Airbyte

# The new modern data stack

## Powered by Airbyte, Airflow, dbt

# Hello!

## I am Michel Tricot

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## Airbyte

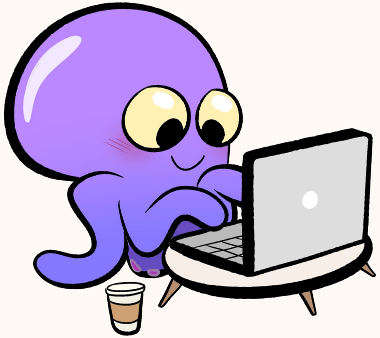
### Open Data Integration (ELT)

- 3,000 users
- 1,900 Slack members
- 3.5k GitHub stars

## 1

# Extract - Load - Transform

A new paradigm for modern data teams



## Extract

Source-specific routines to pull selected data from an external system.

## Transform

Business logic specific to your organization to serve an analytics or operational use case.

## Load

Destination specific routines to push data where it is going to be consumed.

# ETL doesn’t work in today’s world

## Inflexible

- Friction when changing an existing pipeline.
- Hard to add new data.
- Most issues force data to be re-extracted.

## Lack of Autonomy

- Warehouses made data consumers more autonomous.
- Changes require engineering involvement.

## Complex

- Custom DSL.
- Force adoption of a data stack.
- Address 70% of the needs, 30% still built and maintained in-house.

## Extract

**General-purpose** routines to pull selected data from a source.

## Load

**General-purpose** routines to push raw data where it is going to be consumed.

## Transform

Business logic specific to your organization to serve an analytics or operational use case with SQL / dbt / ...

# ELT fixes the ETL-related issues

## Flexibility

- All the data available on the destination.
- Data consumers are free to use what they need for the insights they want.

## Autonomy

- Data consumers can leverage SQL queries to transform the data the way they want.
- No need to involve the engineering team.

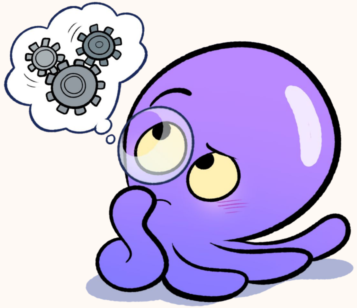
## Future proof

- Issues during transformation don’t prevent access to the data.
- Easy to update transformation schemas.

## 2

# The open modern-stack

## Compose with best of breed



# The world of data is changing

## All companies have custom data needs

- Types
- Skills
- Scale
- Budget
- Security
- Privacy
- Turnaround
- Compliance
- ...

