department for these integrations.

Improves overall productivity: When a department does not have the data, insights, and business intelligence it needs, the lack of information hinders decision-making, productivity, and workflows. By eliminating IT delays and leveraging domain expertise to create more successful data integrations, citizen integrators improve overall productivity, efficiency, and success in their respective departments.

Promotes the democratization of data: IT departments have access to vast reserves of siloed business data that is unavailable to other business departments. When IT departments give citizen integrators access to this information, they can safely democratize access to data across the entire organization. At the same time, IT experts can trust that citizen integrators will adhere to data compliance and data security standards. It seems clear that the applications of the future will rely on democratized, self-service data integrations.

Alleviates IT burdens: By moving the bulk of integration tasks over to citizen integrators in their individual business departments, it frees IT to focus on more business-critical tasks — while eliminating the weeks or months of waiting for data integrations.

Empowers employee engagement: No-code/low-code data transformation tools empower citizen integrators to leverage their unique business knowledge and experience to build better data integrations.

This empowers employees in business departments to feel more connected and engaged to use tools directly — in a way that helps them do their jobs better.

In fact, a 2019 study from Dimensional Research found that 58% of business stakeholders agree that users prefer to build applications themselves.

Avoids data lake workarounds: Data scientists can get frustrated while waiting for data access. This is why companies create data lakes, but data lakes pull in data and files without discrimination, representing a security and malware risk. By comparison, citizen integrators quickly provide the data connections data scientists need, so they do not have to resort to ineffective and risky data lake solutions.

Achieves better data security and compliance and earns the trust of IT departments: One of the biggest concerns surrounding the use of data-integration-as-a-service tools relates to data security and compliance. Companies and IT departments worry that it is risky to let non-tech-savvy users manage sensitive data and data connections. The citizen integrator overcomes these risks by working openly with IT to fully understand and adhere to data security and compliance rules, regulations, and internal security policies.

Safeguards data while giving business departments more independence: The most advanced no-code/low-code data integration platforms — like Integrate.io — offer data security controls, SAML 2 SSO, and encryption features so IT departments can trust the platform. This gives IT teams the confidence they need to empower line-of-business users while trusting that these users will not create security problems, maintenance messes, or data breach vulnerabilities that IT has to clean up later. For more details on this see the section below titled “How Citizen Integrators and Integrate.io Safeguard Compliance, Data Governance Standards, and Data Security.”

Among the above benefits, the ability to increase data agility is one of the most compelling reasons to adopt an integration workflow model that includes the citizen integrator role.

06

OPTIMIZING DATA AGILITY: MOVING FASTER TO STAY COMPETITIVE

At one time, data connections lasted for years.

Today, organizations are constantly adopting new technologies and facing new data integration requirements, which shortens the overall life cycle of most data integrations. Traditional integration processes are not agile enough to keep up with the high pace of modern data integration demands. Traditional integration processes are not agile enough to keep up with the high pace of modern data integration demands.

This lack of data agility is understandable when you consider that most IT departments are doing their best to navigate the following challenges:

- **Managing hundreds of data sources:** Businesses are drawing from an average of more than 400 data sources to fuel their business intelligence and data analytics systems.
- **Data silo challenges:** 41% of customer support teams say that they face daily or weekly slowdowns from data silos. Destroying these silos takes time and when IT departments are slow to respond to data integration requests, the silos persist.
- **Data integration backlogs and delays:** Most business departments wait weeks or months for IT to implement the data integrations they require. Data integration processes are sluggish because they require complex tools that few individuals know how to operate. These delays are especially problematic in today's highly competitive marketplace. A data-driven organization — with the agility to respond to change quickly — is necessary to remain in business.

- **Business users cannot access even basic data:** According to Harvard Business Review, “By far the most common complaint we hear is that people in different parts of a business struggle to obtain even the most basic data. Curiously, this situation persists despite a spate of efforts to democratize access to data within corporations. Starved of information, analysts don’t do a great deal of analysis, and it’s impossible for a data-driven culture to take root, let alone flourish.”

