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Product & UX Design



Portfolio Presentation

Bluesky Data
Founding Designer



Bluesky Data

Transforming Snowflake data
management through intelligent, cost-
effective optimization.

Overview:

- Third-party web application providing analysis and recommendations on data handling for users of Snowflake.
- Provides suite of cost governance tools where Bluesky could auto-update a user's settings or provide SQL for the customer to apply themselves.
- Analysis covered data warehouses, query handling, storage, sessions and more.
- Team of mostly engineers, business development, one product manager and one (founding) designer.
- Headquartered in Menlo Park, CA.



Objectives:

- **Redesign and enhance:** I joined Bluesky in its very early stages and many features were still being defined. My immediate tasks were to enhance existing features.
- **New feature design:** I met weekly with internal stakeholders and customers to gather feedback on potential new features to design prototypes for potential products as a result of those discussions.
- Key features of the product were still being worked out depending on conversations with existing and potential clients of Bluesky.



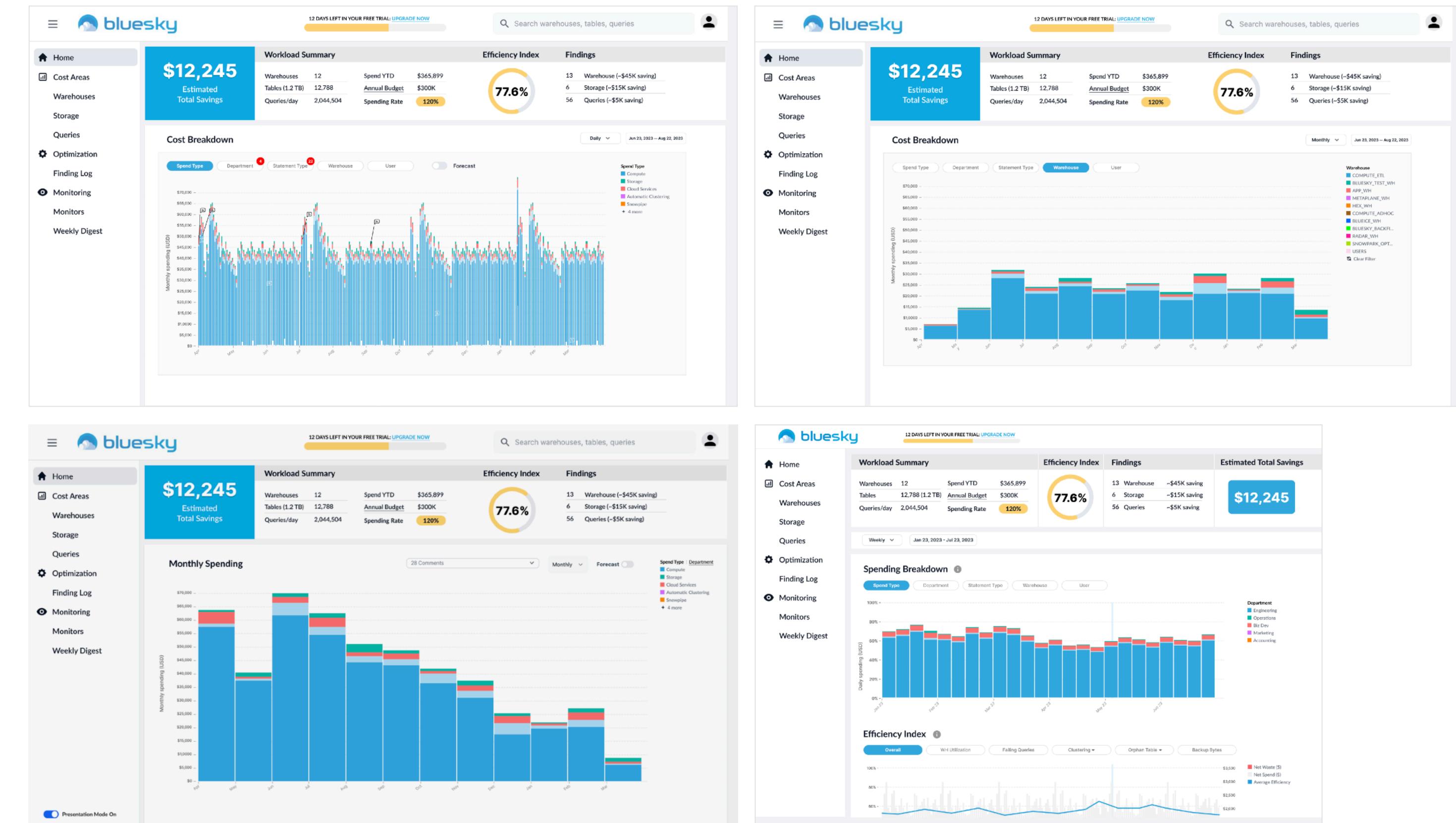
Target User: Non High-End DBA:

- Data analysts/scientists, data engineers, CIO/CDO.
- Looking to save on spending.
- User would need to have a working knowledge of SQL.
- High-end users with deep knowledge and understanding on data analysis and processing.



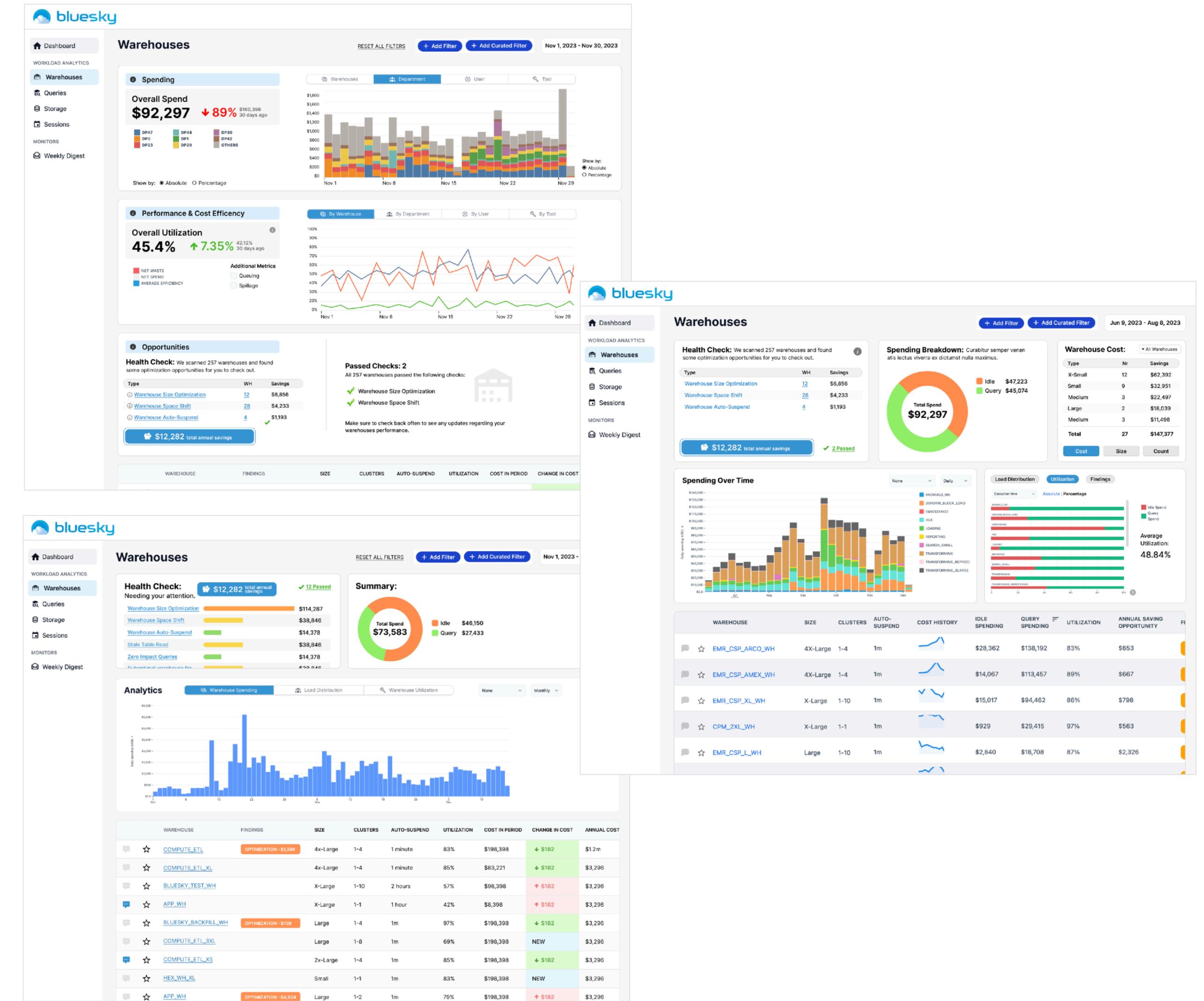
Dashboards:

- Each section in the left-bar navigation essentially had their own dashboard.
- **Home:** Breakdown of spending over time and ability to break that down into finer detail.
 - User may want to use it to present to their team and execs with comments and annotations.
 - Spend broken down by different types.
 - View by month/week/day and comments.
 - Pairing spend breakdown with efficiency index.



Dashboards:

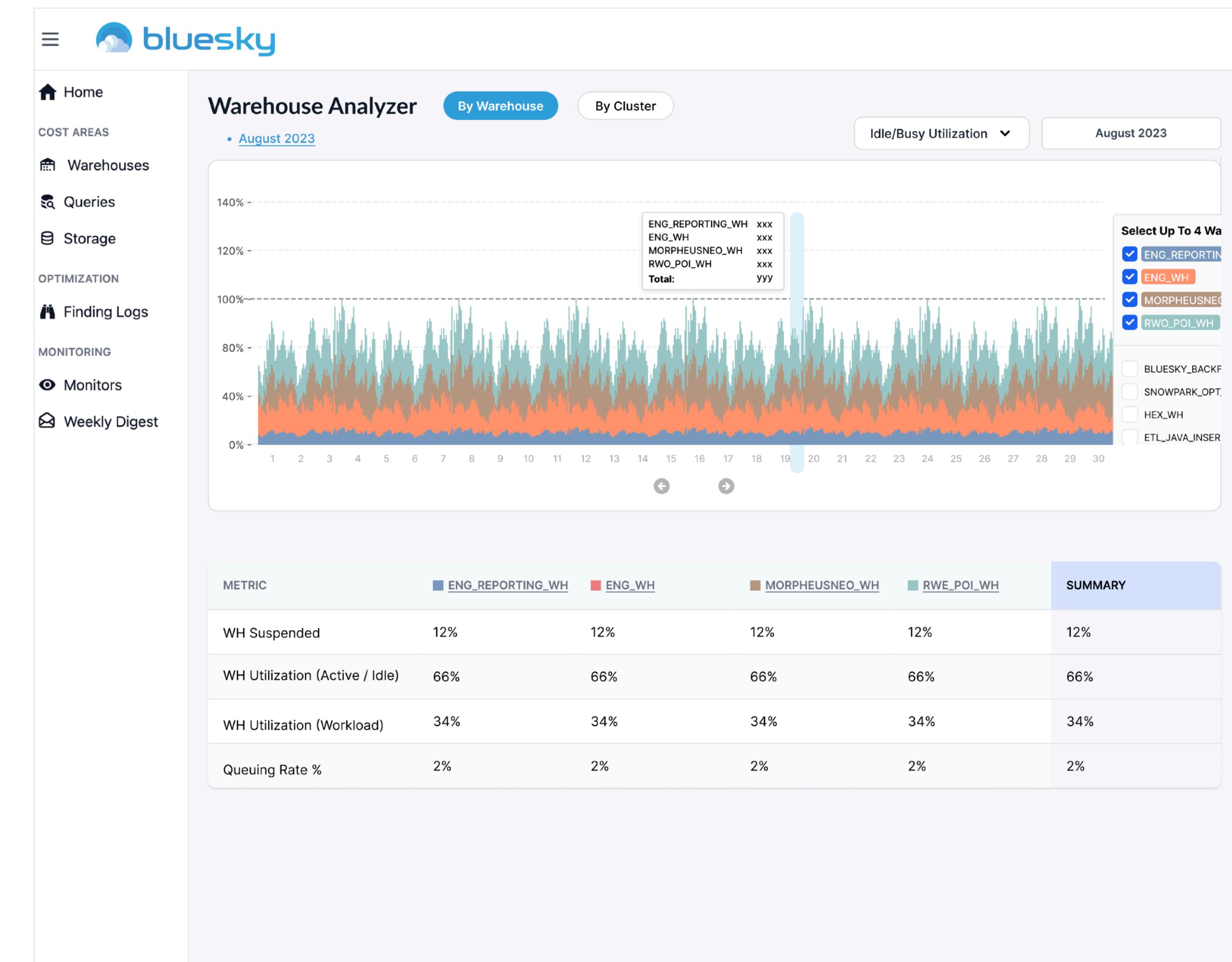
- Each section in the left-bar navigation essentially had their own dashboard.
- **Warehouses:** Breakdown of spending over time, performance, cost efficiency.
 - Recommendations based on regular health checks (e.g. warehouse downsizing).
 - User may want to use it to present to their team and execs with comments and annotations.