**We are moving away from horizontal, end-to-end solutions**

# Select the best building blocks

## Extract & Load

Airbyte

Fivetran

## Data warehouse

snowflake

amazon REDSHIFT

BigQuery

databricks

## Quality

great_expectations

## Transformation

dbt

SQL

## BI / Visualization

Superset

Looker

## Observability

MC MONTE CARLO

Bigeye

## Infrastructure

docker

Azure

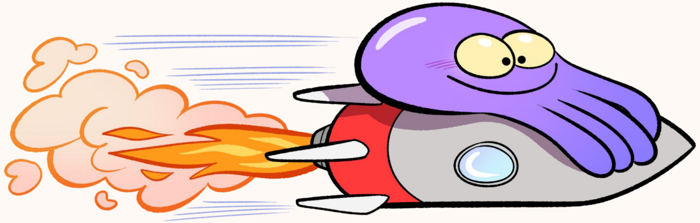
amazon web services

# Composed with the best glue

## 3

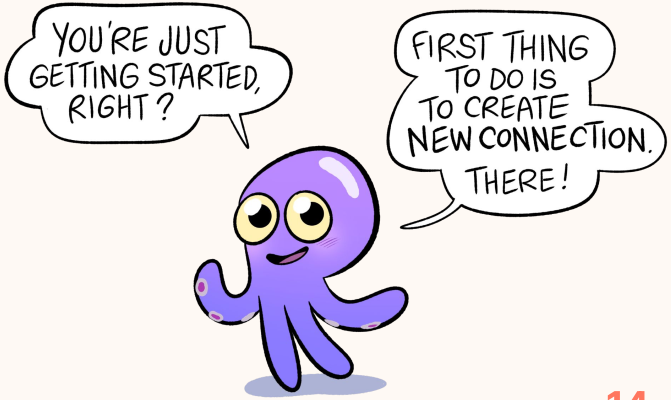
# Airbyte-dbt-Airflow

### To rule them all



# Airbyte: Solving Data Integration

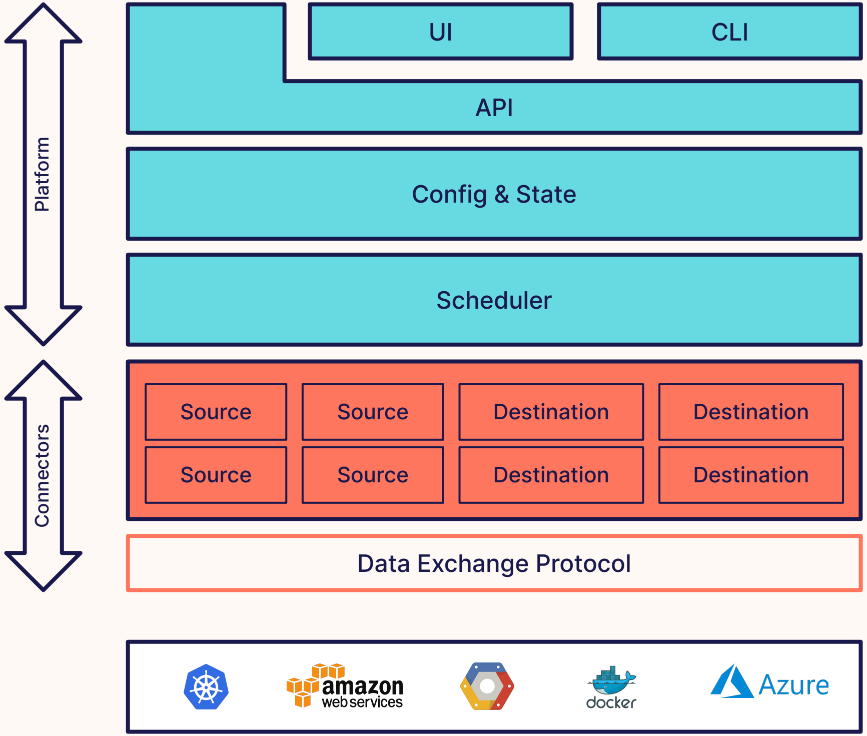
- **Open-Source** data integration platform
- **80 high-quality data connectors** (targeting 200 by EOY)
- **Connector Development Kit** to build your own data connector
- Active **Slack community**
- Super fun mascot: **Octavia Squidington III**


YOU'RE JUST GETTING STARTED, RIGHT?
FIRST THING TO DO IS TO CREATE NEW CONNECTION. THERE!

