

The blueprint for scalable and efficient data ingestion

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Engineering-led data pipelines, collaborative business tools, supercharged with Al.



What is Data Ingestion/Onboarding?

Introducing data from a new source into an existing system or process (e.g. new client, partner, ...) by standardizing any format into a master format.

- Repeated process
- Often small but important variances between clients



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Objectives of data ingestion



Accept data as-is

Reduce the burden on your counterparty

Don't force clients to conform to your format

"The onboarding process is our first chance at making a good impression with our customers after the dollars are already spent. And CloverDX gives us a tool to be able to move faster."





Simplicity

Empower the onboarding team

Minimize reliance on the engineering team writing new code

"That balance between 'can a non-technical person use it' versus how much effort you have to put in is important. Performance is number 1 for us. I'd say CloverDX hits the right notes for us."





Resilience

Handling variability in input format (client by client, day by day)

Tolerate week-to-week variances in each source

"You can imagine, you have 10 providers that are giving you these files, and even if it's the same type of file, same version, there could be variations within it, so we needed a process that could handle the variations in a configurable way."





Automation

Automating detection and assessment of data to onboard Orchestrate end-to-end onboarding process

Manual



Automated

"By far the most valuable thing CloverDX has brought is that automation. Being able to pick up those orders and jobs and run them in the middle of the night and not have somebody that has to be there first thing in the morning to get it done is definitely the most valuable piece."





Reusability

New client != New pipeline

"With CloverDX, the Engineering team builds reusable, generic components and processes, and the Client Operations team uses and extends them for client-specific integrations -- delivering fast turnaround for client onboarding."





Reality

Having two separate CRMs for this one company sounds like a nightmare, and it was...getting all of the data that was in different Excel spreadsheets into a consolidated location.

10 years ago, a script-based approach to integration seemed like a good idea for a leading US wealth management firm. 9 years later, after very substantial growth in clients and data sources, the maintainability, error rates and lag times had become a serious threat to transparency and overall quality of service.

Prior to using CloverDX, different parts of the organization were dealing with different client data, with everyone building their own technology - using different tools - to translate and standardize the data into a format suitable for each client. It was working, but not very efficiently, and everyone involved could feel the pain.

Before CloverDX, we would spend 80% of our time just extracting and preparing the data...



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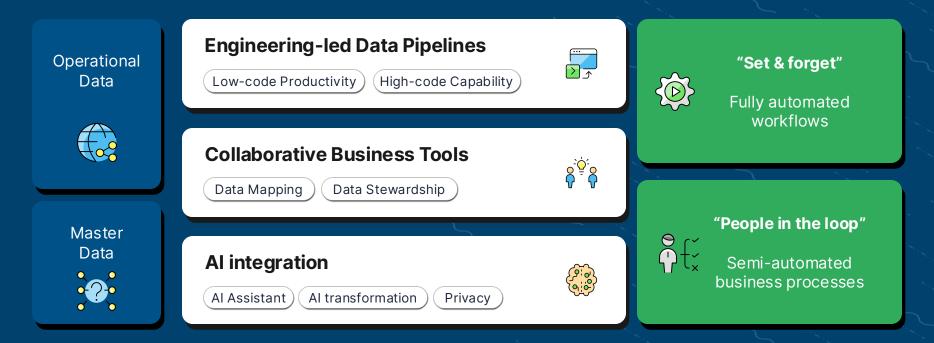
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The CloverDX Blueprint for ingestion



CloverDX Platform

CloverDX is a **data integration & transformation platform** designed to help organizations manage complex data workflows, automate data pipelines & ensure data quality across systems.



Self-hosted on-prem/cloud Privacy & Governance Cost control







Enterprise-grade Control Monitoring Enterprise interoperability







THE BLUEPRINT

Automation

Rule of Four

If you're doing it more than four times, automate

Challenge of abstraction

Is there anything common that I can abstract away and automate?

Even 50% automation is better than none.