Additional Features

Warehouse Explorer

- Tool intended to provide the user with a comparison of warehouse utilization with multiple warehouses.
- Users may want to merge warehouses together into a single one in order to save on cost:
- Data pipelines may be too small for the warehouse it is in.
- Tool could compare up to four different warehouses and have the ability to view performance over a month and zoom down into 12 hours and then to 15 minute blocks.



Findings:

Fleet & Instance Dashboards

- Visuals communicating database health with additional two weeks of health data.
 - Color-coded health scores.
 - Additional health metrics for individual features.
- Accompanying list of actionable recommendations generated by AI/ML.
- Educate the user with additional visual overviews of data performance. This would not make it in the final released version.
- Listing of database instances and clusters.

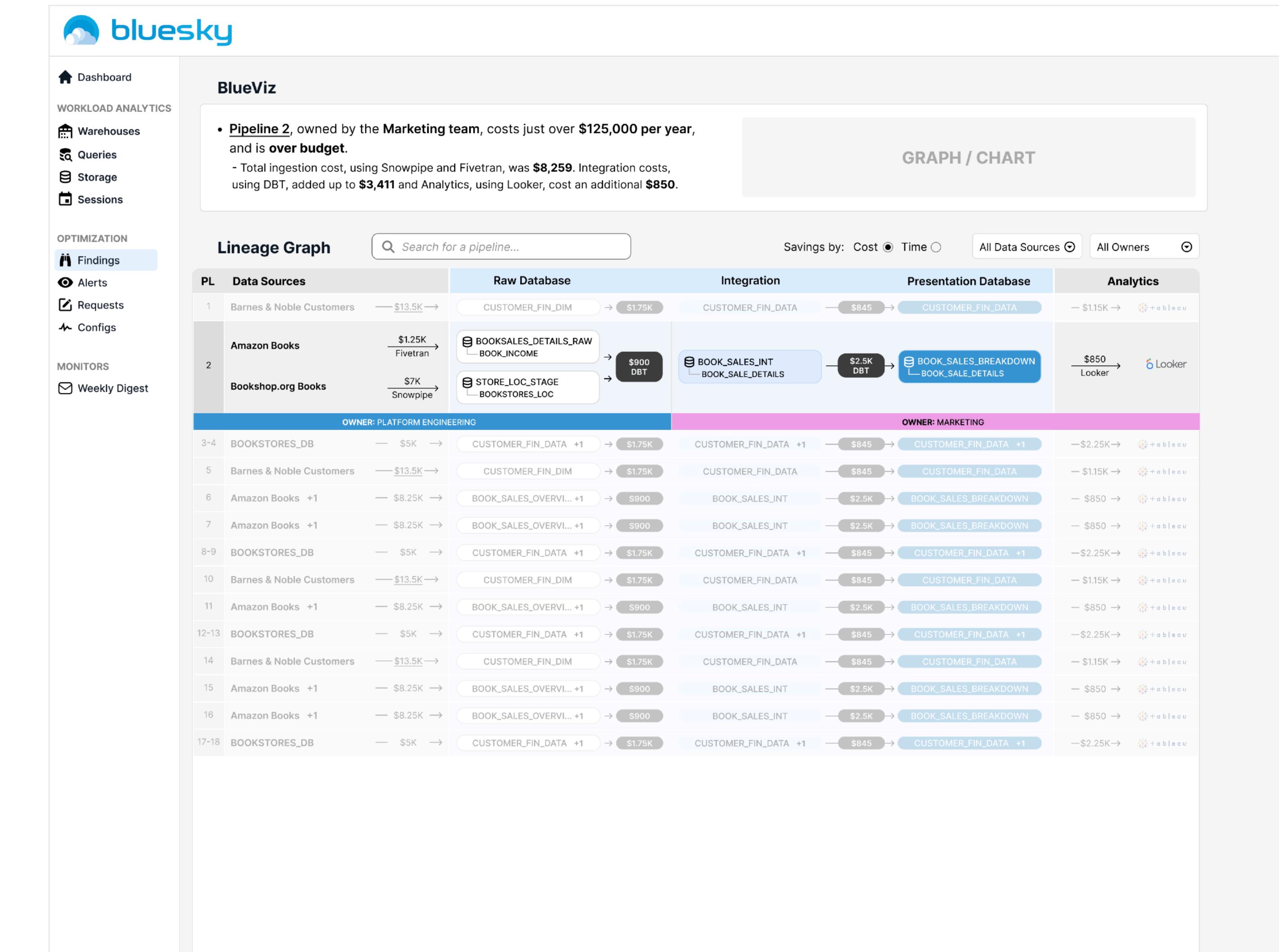
The screenshot shows the Bluesky Findings dashboard. The left sidebar includes links for Dashboard, Workload Analytics, Warehouses, Queries, Storage, Sessions, Optimization (Findings is selected), Requests, Configs, Monitors, and a Weekly Digest. The main area has a title 'Findings' with a summary table:

	Open Findings	Total Findings	Potential Savings - open	\$65,725 annual savings	
Dismissed Findings	0	Initial Savings Est	\$3,480	Potential Savings - dismissed	\$0
