



dbt Projects on Snowflake

dbt Projects on Snowflake Overview



Pain points we hear from customers

Biggest challenges with data engineering use cases



Hard to let new teams build and deploy pipelines

I want to encourage lines of business or departments to prepare their own data, but there's a steep learning curve and a lot of tools involved. I want something simpler.



Burden of maintaining multiple systems

I need to manage compute for an orchestrator (e.g. Airflow) and Snowflake.

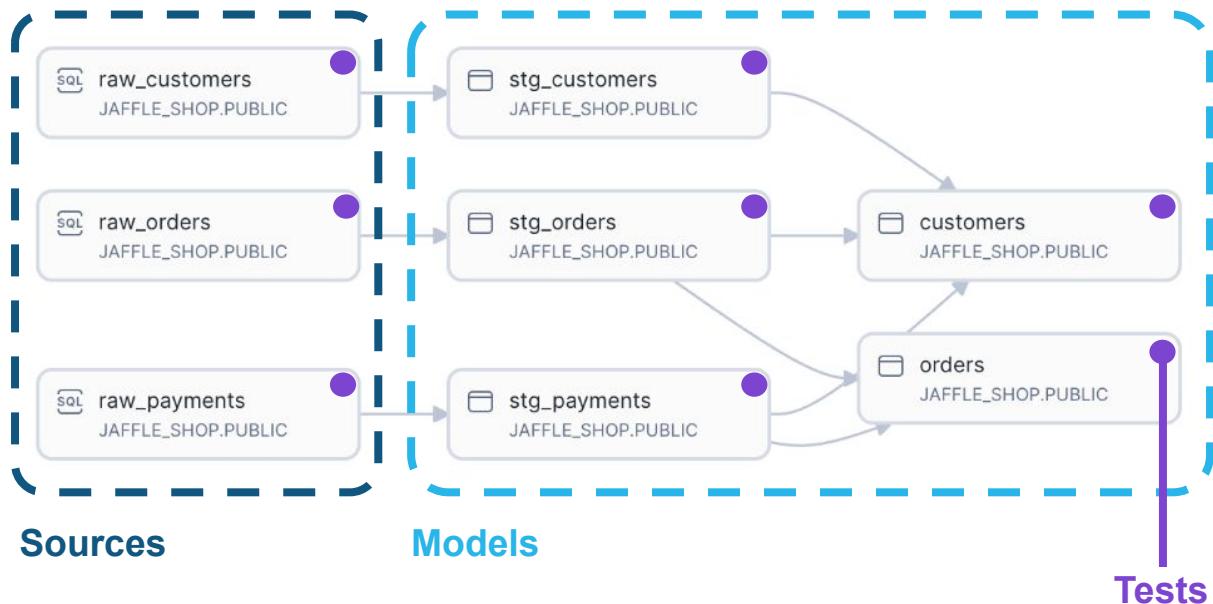


Painful to debug across system

Logs are spread across the orchestrator, dbt logs, query logs. It's hard to find the bottleneck! This makes self-service even harder.

What is dbt (data build tool)?

dbt is an open-source framework that brings the development best practices to pipeline development.



dbt Projects on Snowflake

dbt Projects enable organizations to build, test, deploy, and monitor data transformations with managed dbt in Snowflake



Self Service

Self-serve,
fully-managed data
engineering pipelines
in Snowflake



Observable

Unified observability
and debugging. Run,
monitor, and debug all
within Snowflake



Governed

Uniform governance
and security model for
data and pipelines



Managed

Higher reliability with
fewer, disparate
systems. Run dbt
projects in minutes

dbt Projects on Snowflake

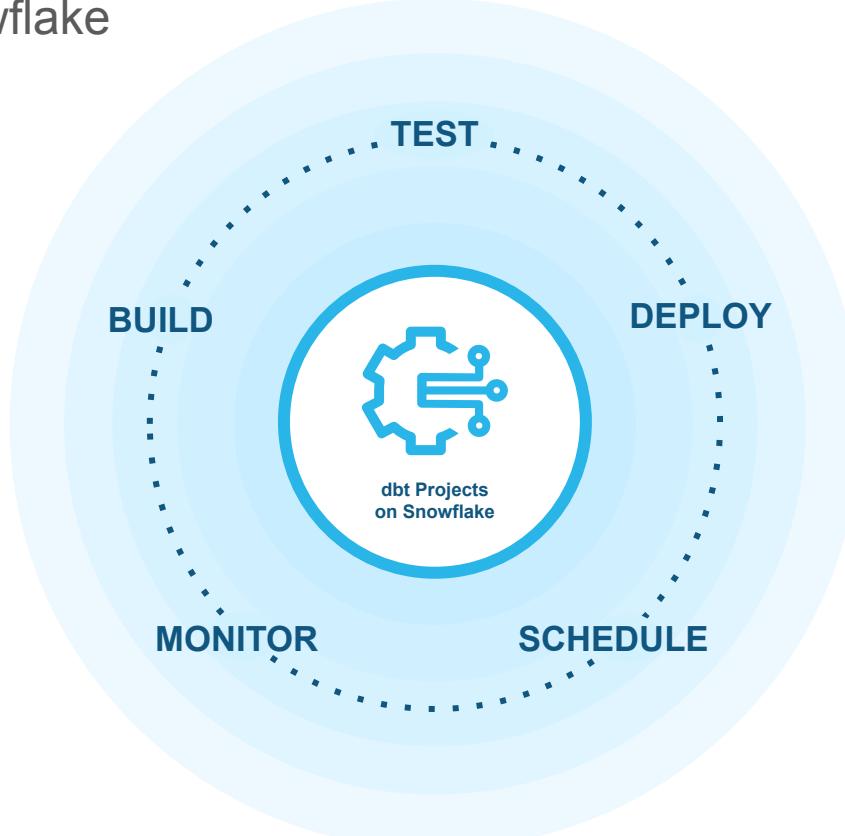
Run and govern dbt natively on Snowflake



