

Data warehouse and executive reporting – design and implementation

Indoor skydiving company

Consolidated multiple source systems into an on-premise data warehouse, developed comprehensive data models, and diagnosed key performance indicators (KPIs). Additionally, designed a Power BI reporting suite to provide the Executive team with real-time insights and track essential performance metrics

Indoor skydiving company needs a comprehensive reporting suite and a centralized data warehouse

Picture this...

You’re seeking to develop a comprehensive reporting layer that enables quick business decisions and provides a daily overview of overall business performance. Integrated data from multiple source systems into a single data repository, developed comprehensive data models, identified key performance indicators (KPIs), and designed a Power BI reporting suite to provide the Executive team with real-time insights

You turn to Accordion.

We partner with your team to **streamline and centralize data** from fragmented sources like POS, CRM, Google Analytics, vendors, and Finance into an on-premise data warehouse.

- 1) Streamlining the data ingestion process and created a centralized data repository from fragmented sources such as POS, CRM, Google Analytics, vendors, and Finance into an on-premise data warehouse
- 2) Deploying automated daily data pipelines ensuring seamless integration and transformation of data with proactive monitoring and alerts to quickly address any issues
- 3) Diagnosing key business performance metrics, by partnering with stakeholders to establish a standardized methodology, and built data models and data marts that serve as a unified source for executive reporting and future ad-hoc analysis
- 4) Creating a robust Power BI dashboarding suite delivering daily performance insights directly to executive stakeholders via email, providing a snapshot of business trends alongside upcoming priorities

Your value is enhanced.

- Enabled client to implement a global data governance framework and a data warehouse solution that acts as a single source of truth encompassing strong metadata management, automated quality & access controls, and consistency across all BI reporting and analytics
- Automated dashboarding suite with well-defined data models for key metrics enhanced visibility into business performance empowering leadership to make faster, data-driven decisions
- 70% reduction in man-hours with the creation of Intuitive Power BI dashboards enabling the business team to drill down into specific areas that not only highlights potential issues but also equips the team with insights to take proactive actions, driving continuous improvement and long-term growth

CONSUMER

KEY RESULT

- 70% reduction in person-hours for reporting
- Enhanced visibility into business performance enabling data driven decision making

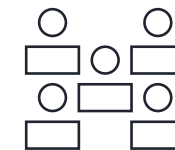
VALUE LEVERS PULLED

- Data Pipelines to pull data to a central warehouse from different source systems
- BI Reporting
- Performance Tracking

Methodology/Approach

01

Requirement Gathering from Clients – The team engaged in detailed discussions with the client and engineering teams from different vendors to identify specific requirements, including different data sources’ structure and data extraction capabilities



02

Data Retrieval and DW Design – The team undertook data retrieval from different sources and Data Warehouse design to **ensure accuracy and security of data**. It involved setting up staging and production environments along with Entity-Relationship diagrams to keep the warehouse structure up to date with industry standards



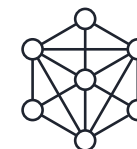
03

Data Diagnosis and KPI Identification – Diagnosed the centralized data to identify the relevant business performance metrics and collaborated with executive stakeholders to finalize the calculation methodologies



04

Pipeline Creation and Deployment – Established a pipeline from all the data sources to client's data warehouse (DW) using API calls or data extracts through SFTP folders, and subsequently created data models for KPIs. Additionally, we implemented a pipeline monitoring mechanism enabling pipeline failure alerts and consolidated pipeline reports daily