Resolved Findings	5	Savings to Date	\$245	Potential Savings - total	\$65,725 annual savings

Below the summary is a chart showing 'Workload over Past 30 Days' with a line graph. A 'Saving Opportunity' section estimates annual savings of \$36,396 - \$78,250 by downsizing to X-Large. It includes a risk factor of 'Low' and an effort level of 'Low - 2 hours'. A 'Recommendation' section suggests reducing the warehouse size to save costs. A 'Queries To Move Out' section lists recommendations for 16 warehouses. A 'Risks' section discusses the main risk of downscaling. An 'Effort Level' section estimates the effort level at 4.

Query Lineage:

- This feature was to inform the user of an area in their Snowflake usage where spend was spiking and provide them a solution to correct not only the spike but to provide potential additional savings in their overall spend.



Filters:

- Quick and easy ability to filter down by name, size, spending and more.
- For warehouses, queries, stores and more.
- Original filtering method consisted of two filter buttons. Updated method merged into a simpler and faster method of filtering.

The screenshot shows the Bluesky Data interface with a list of Warehouses. The table includes columns for WAREHOUSE, SIZE, CLUSTERS, AUTO-SUSPEND, COST HISTORY, IDLE SPENDING, and QUERY SPENDING. The filtering sidebar on the right allows users to filter by Warehouse name (CONTAINS ETL), Size (equal to), and other criteria like Cost History and Auto-Suspend.