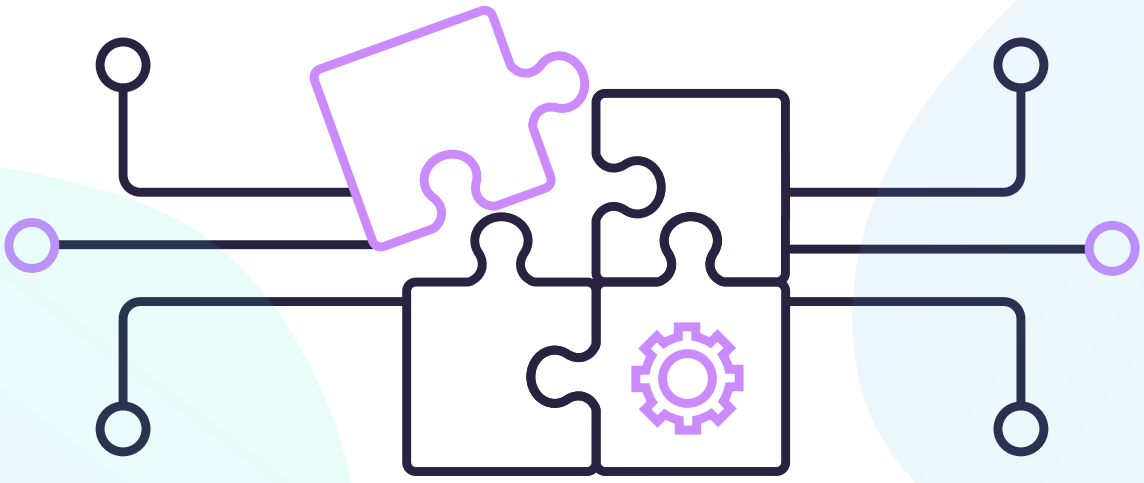
How Citizen Integrators Use No-Code/Low-Code Platforms to Achieve Data Agility

Organizations can boost data agility by allowing individual departments to create and manage their own data integrations. This makes data more accessible and discoverable across the organization.

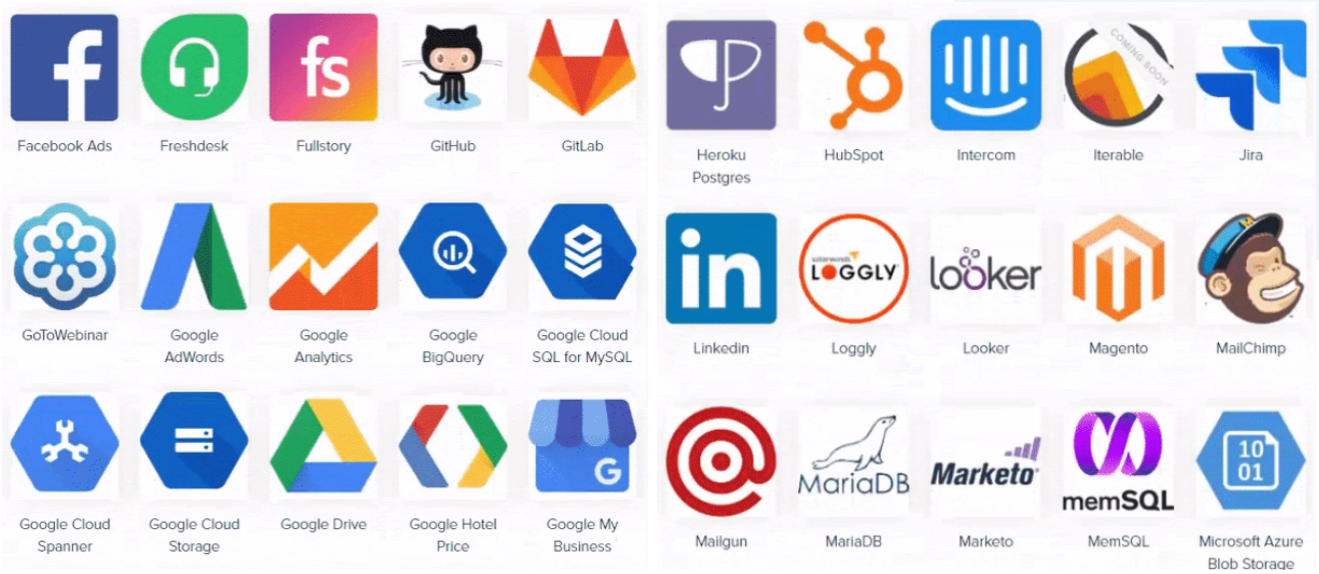
Citizen integrators in business departments — without any special tech skills — can leverage easy-to-use data integration systems to ensure the speed, safety, and compliance of all new integrations. As a low-code/no-code platform, Integrate.io offers the following features to help citizen integrators achieve this goal:

Plug-and-Play Data Connectors for Easy, Rapid Implementation:

Easy-to-use data integration platforms include pre-built, plug-and-play data connectors for the most popular data sources and destinations. For example, Integrate.io features hundreds of out-of-the-box data connectors — in addition to a REST API connector — for implementing fast, custom integrations to virtually any source/destination.