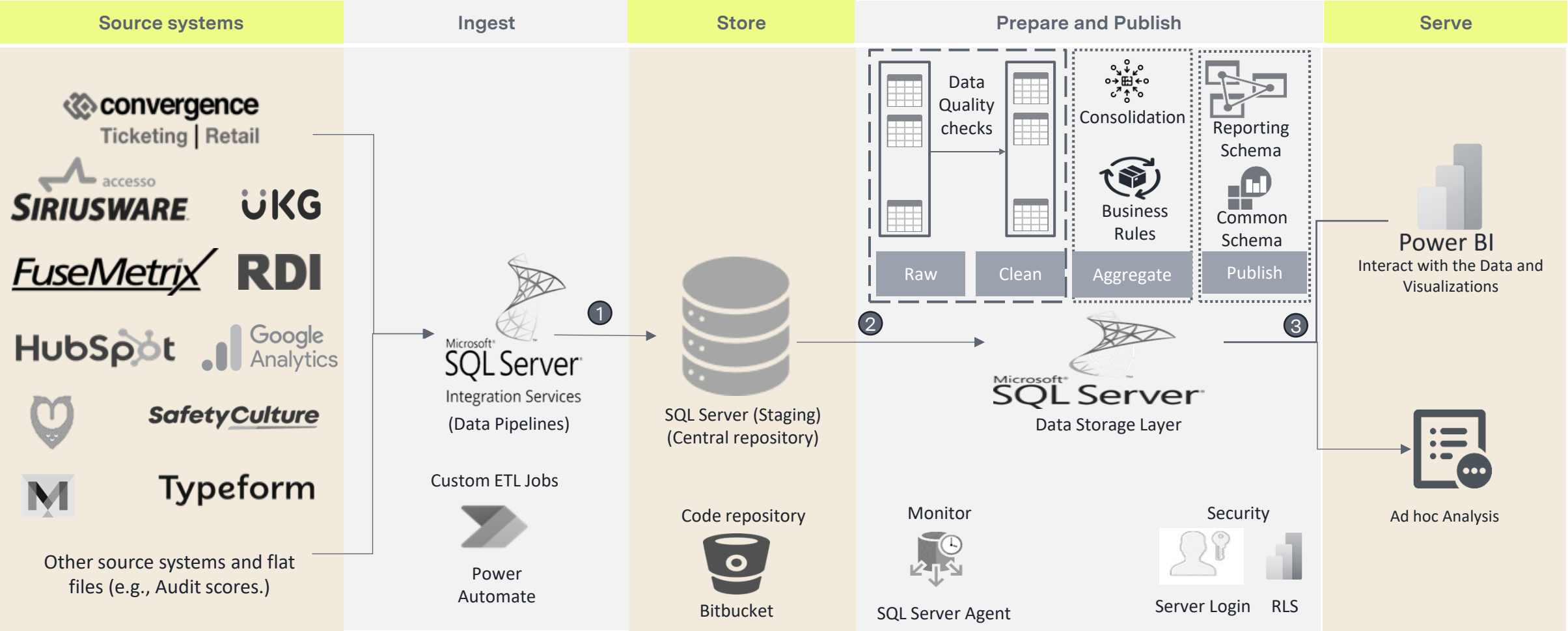


05

BI Reporting (Performance Tracking) – Created Power BI reporting for executive stakeholders to track business performance and enabled daily emails. This process provided real-time insights into the pain points, enabling stakeholders to quickly adapt to changing customer preferences and make informed decisions



High level data architecture (illustrative)



- 1 Collate and ingest data from various sources into the Staging database of SQL Server using SSIS or custom ETL jobs
- 2 Push the data into SQL Database, which will have different layers to store raw, cleaned, and aggregated data
- 3 Develop visuals in Power BI and provide access to the data for downstream applications

Business overview – Daily executive snapshot

Summarized view for critical business performance metrics on traffic, website performance, Sales and Revenue Trends