WAREHOUSE	SIZE	CLUSTERS	AUTO-SUSPEND	COST HISTORY	IDLE SPENDING	QUERY SPENDING
COMPUTE_ETL_XL	X-Large	1-10	30s		\$2,045	\$5,144
BLUESKY_TEST_WH	Medium	1-2	30s		\$1,525	\$2,062
APP_WH	2X-Large	1-4	30s		\$7,021	\$1,875
COMPUTE_ETL	X-Small	1-8	30s		\$1,012	\$1,229
COMPUTE_ETL_2XL	2X-Large	1-10	30s		\$624	\$1,161
COMPUTE_ETL_3XL	3X-Large	1-10	30s		\$591	\$815
COMPUTE_ETL_XS	X-Small	1-10	30s		\$215	\$578
BLUESKY_BACKFILL_WH	3X-Large	1-1	30s		\$1,103	\$237
COMPUTE_ETL_M	Medium	1-10	30s		\$98	\$205

Filter Types:

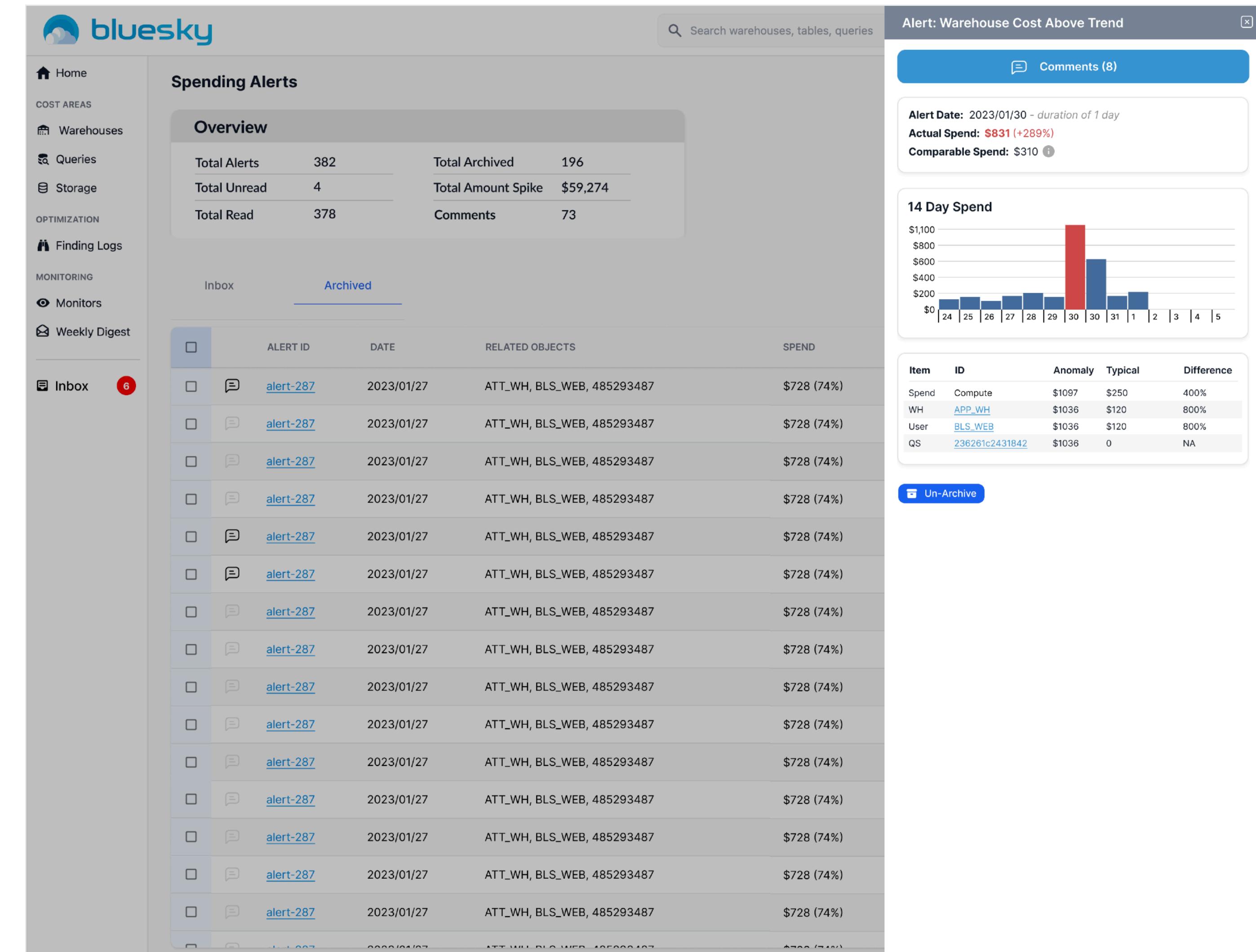
- Warehouse: CONTAINS ETL
- Size: = value
- Cost History: Contains, Includes, Not contains, IS NULL, IS NOT NULL
- Auto-Suspend: Contains, Includes, Not contains, IS NULL, IS NOT NULL