Here are some of Integrate.io's 100+ connectors:



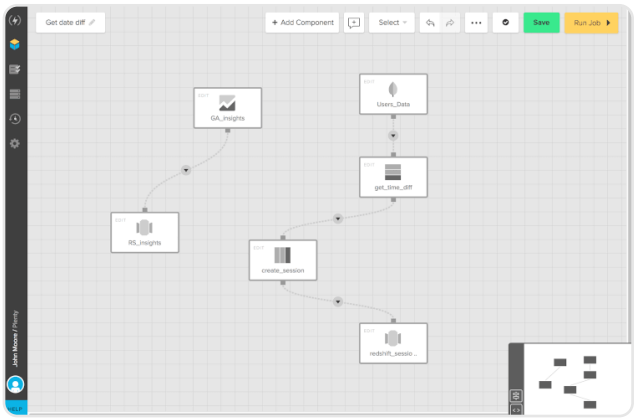
Among these connectors is Integrate.io's popular Salesforce-to-Salesforce data connector, which allows business teams to extract data from a Salesforce org, transform or enrich it, and then send it back into Salesforce. Considering the enormous cost of data processing on Salesforce, this is a noteworthy feature. This also empowers firms to leverage sophisticated machine learning tools on larger data sets outside of Salesforce, and push the results back into Salesforce.

Additionally, Integrate.io can automate the migration of data from one Salesforce org into a different Salesforce org — a capability that isn't native to Salesforce itself.

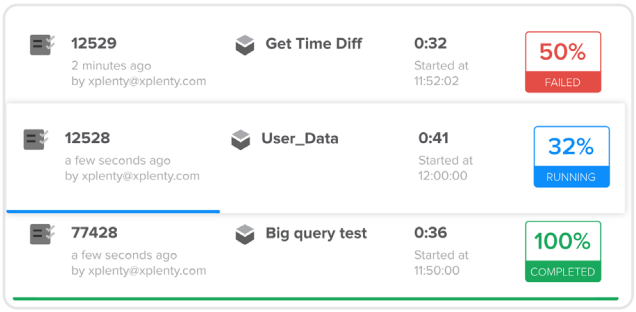
No-Code, Drag-and-Drop Data Tools for Building Data Transformation Pipelines: Finally, Integrate.io includes more than 100 no-code transformations — such as FILTER, JOIN, SELECT, LIMIT, and CLONE — which allow non-tech-savvy users to layer multiple transformations into their data pipelines. For users who don't understand the 'what, how, and why' behind these transformations, an Integrate.io specialist is only a phone call away.

Integrate.io's no-code tools also include a built-in job scheduler. This feature allows anyone to create complex workflow automations that run jobs automatically according to the user's specific schedule and criteria. For more experienced data engineers, Integrate.io's native scripting language empowers developers to hand-code more nuanced data transformations and automated workflows as required.

Here's a screenshot of Integrate.io's point-and-click user interface for creating data transformation workflows and automated pipelines:



Here's a screenshot of Integrate.io's real-time job progress monitoring:



07

LEVERAGE CITIZEN INTEGRATORS IN A HYBRID/ DECENTRALIZED ORGANIZATIONAL MODEL

As a team member who works in a business department but also works closely with IT and Chief Data Officer teams, a citizen integrator helps support a hybrid organizational model.
This overcomes the common problems of data integration/analytics initiatives being either too centralized or too decentralized.

Too much centralization happens when organizations develop data analytics in total isolation, the C-suite CDO unit controls all aspects of data, and an enterprise team manages all data requests. Too much decentralization happens when data is siloed off in different departments, there's no overall data strategy, and there is very little alignment or coordination from department to department.

According to McKinsey & Company:

> *"Those organizations struggling to create value through analytics tend to develop analytics capabilities in isolation, either centralized and far removed from the business [over-centralized] or in sporadic pockets of poorly coordinated silos [over-decentralized]. Neither organizational model is effective. Over-centralization creates bottlenecks and leads to a lack of business buy-in. And decentralization brings with it the risk of different data models that don't connect."*

Whether the problem relates to over-centralization or over-decentralization, the business intelligence and metrics that data engineers and data scientists produce will not render desired impacts. In these cases, the efforts of data scientists will mostly be for naught.