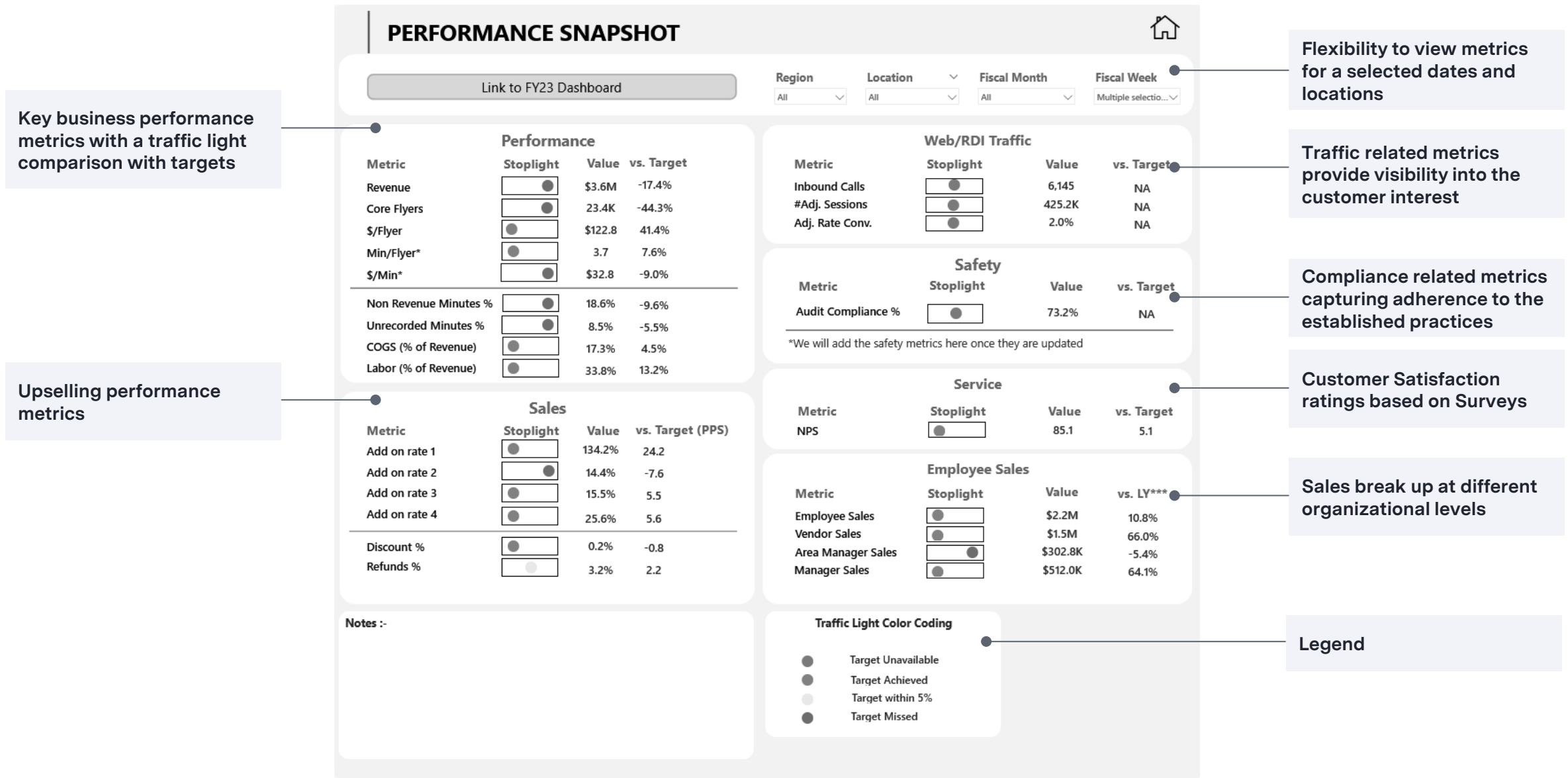
Ability to analyze performance metrics for different time periods

vs PY % cards to benchmark business performance with last fiscal year

Performance tracking at a product category level enabling real-time insights into customer preferences