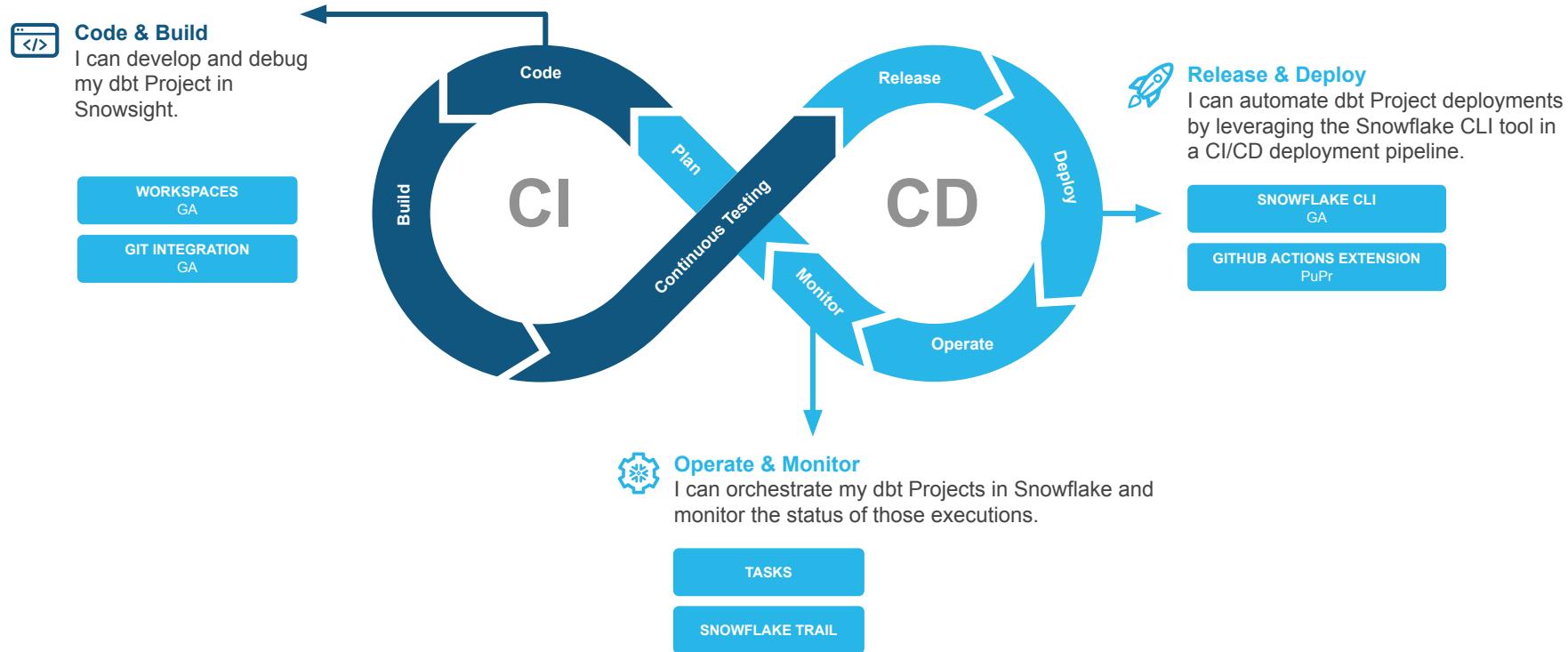
Consolidate systems to reduce administration and improve debugging



Enable new teams to build and deploy pipelines



dbt Projects Lifecycle



Self-Service Transformations within Snowflake

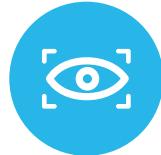
Run dbt natively on Snowflake



Intuitive



Fast



Reliable



Everything I'm seeing here is massive leaps ahead. I'm really liking what I'm seeing ... You've got the **availability of the whole pipeline running**. You've got the availability of different tasks. And, from the looks of it, you've got the ability to run dbt tests ... I think **this is awesome**.



Chris Hastie

InterWorks – Data Superhero

How it works



Snowflake Workspaces

Your one-stop shop for code editing and collaboration

One editor for all

SQL, notebooks, Python, pipeline projects all in one editor

File based development

All your code organized in files and folders

Private by default

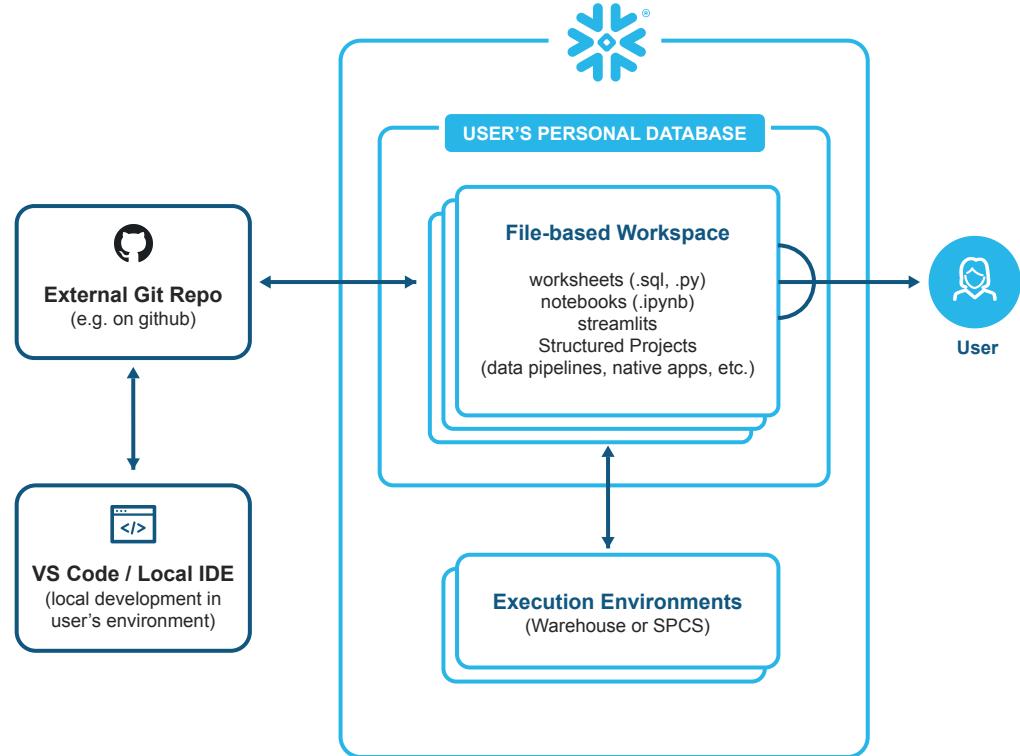
Leveraging personal databases for private development

Git integration

Work directly with your git repos

Collaborate with others

Collaborate safely in shared workspaces



Create or Import

1 2 3 4

Import an existing
dbt project from git
or create a new dbt
project

Home +

Create workspace from git repository

Repository URL ⓘ

Workspace name ⓘ

API integration ⓘ

[Learn more](#)