Saved Filters:

- Auto-Suspend-Large
- Cost above \$1,000

Alerts:

- Alerts immediately communicated to users for instances such as cost spikes, query issues, storage optimization and more.
- Users could view could quickly compare with data from previous week or beyond.
- Ability to communicate with team members to identify potential issues and solutions.



Comments & Annotations:

- Different locations for comments.
 - Users wanted to present charts to team members to present to company executives to explain Snowflake spend and budgeting.
 - Team members could communicate through accompanying commenting system.

The screenshot shows the Bluesky Data interface. On the left, a sidebar menu includes: Overview, Warehouses, Queries, Storage, Finding Logs, Monitors, and Weekly Digest. The main area is titled 'Queries' and displays a 'SUMMARY' table with three rows: Open Findings (2), Potential Savings - open (\$18,804), Warehouse; Open Findings (0), Potential Savings - dismissed (\$0), Storage; and Open Findings (2), Potential Savings - total (\$18,804), Queries. Below this is a table of query details with columns: QUERY SIGNATURE, WAREHOUSE, WAREHOUSE SIZE, RECOMMENDED SIZE, USER, and TYPE. The table lists six queries, each with a comment icon and a link to a comment box. The first comment box is open, showing a message from @dsmithers on Aug 4, 2023, with a 'Comments On' toggle at the bottom.

SUMMARY					
Open Findings	2	Potential Savings - open	\$18,804	Warehouse	
Open Findings	0	Potential Savings - dismissed	\$0	Storage	
Open Findings	2	Potential Savings - total	\$18,804	Queries	

QUERY SIGNATURE	WAREHOUSE	WAREHOUSE SIZE	RECOMMENDED SIZE	USER	TYPE
b190187925286d	7/17/2023	X-Small	X-Large	DBT_CLI	APP_WCREATE_TABLE_AS_SELECT
1223c4fa61ba9f	8/4/2023	Medium	X-Small	BLUESKY_TEST	SELECT
236261c2431842	7/17/2023	X-Small	X-Large	DBT_CLI	CREATE_TABLE_AS_SELECT
33c2a2819b6755	8/4/2023	X-Small	Large	DBT_CLI	CREATE_TABLE_AS_SELECT
463b6ea8df5a0d	7/17/2023	Medium	X-Small	BLUESKY_AIRBYTE...	COPY
258184bc22332b	8/4/2023	X-Small	Medium	DBT_CLI	CREATE_TABLE_AS_SELECT

The screenshot shows the Bluesky Data interface. The top navigation bar includes: Home, Cost Areas, Warehouses, Storage, Queries, Optimization, Finding Log, Monitoring, Monitors, and Weekly Digest. The main area is titled 'Workload Summary' and displays a large blue box with '\$12,245 Estimated Total Savings'. Below this is a 'Cost Breakdown' chart showing monthly spending in USD. A comment box is overlaid on the chart, showing a message from @dsmithers on Aug 4, 2023. The sidebar on the right shows 'Findings' with a '77.6%' efficiency index and a list of 13 Warehouses, 6 Storage, and 56 Queries. The bottom right corner has 'Comments On' and 'Archive' buttons.

Workload Summary			
Warehouses	12	Spend YTD	\$365,899
Tables (1.2 TB)	12,788	Annual Budget	\$300K
Queries/day	2,044,504	Spending Rate	120%