Customer satisfaction metrics based on surveys and purchase patterns

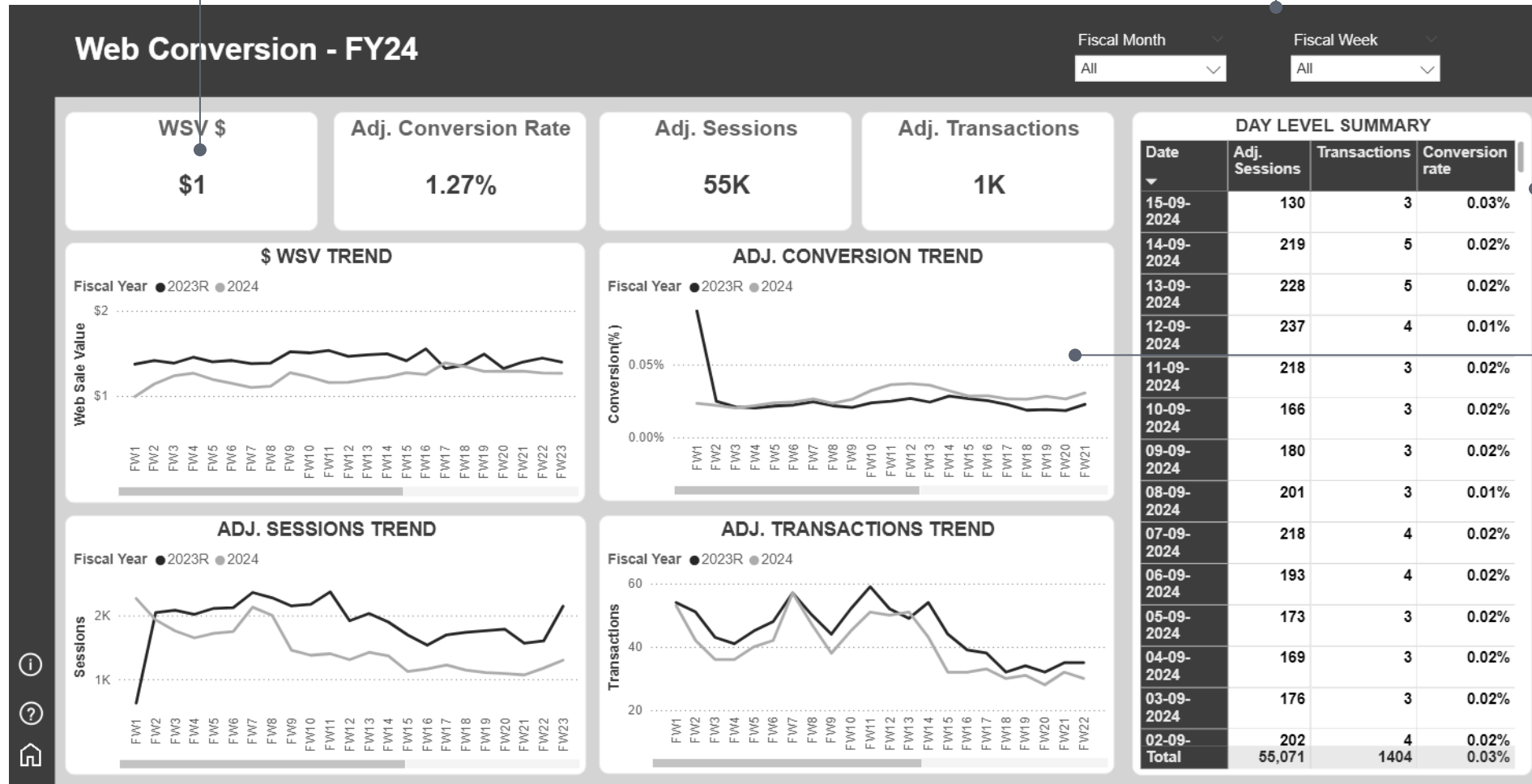
Monthly executive snapshot



Website performance analytics (1/2)

Cards capturing website performance metrics (AOV, Conversion Rate and Traffic)