Personal access token Authenticate by selecting personal access token

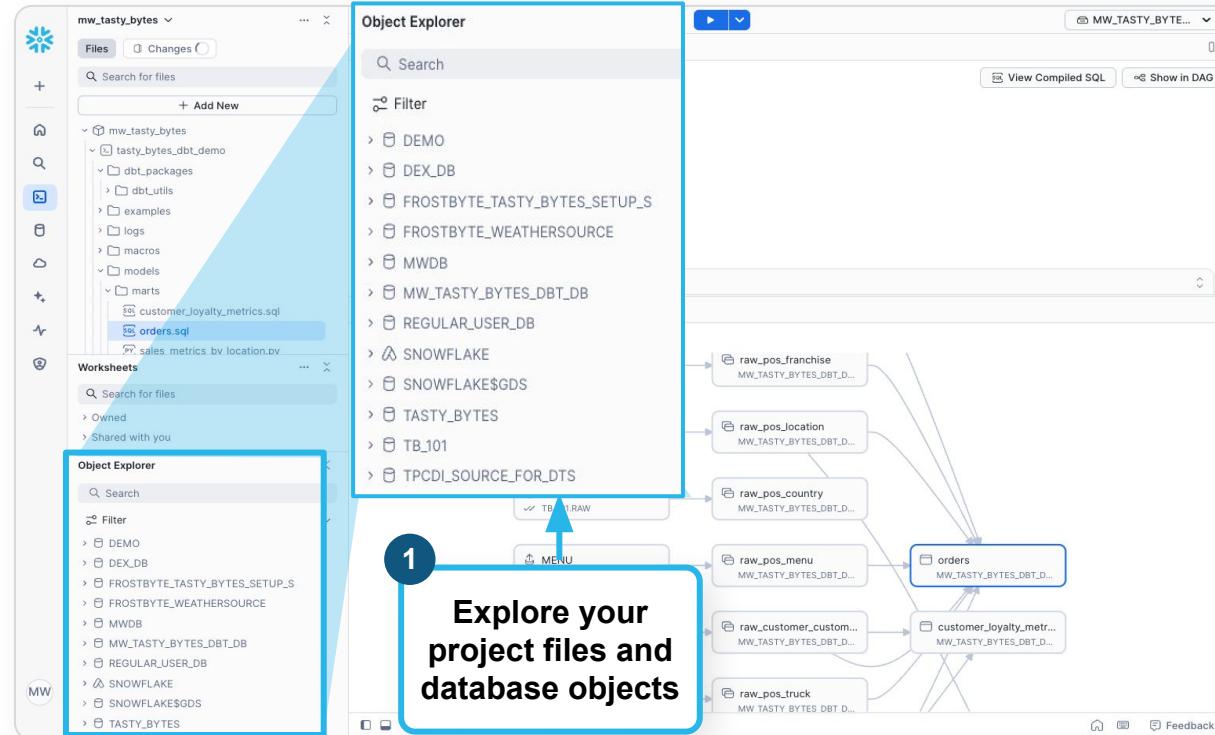
Public repository Authentication is not required

Credentials secret ⓘ
 Select database and schema

Edit, Test, and Deploy

1 2 3 4

View, edit, test,
deploy a dbt Project
from the new
Workspaces in
Snowsight



Edit, Test, and Deploy

1 2 3 4

View, edit, test,
deploy a dbt Project
from the new
Workspaces in
Snowsight

The screenshot shows the Snowsight interface with a highlighted workspace titled "mw_tasty_bytes". A modal window titled "Select a project" is open, with the "Project" tab selected. The "tasty_bytes.dbt_demo" project is highlighted. The main workspace displays a dbt command-line interface (CLI) terminal with the following command:

```
Project: tasty_bytes.dbt_demo
FROM {{ ref('raw_pos_order_det') }}  
JOIN {{ ref('raw_pos_order_header') }}  
ON od.order_id = oh.order_id  
JOIN {{ ref('raw_pos_truck') }}  
ON oh.truck_id = t.truck_id  
{{ ref('raw_pos_menu') }}  
m_id = m.menu_id  
franchise_id = f.franchise_id  
JOIN {{ ref('raw_pos_location') }} l  
ON oh.location_id = l.location_id
```

The workspace also includes a sidebar with "Object Explorer" and a "DAG" diagram showing the data flow between various tables like raw_pos_location, raw_pos_country, raw_pos_menu, raw_pos_order_det, and orders.

Edit, Test, and Deploy

1 2 3 4

View, edit, test,
deploy a dbt Project
from the new
Workspaces in
Snowsight

The screenshot shows the Snowsight interface with a dbt project workspace. The left sidebar displays the workspace structure with sections for 'mw_tasty_bytes' (containing 'tasty_bytes_dbt_demo', 'dbt_packages', 'examples', 'logs', and 'macros'), 'Worksheets' (with a search bar), and 'Object Explorer' (listing various databases and tables). The main area shows a code editor for 'orders.sql' with a dropdown menu set to 'dev'. A callout bubble with the number '3' points to this dropdown, containing the text: 'Choose target environment (dev/production)'. Below the code editor is a 'Results' section and a 'Output' section showing a DAG diagram of the data pipeline. The DAG diagram illustrates the flow from raw data sources like 'COUNTRY', 'MENU', and 'CUSTOMER_LOYALTY' through intermediate tables like 'raw_pos_country', 'raw_pos_menu', and 'raw_customer_custom...' to final tables like 'orders' and 'customer_loyalty_metrics'. The top right of the interface includes buttons for 'Compile', 'Test', 'Deps', 'Show', 'List', and 'Run operation'.

Edit, Test, and Deploy

1 2 3 4

View, edit, test,
deploy a dbt Project
from the new
Workspaces in
Snowsight

mw_tasty_bytes

Project: tasty_bytes_dbt_demo

Profile: dev

Compile

- ✓ Test
- ✗ Deps
- >Show
- List
- Run
- Seed
- Snapshot
- Run operation

SQL Compile

- ✓ Test
- ✗ Deps
- Show
- List
- Run
- Seed
- Snapshot
- Run operation

DAG

tasty_bytes_dbt_demo

LOCATION

COUNTRY

MENU

CUSTOMER_LOYALTY

raw_pos_order_det

raw_pos_order_header

raw_pos_truck

raw_pos_menu

raw_pos_franchise

raw_pos_location

raw_pos_country

raw_pos_menu

raw_customer_custom...

customer_loyalty_metr...

FROM {{ ref('raw_pos_order_det') }}

JOIN {{ ref('raw_pos_order_header') }}

ON od.order_id = oh.order_id

JOIN {{ ref('raw_pos_truck') }}

ON oh.truck_id = t.truck_id

JOIN {{ ref('raw_pos_menu') }}

ON od.menu_item_id = m.menu_id

JOIN {{ ref('raw_pos_franchise') }}

ON t.franchise_id = f.franchise_id

JOIN {{ ref('raw_pos_location') }}

ON oh.location_id = l.location_id

Results

Output DAG DBT Project Output

4

Select from command options

Edit, Test, and Deploy

1 2 3 4

View, edit, test,
deploy a dbt Project
from the new
Workspaces in
Snowsight

Project MW_TASTY_BYTES_DBT_DB.DEV....