Balancing Centralized and Decentralized Data Management

The dilemma of balancing centralization versus decentralization in data science tends to develop over time. In a start-up firm — or in a company that is just beginning its analytics initiatives — a centralized approach to data science is more appropriate as it empowers leadership to closely watch over a single team while determining its strategies and data management standards, and compliance requirements. However, as business departments grow to develop more autonomy and independence, their data needs will become more specific.

Here is where IT and/or the CDO team may want to adopt a more hybrid/decentralized role as helper/supervisor. This involves helping individual departments by giving them the technology they need to create their own integrations while supervising and enforcing the data governance standards that apply to those integrations.

When Core IT & Point-and-Click Data Integration Co-Exist: Business Departments Gain Integration Independence and Core IT Keeps a Grip on Compliance

A citizen integrator with domain expertise — who is also embedded in a business department — can play an important role in helping the hybrid/decentralized organizational model to flourish. Here is how this kind of model will likely balance itself between centralized and decentralized components:

- **Centralized component:** Data governance, compliance, and data security standards remain centralized with IT or the CDO team and business departments defer and adhere to these standards. The citizen integrator works closely with these teams to understand and implement their requirements while using a no-code data integration platform.

- **Decentralized component:** The responsibility to develop working integrations — along with actionable and productive analysis — remains decentralized within the actual business departments where domain expertise is found. The citizen integrator is the embedded domain expert who manages integrations and data science needs.

The same article from McKinsey (referenced below) describes two versions of what this hybrid balance could look like:

- **Slightly more centralized:** The Chief Data Office and IT departments serve as helpers, supervisors, and data governance enforcers — while each business department is responsible for its own data science.
- **Slightly more decentralized:** Taking decentralization even further, the Chief Data Officer or IT department may simply bear the responsibility for setting and enforcing data governance standards — while individual business departments take full responsibility for their data integrations and analysis while following those governance standards.

Both of the above options are feasible with a trained citizen integrator in each business department — at the helm of a no-code/low-code solution.