Flexibility to slice and dice this data by different date ranges



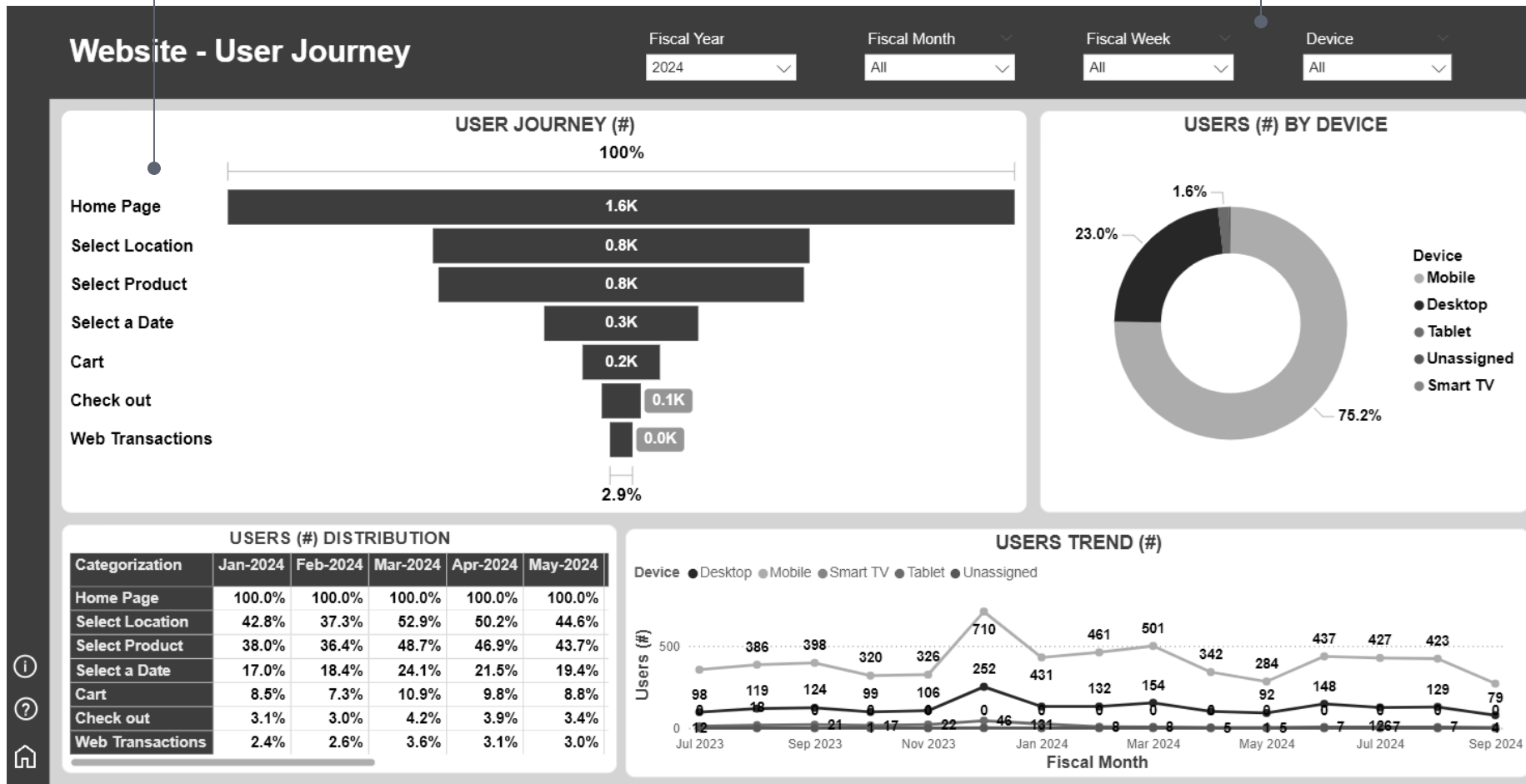
Website performance tracking at a day level enabling stakeholders to track customer preferences

Trend charts to provide visibility into customer demand and website footfall

Website Performance Analytics (2/2)

User Journey funnel to help understand customer behaviour on the website and attrition pattern in the booking flow

Flexibility to slice and dice this data by different dates and devices



Website performance tracking at a device level enabling the comparison of different versions (Mobile, Desktop, etc.) of the website

Users' trends chart to provide visibility into customer demand and website footfall

Weekly Performance Review by Location

Understand the drivers of product wise performance across focus locations

Strategize and discuss next steps to improve and drive revenue

Location	Overall Revenue vs LY (\$)	Overall Revenue vs LY (%)	Underperforming Product Category	vs LY (%)	vs LY (\$)	Reasons for Variance	Action Items
Location 1	(\$9,999.00)	-19%	Product Category 1	-22%	(\$5,555)	<ul style="list-style-type: none"> - Drop in demand on Labor Day (~ \$8000) - Had to reschedule/refund lot of morning books on Sat as the tunnel was under maintainance (~\$1000) - Watch Parties hosted by local bars and restaurants for Commanders Season opener causing a drop in Sunday's traffic (same scheduled for the next 2 weeks as well) - \$707 over reported in Returns LY 	<ul style="list-style-type: none"> - Focusing on partnerships with local bars and restaurants to offer Discounts - More focus on social media posts for promotions - Planned a hospitality night for employees of One Loundon
			Product Category 2	-42%	(\$4,444)	<ul style="list-style-type: none"> - Primarily because of drop in product 1 traffic - Tunnel maintenance on Sat (~\$999) - \$1,111 over reported LY 	<ul style="list-style-type: none"> - Focus on local marketing initiatives to drive customers to the location
Location 2	(\$9,999.00)	-25%	Product Category 1	-31%	(\$6,666)	<ul style="list-style-type: none"> - Significant decline in revenue on Saturday and Sunday (~\$6543 down vs LY) - Poor NPS performance - Poor time management on weekends - Local initiatives and community outreach have not yet shown results due to their early stage and will require time to demonstrate effectiveness 	<ul style="list-style-type: none"> - Company 1 executive member would be coming next week for a site visit - Reached out to 7 hotels to be included on their websites as an attraction. Currently awaiting their responses - Continuing focus on NPS and customer experience at the location - Talking to influencer to post a dancing video online to promote the location
			Product Category 2	-27%	(\$3,333)	<ul style="list-style-type: none"> - Mostly due to significant slowdown in other product categories 	<ul style="list-style-type: none"> - Focus on local marketing initiatives to drive customers to the location
Location 3	(\$9,999.00)	-33%	Product Category 1	-34%	(\$6,000)	<ul style="list-style-type: none"> - Faced staffing constraints. Had only 3 employees almost all week due to PTO/injuries - Slower labor day vs LY (~\$4000) - Closed on Wednesday and Thursday. However, overall utilization for current staff was full - \$200 over reported LY 	<ul style="list-style-type: none"> - Continuing to push sales, and looking for ways to continue to improve occupancy on slow days
			Product Category 2	-11%	(\$2,222)	<ul style="list-style-type: none"> - Smaller Bookings for group events vs LY - Missed on 2 days of Product X bookings vs LY (2 days CY vs 4 days LY) 	<ul style="list-style-type: none"> - Looking for more opportunities to post on social media around Birthday and Corporate events
			Product Category 3	-42%	(\$1,111)	<ul style="list-style-type: none"> - Most of the days were fully booked with other product customers, leaving no availability for this product 	<ul style="list-style-type: none"> - Once fully staffed, planning to start 4 new special events targeting this product