- ↑ Redeploy dbt project
- Disconnect
- Scheduled runs
- Create schedule
- View schedules

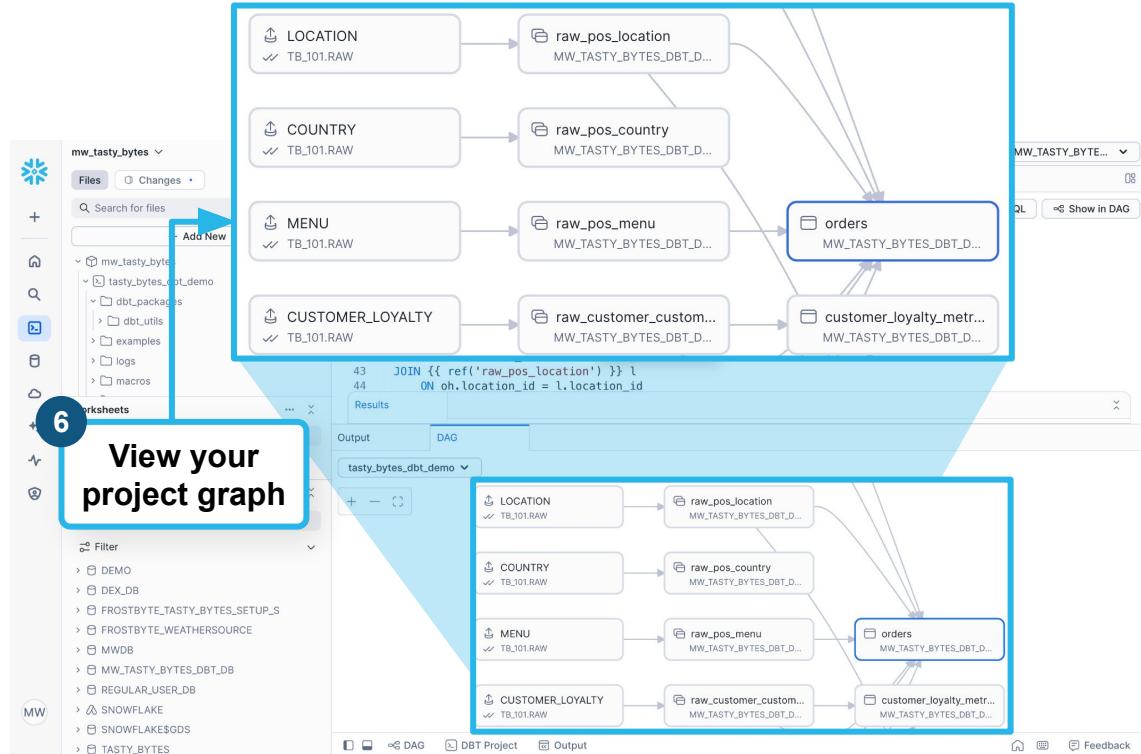
5

Select from command options

Edit, Test, and Deploy

1 2 3 4

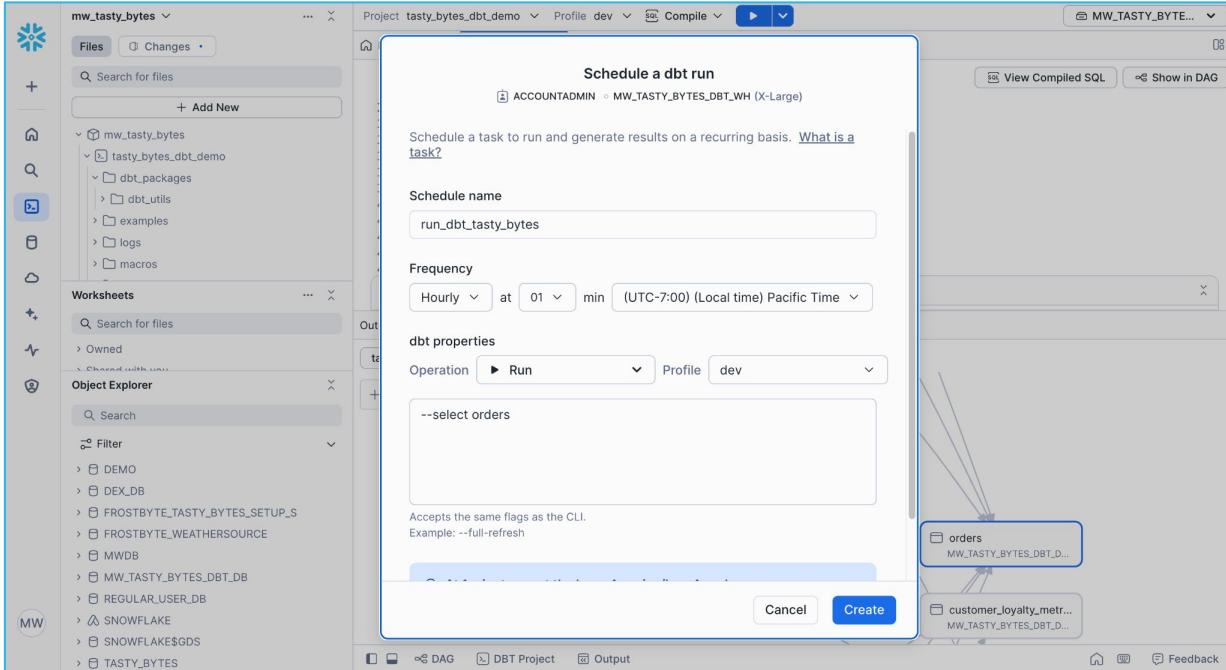
View, edit, test,
deploy a dbt Project
from the new
Workspaces in
Snowsight