THE BLUEPRINT

Division of roles

Engineers

- → Orchestration framework
- **→** Connectors
- → Ops & performance

Business teams

- → Data mapping
- → Business logic
- → Stewardship



Division of roles + Right tools

Engineers

- → orchestration framework
- → connectors
- → performance

CloverDX Designer CloverDX Server

control to the con

Business teams

- → data mapping
- → business logic
- → stewardship

CloverDX Wrangler CloverDX Data Manager

WRA	My Jobs	Q	Search jobs	Import job	Create new job
	JOB NAME	DATA SOURCE	LAST RUN ↑		
∂	Migrate Northwind Customers to MyERP	Northwind Customers 91 rows read	26 Mar at 15:26 ⚠ 91 rejected rows	X MyERP 0 rows written	□ Run ‡
Ф	Timesheet Ingest to Warehouse	timesheets	- Not run yet		i
	Ticket Sales Activity		- Not run yet		i
	Line items with VAT	■ OnlineStoreOrdersLineItems	- Not run yet		i
	Extend line items	OnlineStoreOrdersLineItems	-		ı



CloverDX ROI Metrics from Global Leaders Using CloverDX for Data Ingestion



Fulfillment of 4.5 million packages annually

2 hours => 12 minutes

Manual to automation transformation



Financial Services 8,000+ firms served

Real-time
100+ sources processed



Retail research Global leader

66 hrs / person saved per research cycle



Insurance SaaS 15,000+ customers

Bottleneck => "too fast" customer onboarding



Investment mgmt 500+ clients

5 days => 1/2 days report prep
Grow without headcount increase



Healthcare tech National leader

83% faster HL7 ingest & processing

"We get the speed and scalability from the client's perspective, and the technical scalability of a good architecture. That to us is a win. "





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Blueprint diagram



Pipeline trigger

Incoming source

File Message API call **Semi-automated**Upload to Data App
Run a job

Fully automated Schedule, file trigger, API Data Service, ...