Focus on underperforming product categories to drive max value

Sales & Revenue Outlook vs Budget

Track product & location wise sales pipeline + revenue performance for the current month

Monthly Pipeline Snapshot - Month4

Region	Location	Product Category-1			Product Category-2			Product Category-3		
		Pipeline + Actual (\$)	Budget (\$)	vBudget (%)	Pipeline + Actual (\$)	Budget (\$)	vBudget (%)	Pipeline + Actual (\$)	Budget (\$)	vBudget (%)
Region-1	Location-1	\$10,791	\$11,098	-3%	\$34,913	\$40,661	-14%	\$27,663	\$24,543	13%
Region-2	Location-2	\$7,920	\$25,697	-69%	\$24,592	\$36,428	-32%	\$10,760	\$15,117	-29%
Region-2	Location-3	\$4,770	\$8,530	-44%	\$29,609	\$15,693	89%	\$9,853	\$10,964	-10%
Region-3	Location-4	\$8,910	\$4,859	83%	\$11,807	\$14,939	-21%	\$17,785	\$19,362	-8%
Region-4	Location-5	\$3,320	\$6,958	-52%	\$6,041	\$19,633	-69%	\$4,299	\$8,429	-49%
Region-4	Location-6	\$9,610	\$17,719	-46%	\$5,642	\$14,602	-61%	\$2,886	\$1,242	132%
Region-4	Location-7	\$51,840	\$66,715	-22%	\$16,755	\$29,514	-43%	\$37,181	\$27,309	36%
Total		\$97,161	\$141,576	-31%	\$129,359	\$171,468	-25%	\$110,427	\$106,966	3%