Automate

1 2 3 4

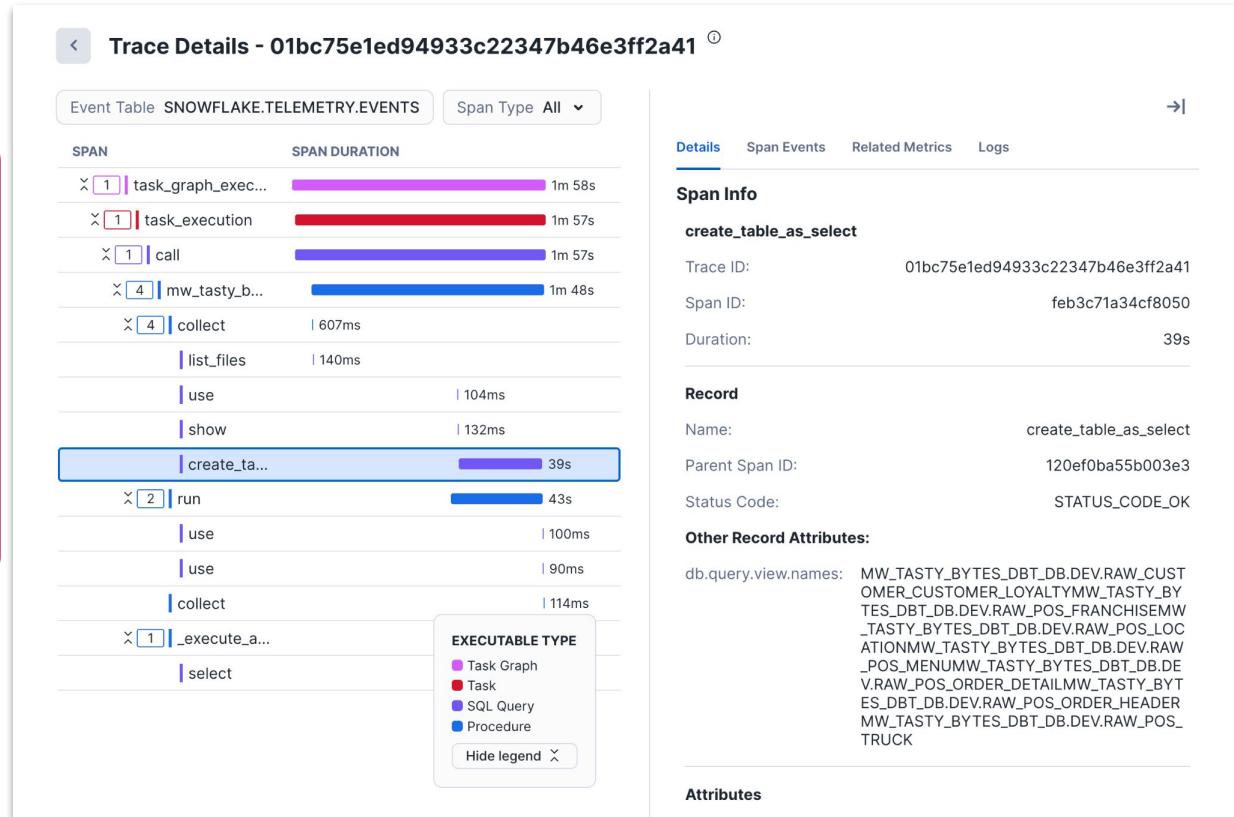
Schedule execution of the dbt Project



Monitor

1 2 3 4

See dbt Project execution history and understand it with fine grained logging and tracing



Demo Showcase



dbt Projects on Snowflake

Demo



Tasty Bytes

Global food truck network, localized menu options, 15 countries, 30 major cities, and 15 core brands