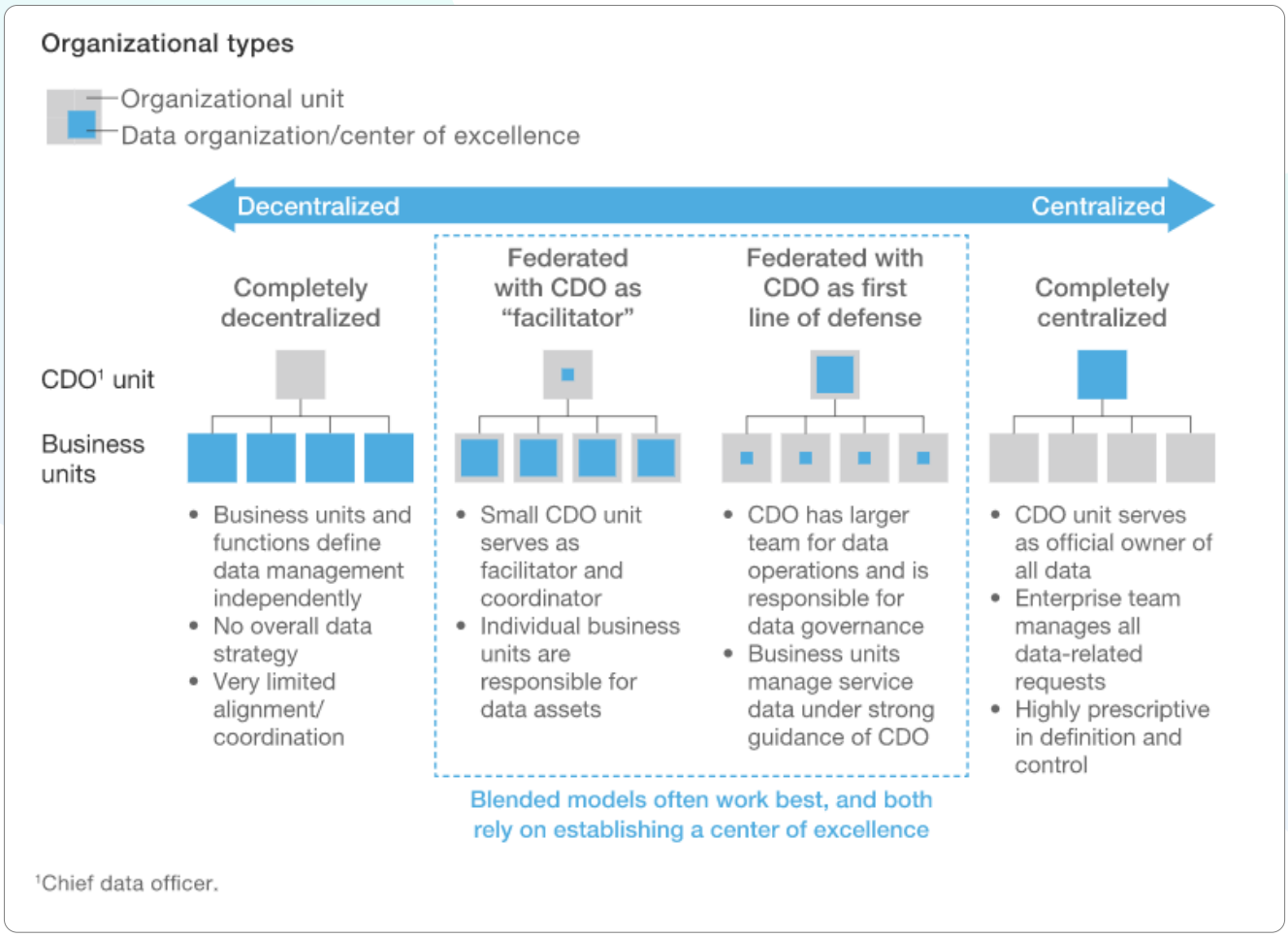


Image source: https://www.mckinsey.com/capabilities/quantumblack/our-insights/ten-red-flags-signaling-your-analytics-program-will-fail

08

HOW CITIZEN INTEGRATORS AND INTEGRATE.IO SAFEGUARD COMPLIANCE, DATA GOVERNANCE STANDARDS, AND DATA SECURITY

One of the primary concerns about letting individual departments manage their own data integrations relates to the organization's data governance policies.

For example, IT and Chief Data Officer units often worry that business departments cannot be trusted to follow crucial data governance and data compliance standards.

To meet the strictest data security, compliance, and governance standards, we built Integrate.io with the following capabilities:

1

ROLE-BASED ACCESS PERMISSIONS FOR EACH TEAM MEMBER

Every organization should have a team of people that develops, implements, supervises, and enforces data government standards. This team might include data scientists/engineers, internal auditors, compliance advisors, and representatives from the business department (such as a citizen integrator). Some organizations also have a Chief Data Officer who manages data governance at the C-Suite level.

Integrate.io includes features to set the role and access permissions for each team member using the account. Each account has only one "Owner" with universal access privileges. The next level is "Admin," which can do everything that the owner can except cancel the account. The next level is "Member." Members are typically the citizen integrators working in the individual

business departments. Members are limited to the following permissions:

- Add/edit/delete packages
- Create/terminate clusters
- Execute/stop jobs
- Use data connections

2

SECURITY

The security capabilities of a data integration solution are key to ensuring both the safety of data and compliance with industry standards and regulations. Integrate.io demonstrates its commitment to security by adhering to all applicable industry standards and regulations including:

- **SOC2 Certification**: Integrate.io is certified as SOC2 compliant with an annual penetration test from a 3rd party security firm that deploys the most up-to-date penetration testing methods and technologies. Our SOC2 audit report and Pen-Test results are available for customers upon request.

- **HIPAA Compliant**: Integrate.io complies with all Business Associates and HIPAA standards by protecting personal health information (PHI). A signed Business Associate Agreement (BAA) is available for customers upon request.

- **GDPR Compliant**: Integrate.io adheres to all EU General Data Protection Regulation (GDPR) requirements, satisfying the terms of being a secure and reliable data processor. Customers can access the Integrate.io Terms o Use for an updated Data Processing Addendum (DPA).

- **CCPA Compliant**: Integrate.io complies with the privacy rights, consumer protections, rules, and standards of the California Consumer Privacy Act (CCPA). CCPA addendums are available to customers upon request.

In support of the above, Integrate.io includes field-level security data transformations with the following high-security capabilities:

- Encryption of sensitive data with AES-256
- AWS partnership to leverage each customer's AWS Key Management Security (KMS)
- Customer-level control of encryption, decryption, and encryption key rotation
- Field-level encryption documentation

Finally, Integrate.io offers SSO (Single Sign-On) authentication using the SAML 2.0 standard for exchanging authentication data with Identity Providers. SAML 2.0 SSO allows Integrate.io customers to use their existing identity providers (e.g., Active Directory, OAuth, etc.) and their existing password policies when authentication/authorization on the platform.