Legend >>

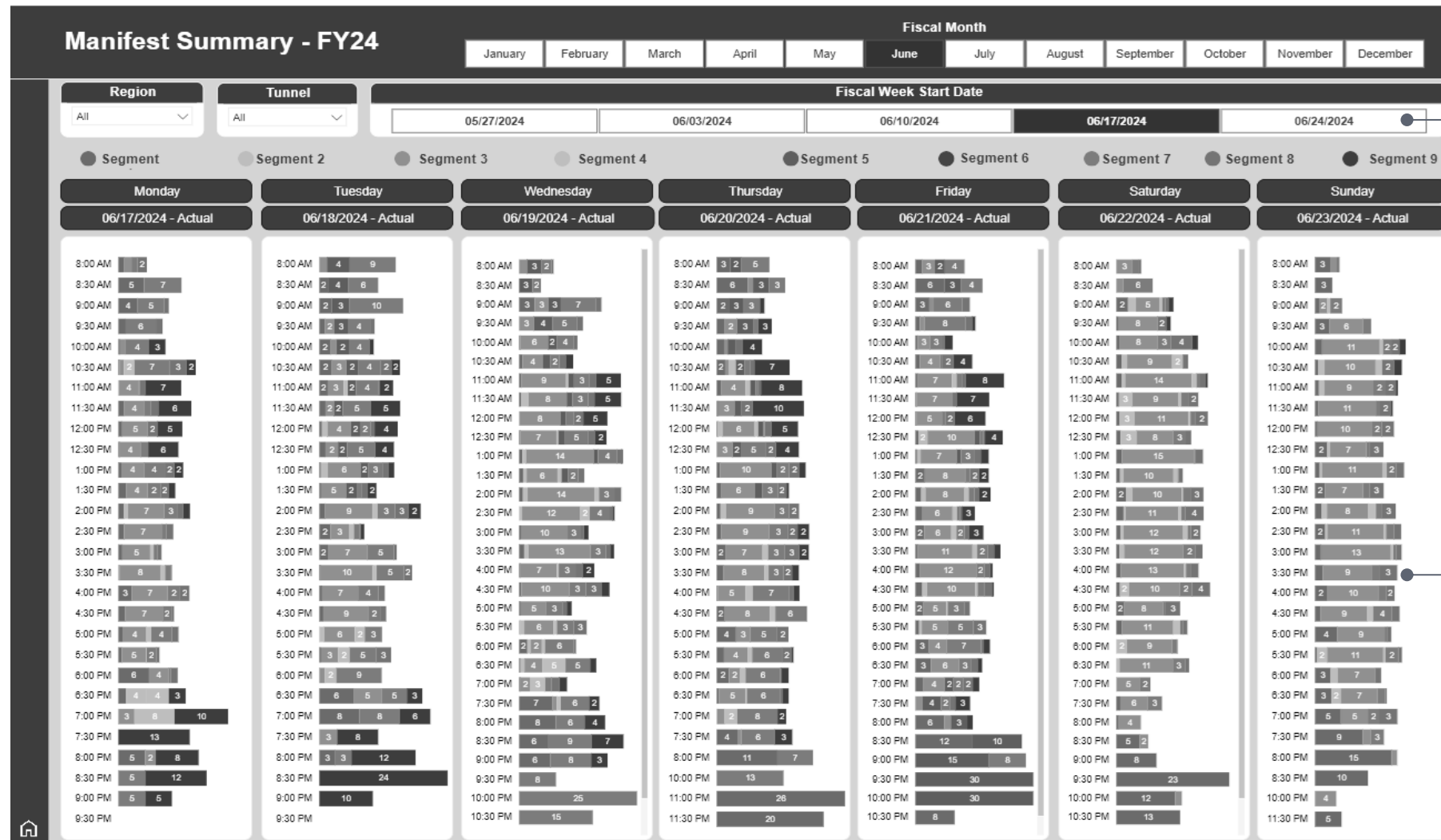
Exceeding Budget

Monitor Closely

Sales Pipeline Deficient

Strategize plans to increase sales at locations where the upcoming weeks pipeline is underperforming compared to budget

Product Segment vs Session Analysis



Flexibility to view metrics for a selected week

Sold Inventory breakup by Customer segment providing visibility into customer preferences and Inventory

Consolidated Pipeline Health

Summary of data pipeline health and job execution status captured at the top of the email

Job Execution Status Info -

Success	Failed	Cancelled	Flagged ▶
6	0	0	0
6	6	6	6

* Second row for totals

Job Name	Start Time (PST)	End Time (PST)	Duration	Avg Duration (T7)	Job Status	Overview
Job 1	Sep 16 th , 5:16 AM	Sep 16 th , 6:18 AM	1hr 2mins 31secs	59mins 16secs	Success	No Reports Affected
Job 2	Sep 16 th , 5:48 AM	Sep 16 th , 6:09 AM	20mins 39secs	15mins 25secs	Success	Report 1
Job 3	Sep 16 th , 6:00 AM	Sep 16 th , 6:02 AM	2mins 11secs	1min 29secs	Success	No reporting impact
Job 4	Sep 16 th , 6:02 AM	Sep 16 th , 6:13 AM	11mins 18secs	8mins 49secs	Success	No reporting impact
Job 5	Sep 16 th , 6:15 AM	Sep 16 th , 6:16 AM	1min 40secs	1min 14secs	Success	Report 2
Job 6	Sep 16 th , 6:19 AM	Sep 16 th , 10:55 AM	4hrs 35mins 34secs	2hrs 22mins	Success	Report 3

Overview to help estimate the impact of any pipeline failures or delays

Pipeline job details, supplemented with the start/end times

Duration and Avg. Duration Columns to help identify any patterns in pipeline delays necessitating actions