Incoming source

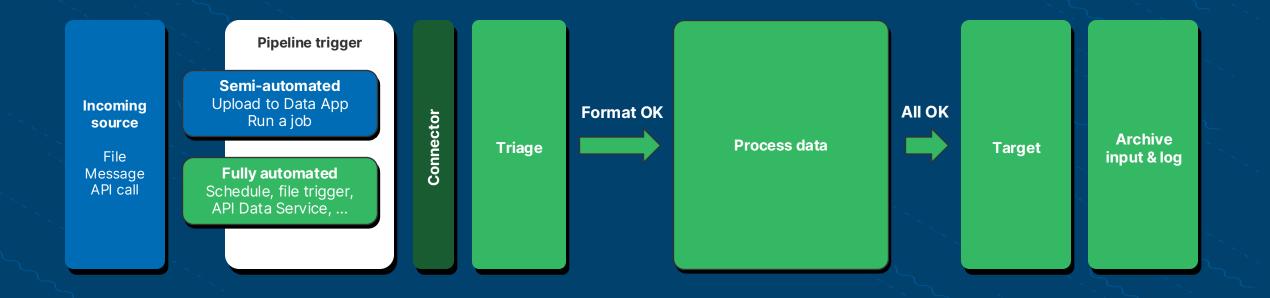
File Message API call Pipeline trigger

Semi-automatedUpload to Data App
Run a job

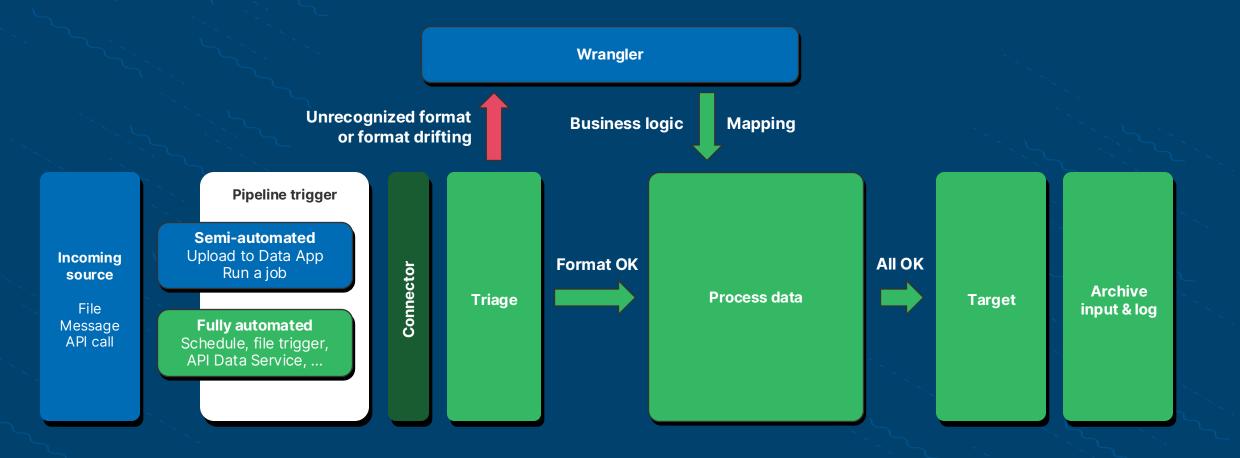
Fully automated Schedule, file trigger, API Data Service, ... Connector

Triage

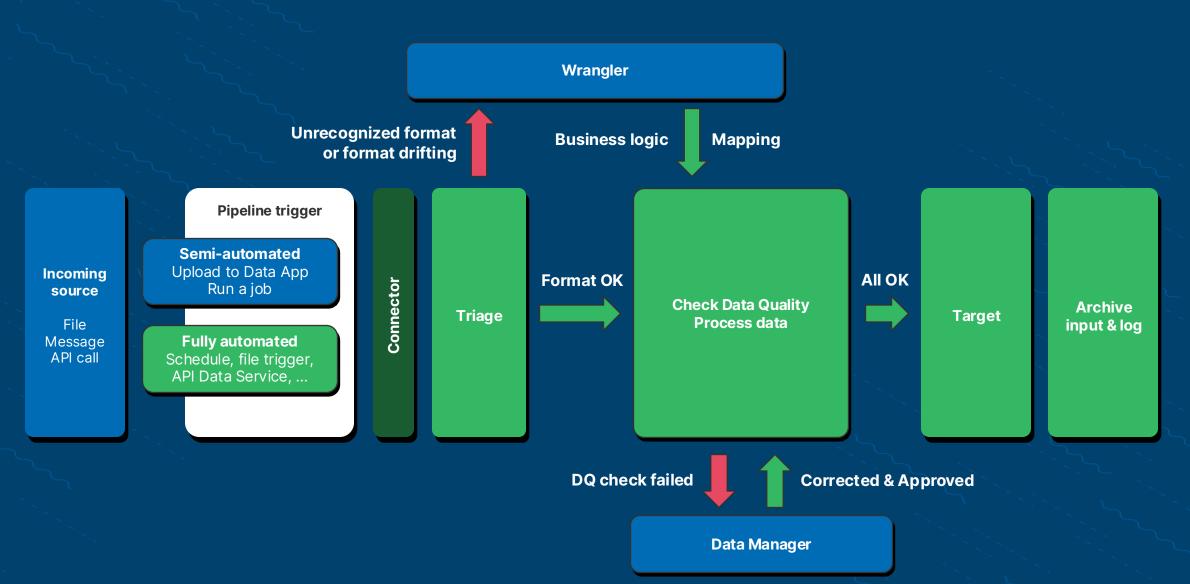














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Demo



Organizational Impact

- Faster, more reliable onboarding builds internal trust & transparency
- Frees up engineers → Refocus on innovation, not firefighting
- Positions company as agile partner for clients (pre-sales, onboarding, delivery)
- Boosts competitive edge: Pre-sale/Post-sale



The blueprint for scalable and efficient data ingestion

Takeaways

Repeatable patterns = Scalability
Divide work across roles = Efficiency
Empower non-technical staff = Innovation
Automation + Oversight = Reliability

Q & A

hello@cloverdx.com



Engineering-led data pipelines, collaborative business tools, supercharged with Al.