3

MAINTENANCE

Designing, developing, and implementing a data integration is only part of the responsibility that IT and CDO teams take on when connecting sources and destinations for business analytics purposes. The other part of the responsibility is maintenance.

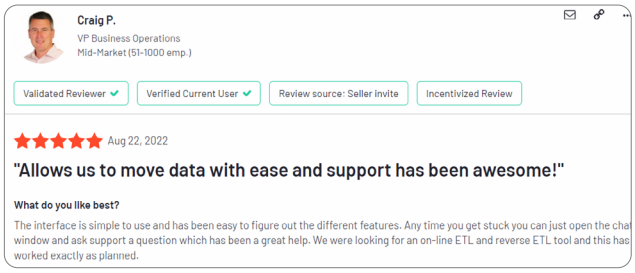
The data ingredients required for accurate and actionable analytics are constantly in flux based on continually changing markets and business conditions. To stay on top of the trends, IT and CDO teams need to continually tweak and maintain data integrations and set up new connections to additional, much-needed data sources. Unfortunately, this maintenance responsibility rarely gets done quickly enough (if at all).

The engineering team at Integrate.io manages this maintenance burden for Integrate.io customers. Essentially, Integrate.io handles the burden of building and maintaining data connections while its customers benefit from pre-built connectors and drag-and-drop transformations. This allows customers to set up low-code/no-code data pipelines with the click of a mouse. The automated platform takes care of all the difficult aspects of building and maintaining integrations automatically behind the scenes.

4

SUPPORT

Integrate.io includes a skilled and responsive engineering support team, standing at the ready to help users who lack data integration knowledge. With Integrate.io, every account receives unlimited, 24/7, follow-the-sun support from a data engineer who can help with the platform and any data challenges.



Integrate.io specialists teach users how to use the platform. When needed, they also take over the process of building unique and sophisticated data pipelines and automated data transformation workflows.

5

TRUST

Already trusted by some of the world's leading brands — such as Nike, 7-Eleven, Caterpillar, Fiverr, and more — Integrate.io allows organizations to quickly set up secure and up-to-date customer profiles while satisfying the most stringent data compliance rules related to GDPR, SOC2, HIPAA, CCPA, and other laws.

Customers say the following about using Integrate.io for data integrations:

> *Integrate.io saves us time dealing with data since it isn't necessary to change the schema constantly. We are also independent in terms of IT, where we've saved on headcount resources and can put more attention on analytics and business insights than on technical maintenance."* – Slava Borodovsky, BI Director, Fiverr

> *Integrate.io provides reliable data, leading to process efficiencies for team leaders and analysts. Improving data quality with an innate ability to source data from anywhere... Our assigned Success Engineer has been spectacular to work with. We've also leveraged the Integrate.io support widget, which has some really smart and energized team members who are responsive and always do the right thing for their clients."* – Bill Heffelfinger, PMP Head Of Client Technology Solutions, Cloudfactory

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EXAMPLES OF INTEGRATE.IO IN ACTION

Integrate.io customers have achieved great success using citizen integrators with domain expertise working in business departments.

These customers tend to have a core IT ETL solution — such as Informatica, MuleSoft, Talend, etc. However, they also leverage Integrate.io alongside those solutions for their line-of-business integrators. That's because Integrate.io is dramatically easier, faster, and more affordable to use than platforms like MuleSoft.

As an example, consider Salesforce, which most businesses run within their marketing and sales departments. Since these departments are already running Salesforce outside of Core IT, it makes sense that individual business departments also manage their own data integrations — especially since that is where domain expertise is found.

Here are two Integrate.io customers benefiting from citizen integrators and low-code/no-code data connections:

Customer Experience (CX) Firm Overcomes Integration Delays

A long-term Integrate.io user is a customer experience (CX) firm that provides consumer data analysis in real-time including advanced data transformation and workflow services.

The company is currently leveraging Integrate.io and citizen integrators to overcome the challenge of needing to rapidly develop new data transformation pipelines in response to continually changing file formats from banking

customers. Because the firm has an IT team located in the United States, and banking customers in a different time zone in Sydney, Australia, there was a significant delay every time banking customers needed a new integration.