SQL Data Engineer

Transform raw data from food trucks into business-ready datasets for BI analysts



Build

Self-serve, fully-managed data engineering pipelines in Snowflake



Testing

Validate models and catch issues before reaching production



Scheduling

Reduce burden of managing compute for orchestrator

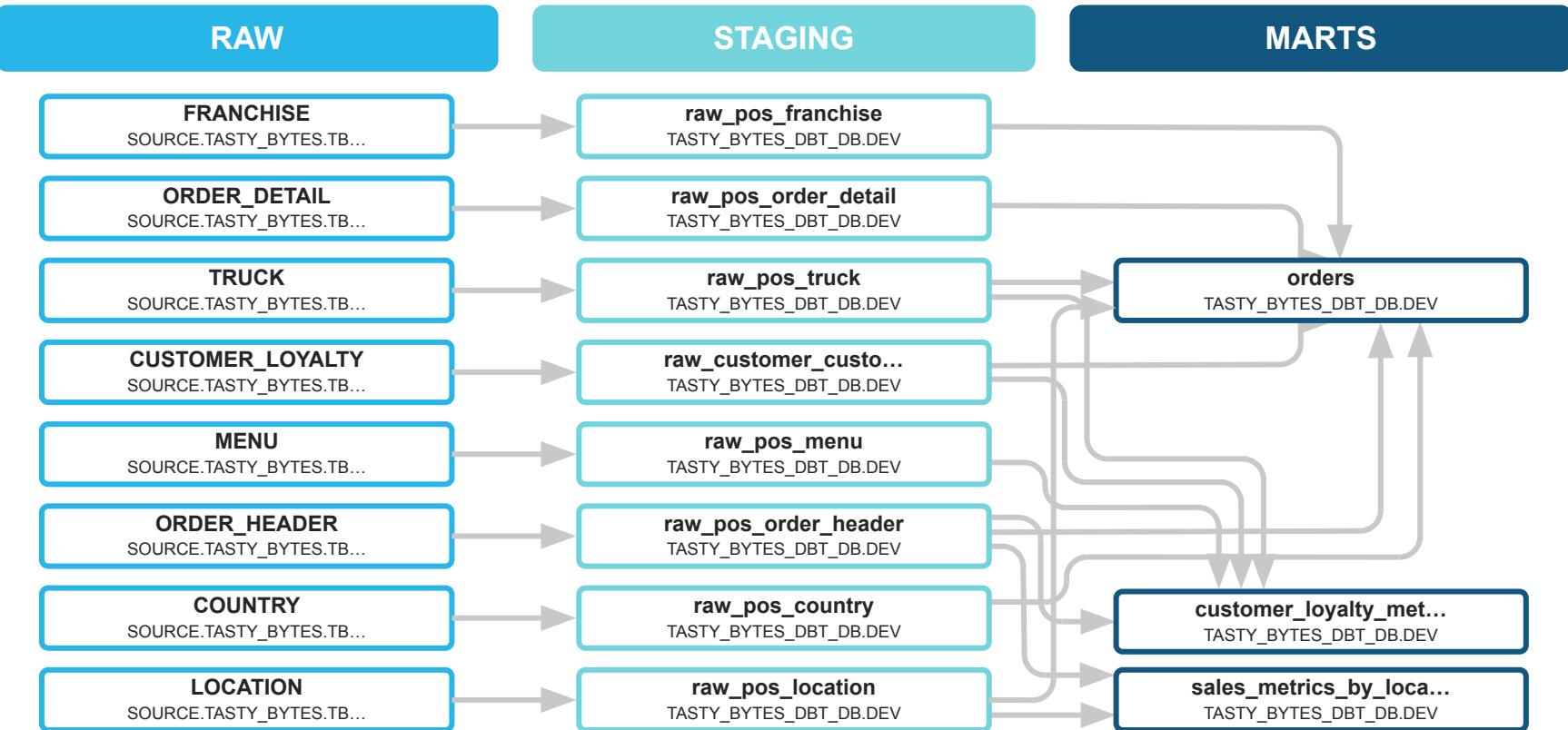


Monitoring and Tracing

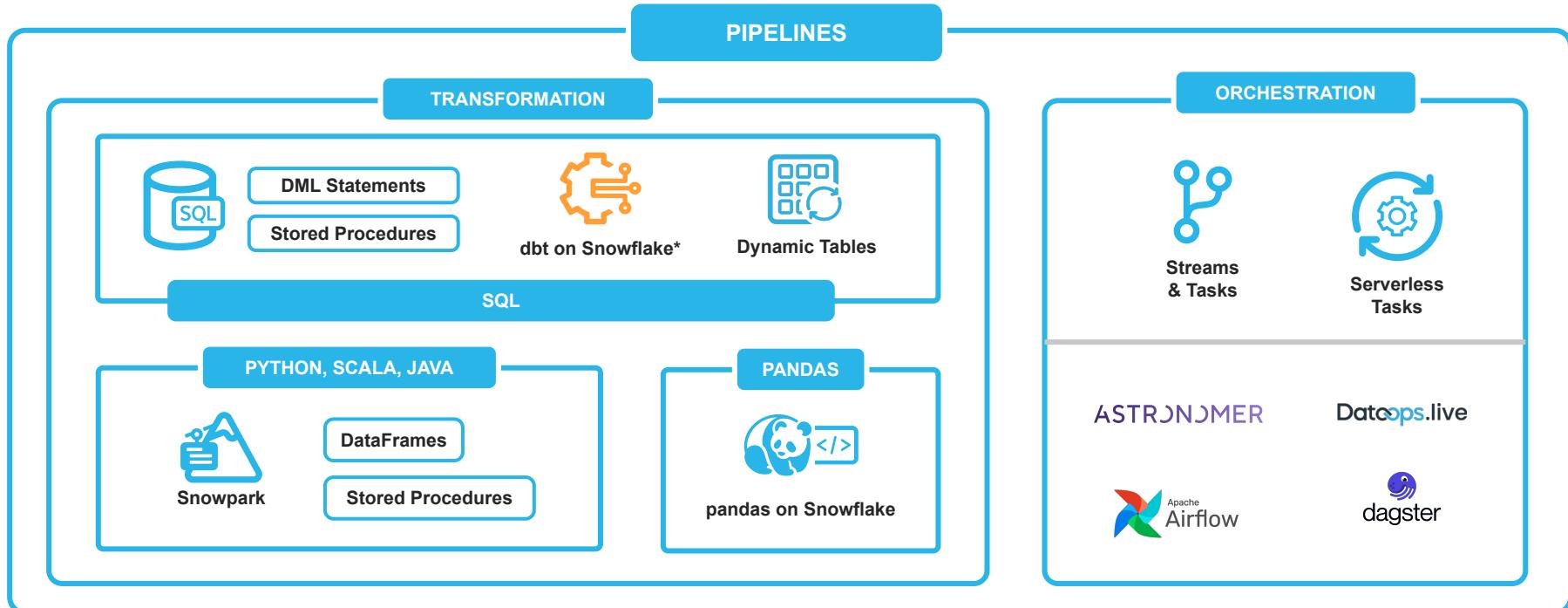
Unified observability and debugging



A Look At The Data Model



Streamlining Data Engineering with Snowflake



Learn more...

dbt projects on
Snowflake demo
video



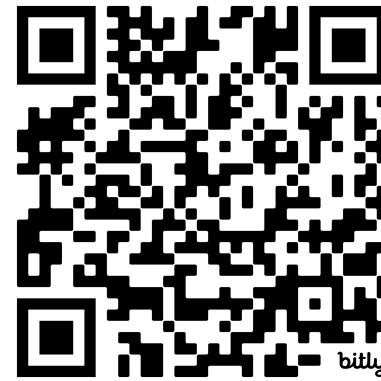
[link](#)

Data Pipelines blog
featuring dbt projects



[link](#)

Best practices for
operationalizing dbt
Projects



[link](#)



dbt Projects Positioning



dbt Projects on Snowflake provide seamless, native integration for teams committed to Snowflake—unlocking instant scalability, governance, and streamlined transformations powered by dbt. For enterprises with cross-platform needs, **dbt Platform** adds flexibility, drag and drop UI, and metadata-driven collaboration

When to go with dbt Projects and dbt Platform?

	dbt Projects on Snowflake	dbt Platform (formerly dbt Cloud)
Use case	Teams standardizing on Snowflake as the data platform; easy on ramp to managed dbt	Data products involving multiple platform, departments & tools with cross-project collaboration
Persona	Data engineers & analytics engineers using dbt Core	Diverse user profiles (e.g. Analysts, Data Engineers, Product Owners) needing code & UI access
Customer Example	Companies doing in-Snowflake transformations with dbt Core and orchestrating via third party tools – ready for a snowflake managed experience.	Ideal customers are data teams operating multiple platforms—combining code-based and UI-driven orchestration—looking to centralize transformation logic, enforce governance, and enable collaboration across personas

dbt and Snowflake: Delivering Scalable, Flexible, and Unified Data Products

Standardizing on dbt unlocks workload portability, enhanced collaboration, data quality, and optimized compute across all platforms—especially powerful when leveraging Snowflake.



- Cloud-native support for dbt core and Fusion engine*
- Build, test, deploy, and monitor data transformations in Snowflake
- Develop using cloud-native IDE or IDE of choice
- Built-in orchestration
- Data lineage graph visualization
- Integration with GIT
- CI/CD Support
- Contextual insights via Semantic layer
- Support for Lakehouse architecture with Iceberg
- Enterprise-grade security and governance
- Cost management and governance
- Centralized logging and alerting

Built on open-source dbt-core integrated natively within Snowflake, delivering frictionless orchestration, uniform governance, and optimized developer experience—ideal for Snowflake-focused teams

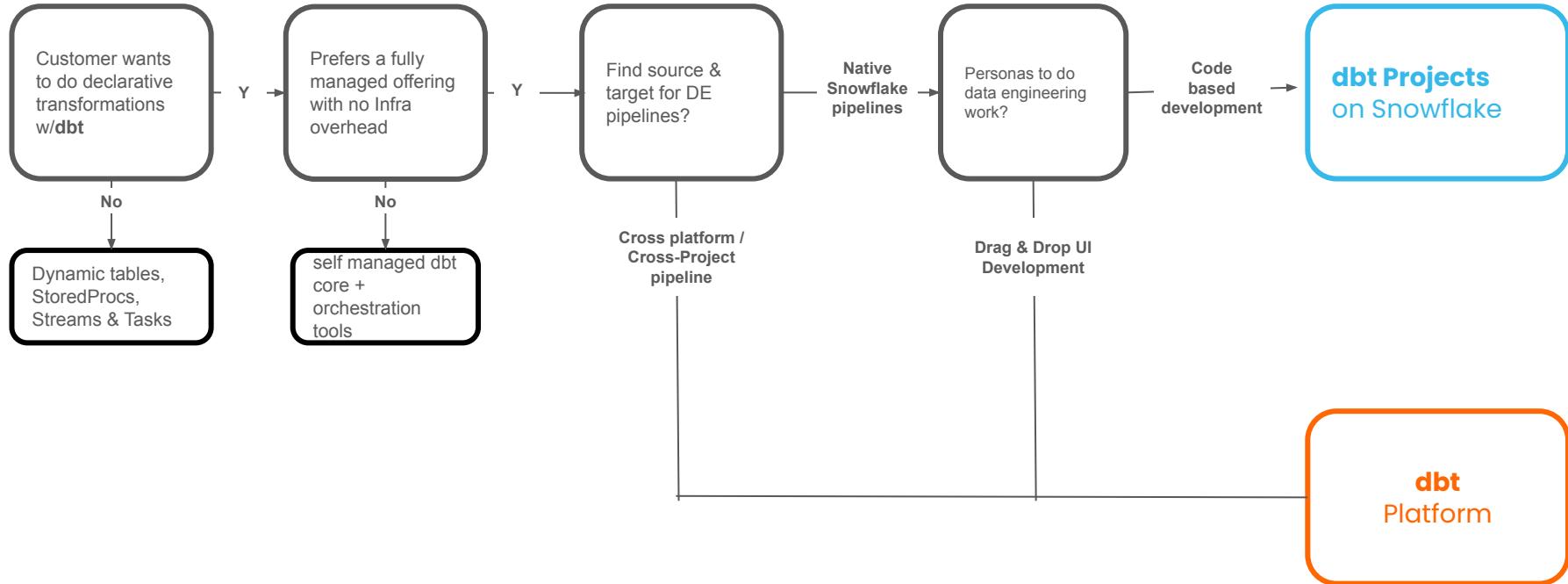
- + Data Pipelines with cross-platform support API to query model metadata and lineage
- + Drag-and-drop interface for pipeline creation
- + Robust enterprise orchestration flexibility and resilience
- + Deeper tool extensibility in heterogeneous data stacks
- + Advanced CI/CD features such as Git repo caching, partial parsing, dbt catalog