IWSR is the leading authority on global beverage alcohol data, delivering detailed market and brand-level insights across 160 countries. Their research supports strategic decisions for major drinks companies using a mix of supplier data, interviews, and market modeling.

- Automated data ingestion pipeline leveraging CloverDX Business Tools
 - Data Wrangler Flexible column mapping of non-standardized Excel formats
 - Data Manager Critical brand line matching step to IWSR's internal taxonomy
- Manual data entry from inconsistent Excel files was slow and error-prone. Researchers were spending too much time typing, not analyzing.
- Non-technical staff now manage early steps; researchers focus on value-added analysis.

66 hours saved per researcher during the research cycle

58% of files were automated in year one (targeting 70%+ next)





Formerly Diameter Health, a national leader in clinical data quality and interoperability, now merged into Availity they empower providers and health plans to benefit from actionable, real-time, and precise data.

- Reduces friction caused by variations of data compared to standards
- Refine raw patient data into high quality, actionable information at scale
- ✓ Ingest and transform complex healthcare data (HL7 v2) into a standardized format
- Solving the complex task of managing sprawl of variations in data formats from providers
- Enables clinical experts with a no-code way to ingest HL7 files

83% Reduced time in mapping HL7

Excel-based configuration

Easy learning curve for no code solution





An operational reporting and analytics platform specifically designed for ERP systems (like SAP and Oracle EBS). It empowers business users to easily access, understand, and report on complex ERP data without needing deep technical knowledge of the underlying database structures, delivering actionable insights directly from the source.

- CloverDX complements Angles by integrating directly with both ERP and non-ERP data (e.g., from CRM, legacy systems, spreadsheets) with the insights surfaced by Angles, providing a more unified and comprehensive view for cross-functional analysis and reporting.
- CloverDX helped Insightsoftware re-platform the data ingestion and validation layer to open up opportunities in new markets and deliver expanded value to customers.

100s of Global Deployments
OEM embedded data ingest

Scalable Platform for data ingest Large Volumes of Business-critical Data





A leading global provider of technology and solutions for risk and return management, enabling their customers to manage their investment decisions.

- They've automated time-consuming, repetitive manual investment reports with CloverDX
- Standardized set of reports but needs updated every quarter
- Replaced stressful weeks of building Excel reports with automated CloverDX jobs
- Enabled to scale out the business without increasing headcount
- They'd spend days on preparing reports each quarter, now all the calculations, validations and building of the reports is automated

90%

Reduction of repetitive manual work

5 days to 1/2 day

Reduced time to produce the reports they needed

New market opportunities

As the teams were freed up to take on new clients





Zywave provides software as a service products for insurance brokers and financial planners. Zywave is the largest enabler of digital quoting in the insurance industry, powering digital distribution by connecting insurers with agents and brokers to help create a seamless, end-to-end experience.

- Customer onboarding use case data conversion from legacy systems to their platform
- CloverDX took the data engineering team from being a bottleneck in the customer onboarding process to being too fast (and leaves them waiting for the customer success teams to finish their part)
- Replaced an older hand-coded bespoke solution with accumulated technical debt
- Turned manual time-consuming effort into a 'push-button' experience for less technical staff

30% reduction

Reduction of the data onboarding time thanks to templated solution

15,000+

Zywave customers

350

New product releases enhancements in a year





FIA Tech is a fintech company that standardizes and processes real-time trade data from brokers, hedge funds, and asset managers. Their platform, Trade Data Network (TDN), ingests diverse data formats and protocols, transforming them into a unified schema for downstream use.

- Their existing tool (eXceptor) couldn't scale, lacked flexibility, transparency a reliability.
- Chose CloverDX for its performance, flexibility, and collaboration
- Built a reusable, modular ingestion framework allowing developers and business experts (Connectivity team) to collaborate effectively
- They leveraged CloverDX's native Kafka, MQ, and FIX support to standardize and accelerate data ingestion workflows.

Compliance-readiness
Traceability and version control baked in

"We get the speed and scalability from the client's perspective, and the technical scalability of a good architecture. That to us is a win." - George Mohr