# An open data platform for modern teams

Monitoring
Incremental updates

Connector Development Kit
Monitoring



Platform

UI

CLI

API

Config & State

Scheduler

Connectors

Source

Source

Destination

Destination

Source

Source

Destination

Destination

Data Exchange Protocol

amazon web services

docker

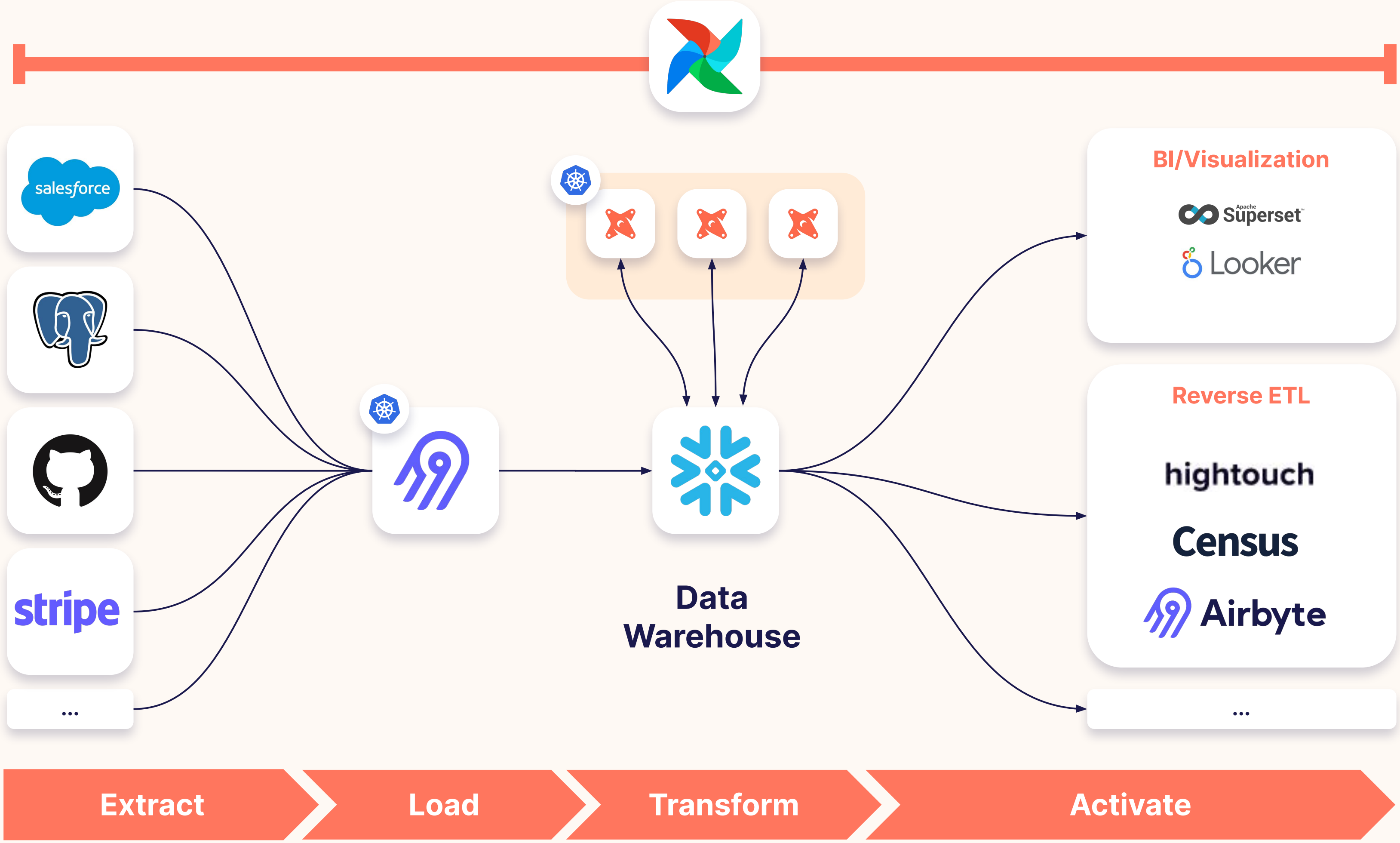
Azure

# dbt: Solving Data Transformation

- **Open-Source** data transformation application
  - **Transform SQL** to tables, views
  - **Cascades** transformations
- Supports most SQL **Databases** & **Warehouses**
- Brings software engineering **best practices** to Analytics Engineers
  - Version control
  - Testing
  - Packaging

# Airflow: Solving Scheduling

## Do I really need to tell you what Airflow is?


salesforce
stripe
...
Superset
Looker
hightouch
Census
Airbyte
...

**BI/Visualization**

**Reverse ETL**

**Data Warehouse**

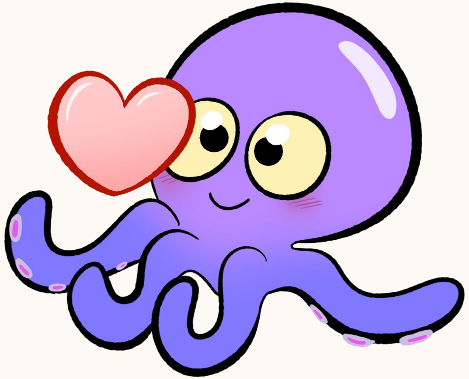
**Extract** → **Load** → **Transform** → **Activate**

# Demo

All source code & configurations available on [github]

# Thanks!

## Any questions?

- @MichelTricot
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