Adds capabilities for broader, cross-platform and cross-project collaboration, flexible orchestration, and centralized metadata

* Coming soon to dbt Projects on Snowflake

Decision Flow

START HERE



Summary

✓ Do's

- **Ask discovery questions** to understand the customer's data landscape
- **Understand current dbt usage and experience** (tools, team, platforms)
- **Position dbt Projects** as a way to **reduce TCO** – *in qualified scenarios*
- **Engage partners** to explore **dbt Labs** features like multi-platform support, team collaboration, and drag-drop development.

🚫 Don'ts

- Don't use a **one-size-fits-all** approach for migration of existing dbt core workloads.
- Don't **undermine existing dbt platform** deployment, which are often tightly integrated and actively driving consumption.
- Don't bypass our **strategic partnership** with dbt Labs – loop them in for deeper collaboration



Choosing the right dbt approach for you

dbt Projects on Snowflake	dbt Platform (formerly dbt Cloud)	dbt Core
Build data transformation pipelines exclusively for Snowflake data.	Comprehensive dbt experience with advanced features and broader platform support.	Open-source dbt framework, offering maximum flexibility and control.
Teams standardizing on Snowflake as the data platform; easy on ramp to managed dbt	Data products involving multiple platform, departments & tools; enterprise-scale collaboration	Teams requiring deep customization, integrating with existing orchestration tools, or those who prefer a self-managed environment.

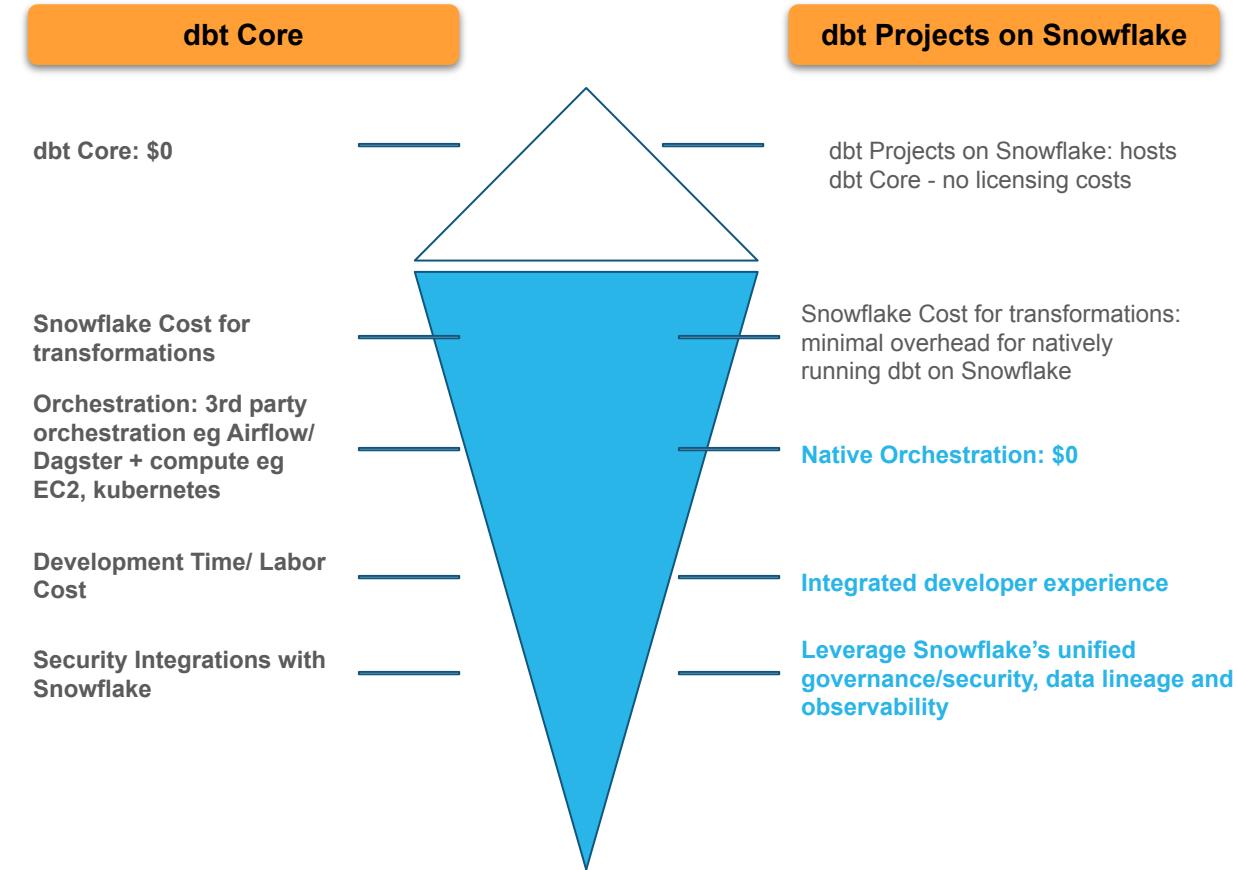


dbt Projects Value Proposition

-  Improve developer productivity
-  Cost effectiveness

dbt Projects on Snowflake

- dbt Core is an open source tool used for data transformation
- dbt Core comes at zero cost but there is additional infrastructure and management cost to run it when self-hosted
- With dbt Projects in Snowflake, customers get the same experience without the infrastructure burden, improved developer productivity and faster time-to-value



Where Do Developers Spend Their Time with dbt

Initial Set-Up



Ongoing Management

27 steps, 40+ min in dbt cost vs 15 steps 25-30 min in dbt projects

Activity	# of steps	est duration (min)
dbt airflow setup	4	< 5
dbt project setup	7	< 10
Prep input files	1	< 5
Create dbt models	2+	> 5 depends on model complexity
Prep airflow env	3	< 5
Build Airflow DAG	1+	> 5 depends on DAG complexity
Start Airflow	1	1
Deploy and run on Airflow	1	< 1
Stop / restart Airflow after adding Snowpark	1	< 1
Snowpark setup with Airflow	5	5
Update DAG to orchestrate Snowpark	1+	> 5 depends on data analysis complexity
Visibility	4	< 5
	27	40+ min

Observability and debugging

Infrastructure downtime and resolution

Version control and regular updates

Supporting business users

5-10% of developers time spent on admin work

Based on internal testing



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Customer insights from dbt Projects PrPr

Driving New SF Usage: Post-PrPr, customers reported being more likely to start using Snowflake across ALL evaluated data lifecycle activities – with the largest usage drivers being pipeline testing (+36%), execution (+47%), and troubleshooting (+41%).