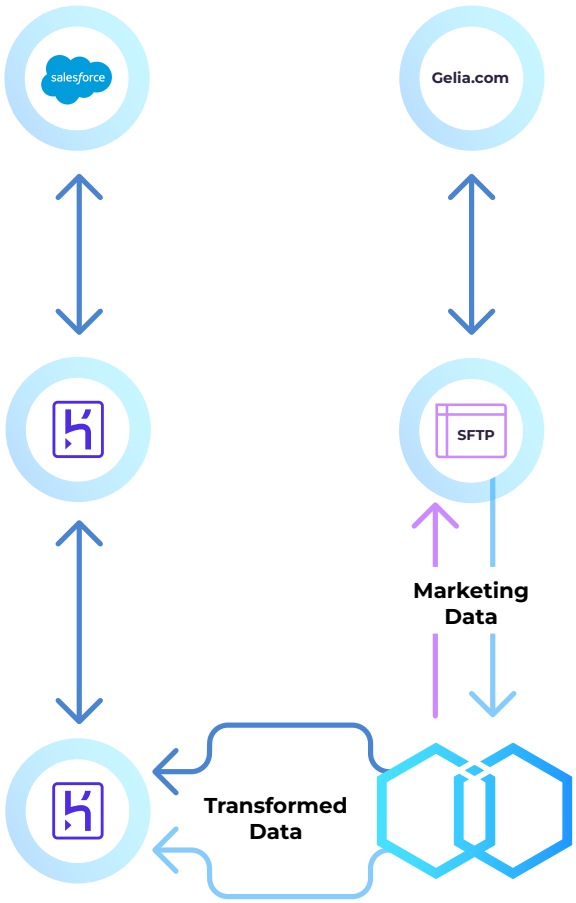
Integrate.io solved this challenge by empowering non-developer users at the CX firm's office in Sidney to rapidly create, modify, and maintain data transformation pipelines without needing to wait for the help of the IT team in the United States to come back online. This has dramatically boosted the overall speed and agility with which the firm's analysts can respond to changing business needs.

Construction Machinery Manufacturer Improves Data Agility

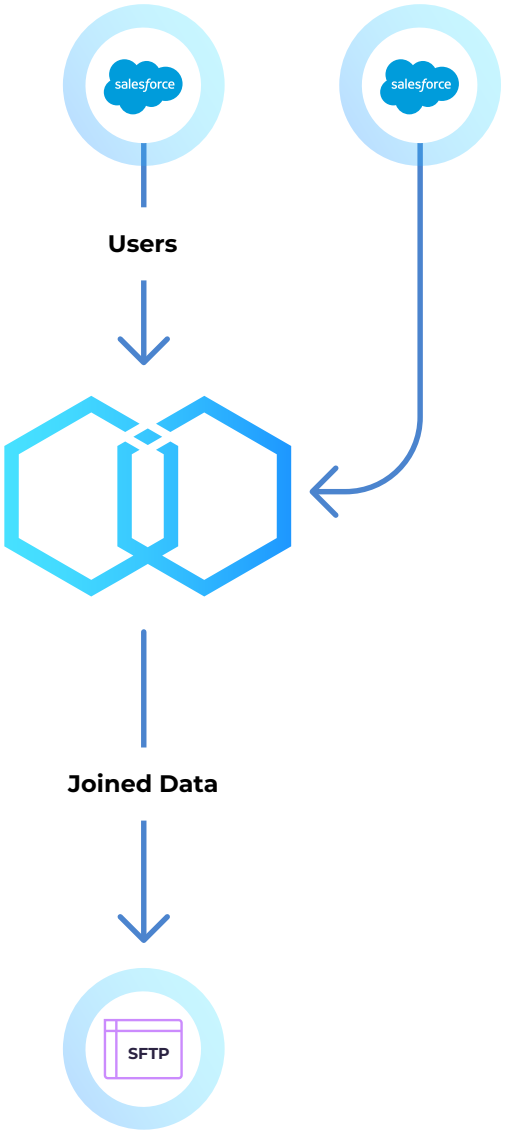
One of the world's leading manufacturers of construction machinery, mining equipment, industrial gas turbines, and other industrial products, leverages Integrate.io for up-to-date and accurate data and business intelligence. In fact, the digital team at this manufacturer currently relies on Integrate.io instead of their core IT integration platform — primarily for lead signup management.

