

The Data Atelier

Transforming energy data for **sustainability**,
powered by **Artificial Intelligence**.



The earth is **evolving**.
The way you manage your data should, too.



Data Lifecycle

The fast-paced way of life that we have today has blessed us with large amounts of information that are both extremely useful and paralyzing at the same time. How do you know which data can lead to a breakthrough or which one is useless and can be discarded when most data are forgotten the minute newer data comes along?

As more amount of diverse data are gathered by your company, it becomes harder to derive value from it. So, what do you do now in this overwhelming situation? You ask help from a different kind of intelligence.

Artificial Intelligence.

Meet the Data Atelier



The **Data Atelier** is a digital factory that is composed of an orchestration of pipelines, data tracking, and monitoring services. It provides an intelligent engine that runs the internal processes and machine learning algorithms that come with production. When optimized, it drives the cost of production down by ensuring economy-of-scale. In addition, it's fully customizable based on your company's data management needs.

Here are the innovative things it can do for you:

Enhance the capability of data engineers and data scientists to create workflows and models suitable for production use.

Foster collaboration with different digital teams within your company.

Allow digital teams to trigger an "on-demand" type of service for processing ingested data, and control their own data.

Centralize and normalize the schema and structure of the different processes and data types.

Enable internal data engineers and clients to visualize and monitor the data that has been ingested in Iraya's **ElasticDocs**.

Give a fresh new perspective to old data which can lead to better research results.

Facilitate data tracking, policies compliance & SOP's implementation.

Take AI from experimentation to at-scale deployment in a low-code environment.

Future-proof your data.

With the **Data Atelier**, you have the power of machine learning and artificial intelligence in your hands.

You customize your data the way you want it, how you want it, when you want it.

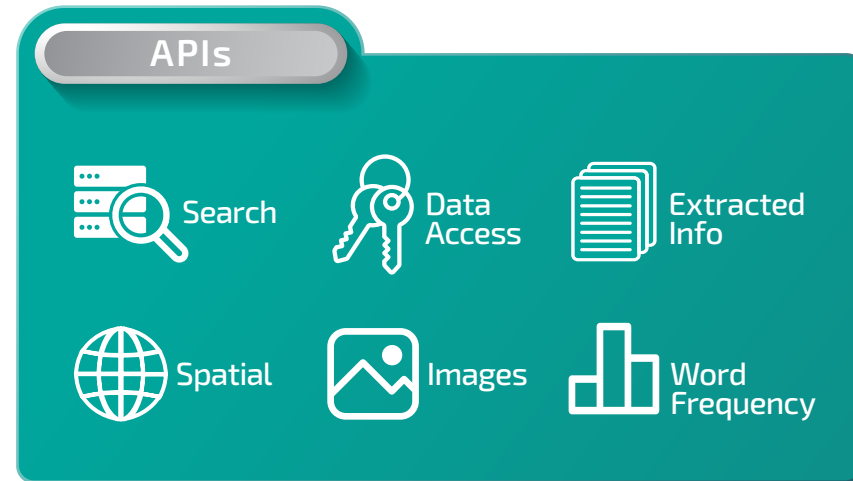
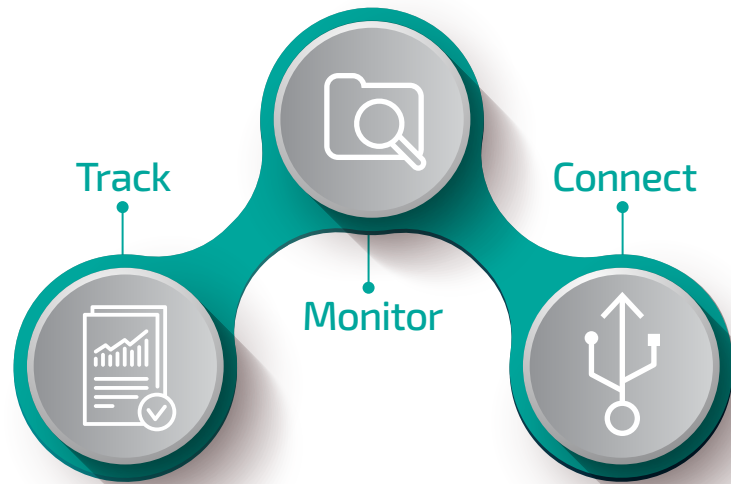


Step inside the workshop.

The **Data Atelier** has an **8-step process** to industrial artificial intelligence. All you need to do is provide a data dump of your structured and unstructured data and it goes through these steps.