Favorable Competitive Comparisons: For most evaluated value propositions, our PrPr capabilities exceeded customers' expectations, relative to their current data transformation approach. In particular, customer perceptions of our governance controls (+33%) & overall integrated experience (+38%) were most favorable.

Faster Pipeline Build & Troubleshooting Times: Post-PrPr, customers reported higher expectations that they would be able to build (+34%) and troubleshoot (+11%) their transformation pipelines within one day or less.



Customers Are Seeing Tremendous Success

*"This feature will enable teams to execute, test, show lineage, deploy, and orchestrate dbt pipelines under one view i.e Snowsight, and this is very, very handy from customer's pov as it would improve **operational efficiency, bring standardization, and simplifying developer experience.**"* - Retail & Consumer Goods company

*"LOVE the aspect that we can easily toggle between dev and prod dbt profiles using the UI and that we can init dbt commands like run/compile/test and view the executed commands in the output terminal. **This really brings the developer experience natively to Snowflake.**"* - Media & Entertainment company

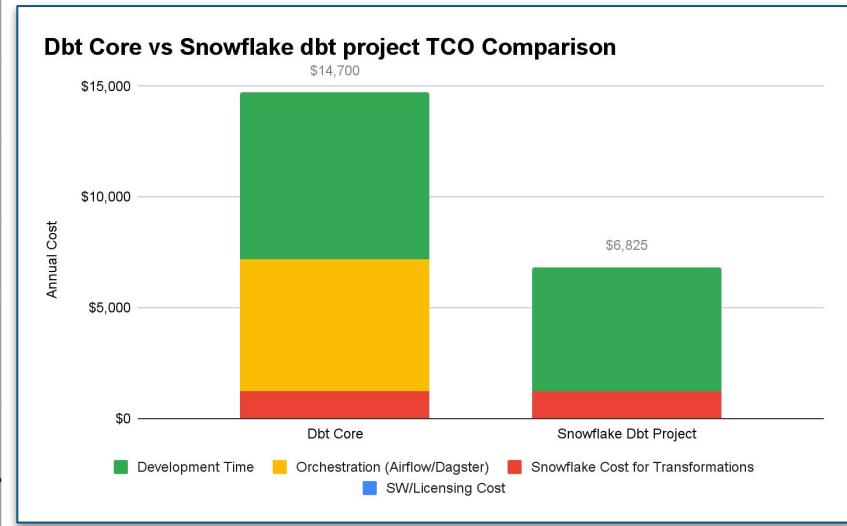
*"the biggest take away from all of this (we **won't have to manage airflow or acquire tooling such as orchestra/astronomer to host and run our dbt models in production**). What we would like is to expand on the observability and usage portions where models could be shared cross models."* - Media & Entertainment company

"We operate as a platform and offer the platform capabilities to our internal customers. When available we are going to promote this capability in-house and I'm pretty sure that product market fit is really good. So I expect that more and more use cases are going to use that capability."
- Manufacturing & Industrial company



Sample TCO Calculation (dbt Core vs dbt Projects)

	Annual Cost	dbt Core	dbt Projects on Snowflake
A	Licensing Cost	\$0	\$0
B	Snowflake Cost for Transformations	\$1,200	\$1,200
C	Orchestration (Airflow/Dagster)	\$6,000	\$0
D	Developer Productivity + 3 hrs for infra downtime	\$7,500	\$5,500
E	Time to Value (with enhanced performance)	Not Quantified	Not Quantified
	Total Cost of Ownership	\$14,700	\$6,700



A: dbt core is open source. With dbt projects there is minimal uplift in Snowflake cost

B: No change in the Snowflake cost for running transformations

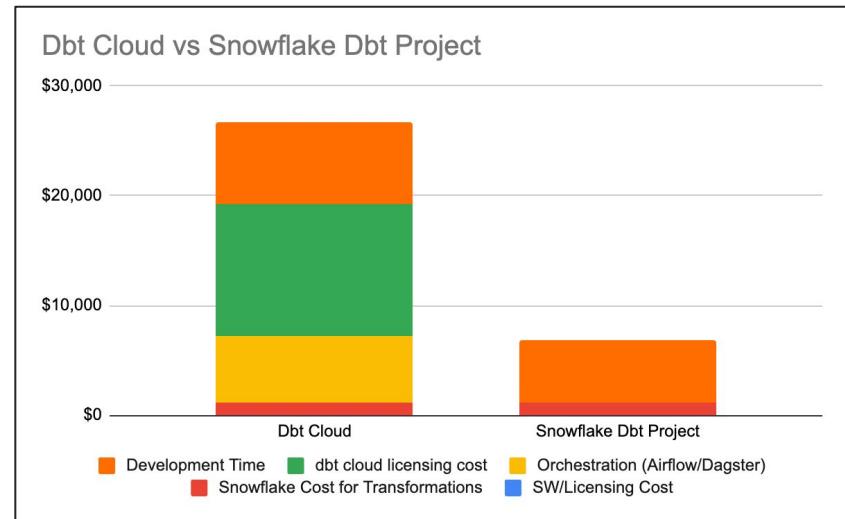
C: Based on information from various customers. The cost can be anywhere from \$6000K/month (however these costs may vary widely depending on the implementation)

D: Assuming 5-10% of 1 developer is spent on the initial setup and ongoing management. With Snowflake, the cost reduces by 25-30%



Sample TCO Calculation (dbt Platform vs dbt Projects)

	Annual Cost	dbt Platform	dbt Projects on Snowflake
A	Dbt Platform Licensing Cost	\$12,000	\$0
B	Snowflake Cost for Transformations	\$1,200	\$1,200
C	Orchestration (Airflow/Dagster)	\$0	\$0
E	Developer Productivity	\$5,500	\$5,500
F	Time to Value (with enhanced performance)	Not Quantified	Not Quantified
Total Cost of Ownership		\$18,700	\$6,700



A: <https://www.getdbt.com/pricing>; Assumed 10 starter licenses to be conservative

B: No change in the Snowflake cost for running transformations

C: Assuming 5-10% of 1 developer is spent on the initial setup and ongoing management. With Snowflake, the cost reduces by 25-30%



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Roadmap



dbt Projects Roadmap

* Snowflake Roadmap

GENERALLY AVAILABLE

- Create or edit a dbt project
- View, edit, test, deploy a dbt project from Workspaces
- Schedule execution of the dbt project with SQL
- See execution history via task
- Monitor/debug logging and tracing
- Performance improvements
- Create/edit schedule via UI
- See dbt project execution history
- Autocomplete for SQL, Jinja, yaml

ON ROADMAP

- dbt Fusion integration
- dbt versions support
- Column-level lineage
- Environment variable support
- Create or Alter for dbt project
- Improved CI/CD integration
- Improved DAG capabilities
- Improved Query History Telemetry View
- Streaming output in the Workspace console during dbt executions
- Improve dbt adapter integration with Snowflake

* List not 100% exhaustive



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