Integrate.io offers this construction machinery manufacturer greater data agility and more cost-effective data pipeline management while moving data between Heroku Postgres, Salesforce, Gelia, and Zift. Here are three examples of data flows that the manufacturer built and manages with Integrate.io:

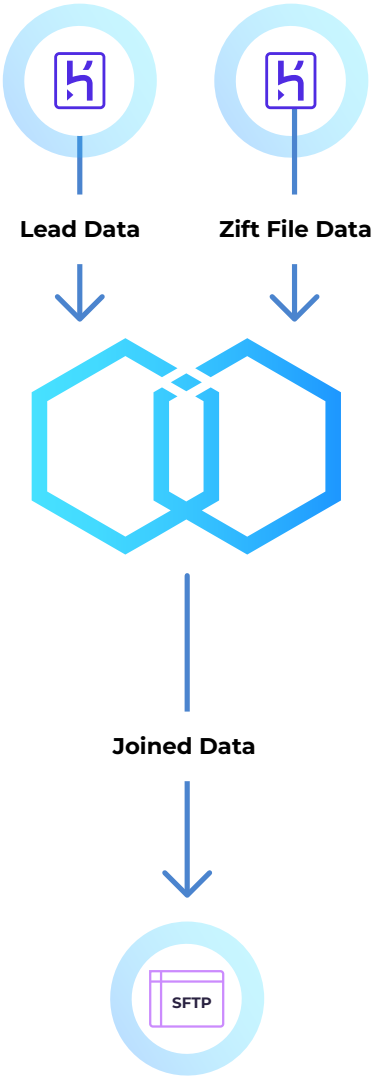
A Gelia pipeline helps identify qualified leads and tracks updates between Gelia and the CRM:



A sales rep pipeline maps sales rep to an account for lookup:



A Zift pipeline aggregates lead data and sends it to the Zift Enterprise Channel Management platform. As a treasure trove of channel and business intelligence, Zift includes over 3B tracked data points for analysis and benchmarking:



According to the manufacturer, Integrate.io serves as a critical tool in their data stack. It currently handles all of their data integration needs, allows their team to maximize the time they spend on data analysis instead of data preparation.

The Integrate.io platform means that less tech-savvy CDO and IT team members can create, implement, and maintain nuanced data transformation pipelines more easily and efficiently.

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FINAL THOUGHTS

As seen in this white paper, data agility is key to staying competitive and profitable in today's data-driven marketplace.

In other words, organizations need the flexibility to rapidly, affordably, and successfully design and deploy new data integrations.

It's for this reason that Gartner is currently advising firms to use a citizen integrator strategy. The Gartner Integration Maturity Model recently forecasted that "by 2023, at least 50% of organizations will have an integration strategy empowerment team to support self-service integration approaches." In this context, citizen integrator strategies offer the "self-service integration approaches" that Gartner recommends.

With citizen integrators in each business department, IT teams and CDO units can achieve a hybrid/decentralized organizational model that empowers business users to build their own data connections independently — thus elevating data agility, integration efficiency, and integration success while conserving staffing resources, costs, and time.
The following three-step process is recommended for leveraging citizen integrators:

Designate a citizen integrator with domain expertise in each business department. A citizen integrator with some experience in data science, app development, or IT is best for this role — but ultimately, no IT or tech knowledge is required.

Train citizen integrators to operate easy-to-use, point-and-click tools for data integrations. With Integrate.io's dedicated integration specialists assigned to each account, Integrate.io assumes all training burdens and the responsibility for guiding and helping users to develop the integrations they need. This eases the process of implementing a citizen integrator strategy.

Establish guidelines to support a hybrid/decentralized organizational model where citizen integrators are responsible for: (1) developing and implementing the data integrations their departments need and (2) collaborating with and adhering to the data governance, data compliance, and data security standards that core IT sets and controls.

By implementing this three-step citizen integrator strategy, organizations and their IT departments can experience immediate relief from their most pressing integration bottlenecks. They will also achieve greater data agility, dramatic IT cost optimization — and most importantly, help unlock the tremendous wealth of untapped value found in unleveraged organizational data.

If you'd like to implement a citizen integrator strategy with a powerful, enterprise-grade data integration platform for fast, safe, and affordable data integration management, contact Integrate.io to see how our platform can optimize the speed, efficiency, and success of all your data integration projects at scale.

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We hope that you have enjoyed reading this whitepaper.

If so, be sure to check out our other Whitepapers related to "The Citizen Integrator Advantage".

Interested in learning more about Integrate.io?

Chat with an Expert!