STEP 4

The Data Warehouse



This step enables faster and more robust big data insights, making it accessible to all users across teams, maximizing the value of the large database. It will be a consistent and quality assured database. Rapid understanding is feasible as it is possible to rapidly test theories and generate evidence-based understanding. This ensures higher quality results and faster turnaround times.

The Data Warehouse also tracks, catalogues, and monitors all extracted digital data. With its unique ID system, it delivers and connects the resulting structured data to the various stakeholders within the organization via API links. Data managers can track the usage of data and allocate additional resources, where necessary. Meanwhile, newly processed data can be accessed constantly by the data scientists in the organization.

These data can then go through additional processes such as cognitive search, auto-image classification, and data analytics.

The Data Warehouse supports effective user and data governance within the **Data Atelier**.

STEP 5

The Helmsman



Iraya recognizes that different enterprise teams follow different digital processes. Our internal data orchestrator, the Helmsman, enables the **Data Atelier** to scale horizontally. This tool allows for processing of different workflows and pipelines concurrently, which means that there is a huge level of flexibility in handling various tasks. This provides scalability to support enterprise digital transformation initiatives.

STEP 6

The Machine Learning (ML) Application Layer



This can be either internal or external applications which can be combined to create new machine learning services. Data Version Control (DVC) is implemented to ensure that ML models are shareable and reproducible. It records & queries experiments, packages data science codes, and manages models in a central repository.

STEP 7






The Internal Connectors

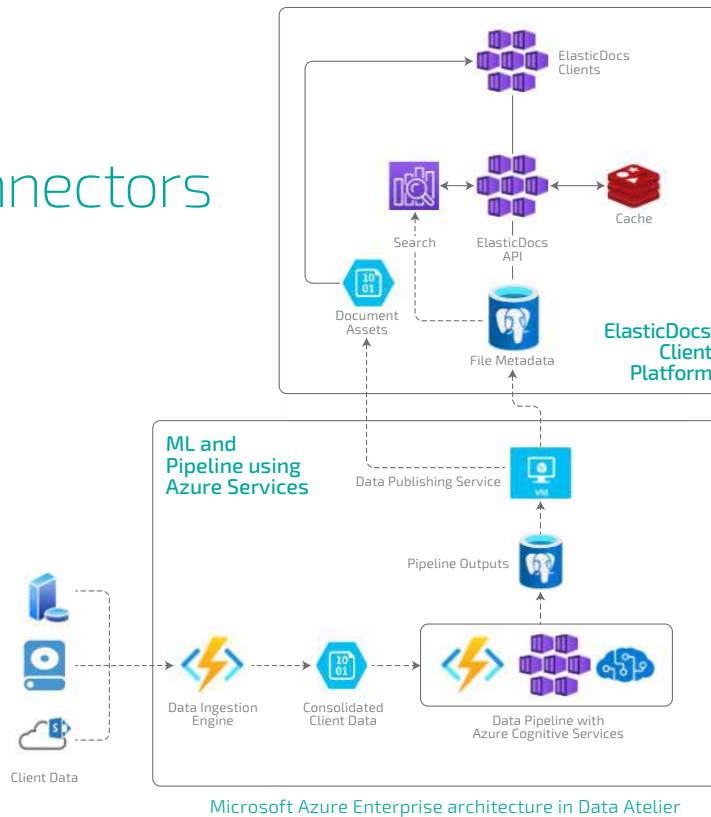
ELASTICDOCS™



This connects the **Data Atelier** to **ElasticDocs** and makes the data ready for analysis for both upstream and downstream applications. Developers can build new dashboard analytics or integrate existing legacy systems. This feature allows for constant upcycling of data, thereby achieving the goal of data sustainability where you can maximize the use of existing knowledge to create new insights.

STEP 8 External Connectors

-  Azure Cognitive service
-  Azure Virtual Machine
-  Azure Database for PostgreSQL
-  Azure Cache for Redis
-  Azure Kubernetes Service
-  Azure Blob Storage
-  Azure Functions



This final step allows you to connect the **Data Atelier** to a software of your choice. Here are a few external connectors that can be paired with the **Data Atelier**:

- Microsoft Azure for Blob Storage and Data Lake
- Amazon Web Services, including AWS S3, Batch Service, Redshift, DynamoDB, etc
- Data Bricks
- Google Cloud Platform, including Big Query, Cloud SQL, Bigtable

The power of AI
is now **yours.**

This process makes the **Data Atelier** one of the most powerful instruments in managing data today. It has built and assembled more than thousands of AI and AI management tools so that you can work faster and better while optimizing cost and performance.

The **Data Atelier** is also your chance to discover the world of artificial intelligence and machine learning. Now is the time to find out how to make this innovation work for you.

Contact us at info@irayaenergies.com to learn more.

