

# BI Infrastructure – Assessment & development

## Ed-Tech service provider

- Assessed the existing reporting suite for gaps in KPIs, designed the future state and proposed the comprehensive roadmap to augment the reporting suite
- Implemented the KPIs and developed the reporting suite with focus on digital media ROI, and customer conversion for different professional courses

# Ed-Tech service provider needs to assess KPIs and design a comprehensive reporting suite

## Picture this...

You're looking to design and develop a comprehensive reporting suite by streamlining, standardizing and augmenting the reporting infrastructure. Currently, you have no visibility into performance of key products and websites across the learning management platforms due to data gaps of acquired entities, and non-optimal design of the reporting suite. Additionally, key KPIs are scattered across views in DOMO resulting in low utilization of existing reports.

## You turn to Accordion.

We partner with your team to assess the existing reporting suite for gaps in KPIs, design the future state and proposed the comprehensive roadmap to augment the reporting suite, implement the KPIs and develop the reporting suite with focus on digital media ROI, and customer conversion for different professional courses, including:

- 1) Consolidating data sources pertaining to CRM, digital marketing, website analytics and sales into DOMO, developing a robust data model to support real-time reporting for key metrics focused on customer conversion, website analytics and digital media spend
- 2) Designing and developing dashboards to provide visibility into customer conversion across product lines, brands, courses, websites and other digital marketing initiatives
- 3) Implementing an automated distribution system of monthly and weekly flash reports for executive leadership and functional leaders to ensure targeted monitoring of key KPIs across the organization and departments

## Your value is enhanced.

- You have enhanced decision-making processes with accurate data to support the strategy on website revamp across products targeted at increasing customer acquisition and subscription upgrades for existing learners
- The dashboards provide you visibility into ROI across social media channels, identifying a cost saving opportunity of ~\$2M on channel spending
- You have automated BI solution by eliminating data inconsistencies and optimizing the performance of the dashboards, bringing ~10% cost reduction on reporting suite software
- You have automated report distribution to target groups and streamline data processes that resulted in optimized DOMO usage costs and saved ~60 FTE-hours/month in report preparation

### KEY RESULT

- Cost saving opportunity of ~\$2M
- ~10% cost reduction on reporting suite software
- ~60 FTE-hours/month saved

### VALUE LEVERS PULLED

- Enterprise KPI gap assessment
- Reporting suite design and build
- Automated executive and leadership facing flash reports

# Assessment and reporting suite build for ED-Tech service provider

## Situation

- Client lacked visibility into performance of key products and websites across their Learning management platforms due to data gaps of acquired entities, and non-optimal design of the reporting suite. Additionally, key KPIs were scattered across views in Domo resulting in low utilization of existing reports
- Partnered with the client to design and develop a comprehensive reporting suite by streamlining, standardizing and augmenting the reporting infrastructure

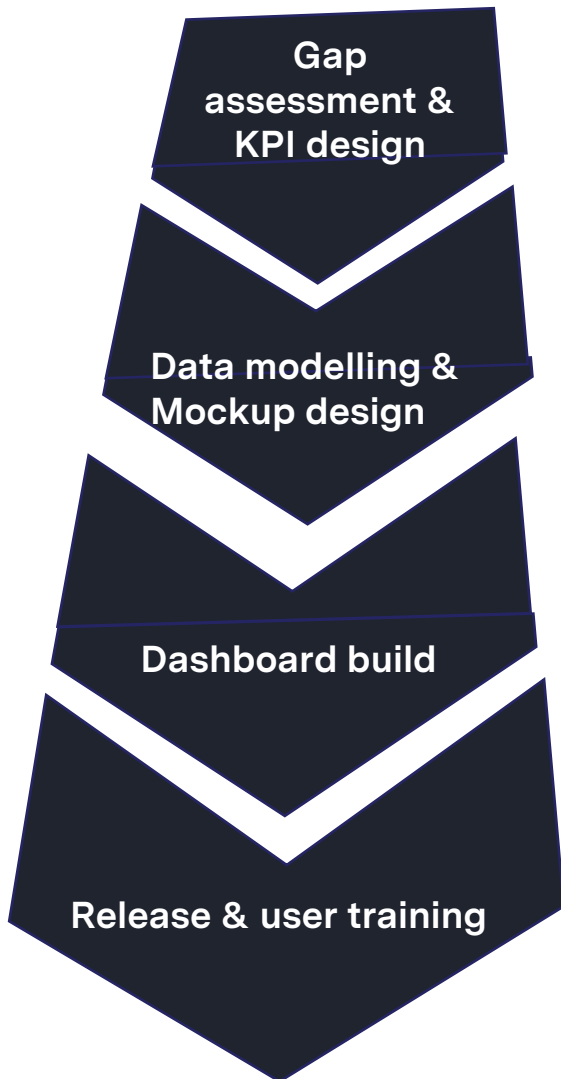
## Accordion Value Add

- Consolidated data sources pertaining to CRM, digital marketing, website analytics and sales into Domo, developing a robust data model to support real-time reporting for key metrics focused on customer conversion, website analytics and digital media spend
- Designed and developed dashboards to provide visibility into customer conversion across product lines, brands, courses, websites and other digital marketing initiatives
- Implemented an automated distribution system of monthly and weekly flash reports for Executive leadership and functional leaders to ensure targeted monitoring of key KPIs across the organization and departments

## Impact

- The reporting suite enabled enhanced decision-making processes with accurate data to support the strategy on website revamp across products targeted at increasing customer acquisition and subscription upgrades for existing learners
- The dashboards provided visibility into ROI across social media channels, identifying a cost saving opportunity of ~\$2M on channel spending
- The automated BI solution eliminated data inconsistencies and thus optimized the performance of the dashboards, bringing ~10% cost reduction on reporting suite software
- Automated report distribution to target groups and streamlined data processes has optimized Domo usage costs and saved ~60 FTE-hours/month in report preparation

# Methodology



- Documented gaps and opportunities in **Data Sources, Workflows and KPIs** to finalize the **KPI Metrics Matrix** that maps systems to KPIs, along with the feasibility analysis, complexity and priority of deriving a KPI across different dimensions

- Enhanced the existing ETL processes by incorporating **best data modelling practices, error handling mechanisms** and other transformations.
- Developed mockup as a visual prototype to showcase the structure and layout of the dashboards, covering comprehensive views across key dimensions for critical KPIs

- Developed the dashboards to enable **comprehensive strategic and operational overview** of the business
- Included capabilities to monitor monthly and weekly trends to support **business decision-making process**

- Set up automated reports to be received via e-mail for user groups, with **targeted dashboard rollouts** based on department and role
- **Enhanced the data awareness** and educated the leadership group with user guidelines and demonstrations of the dashboards

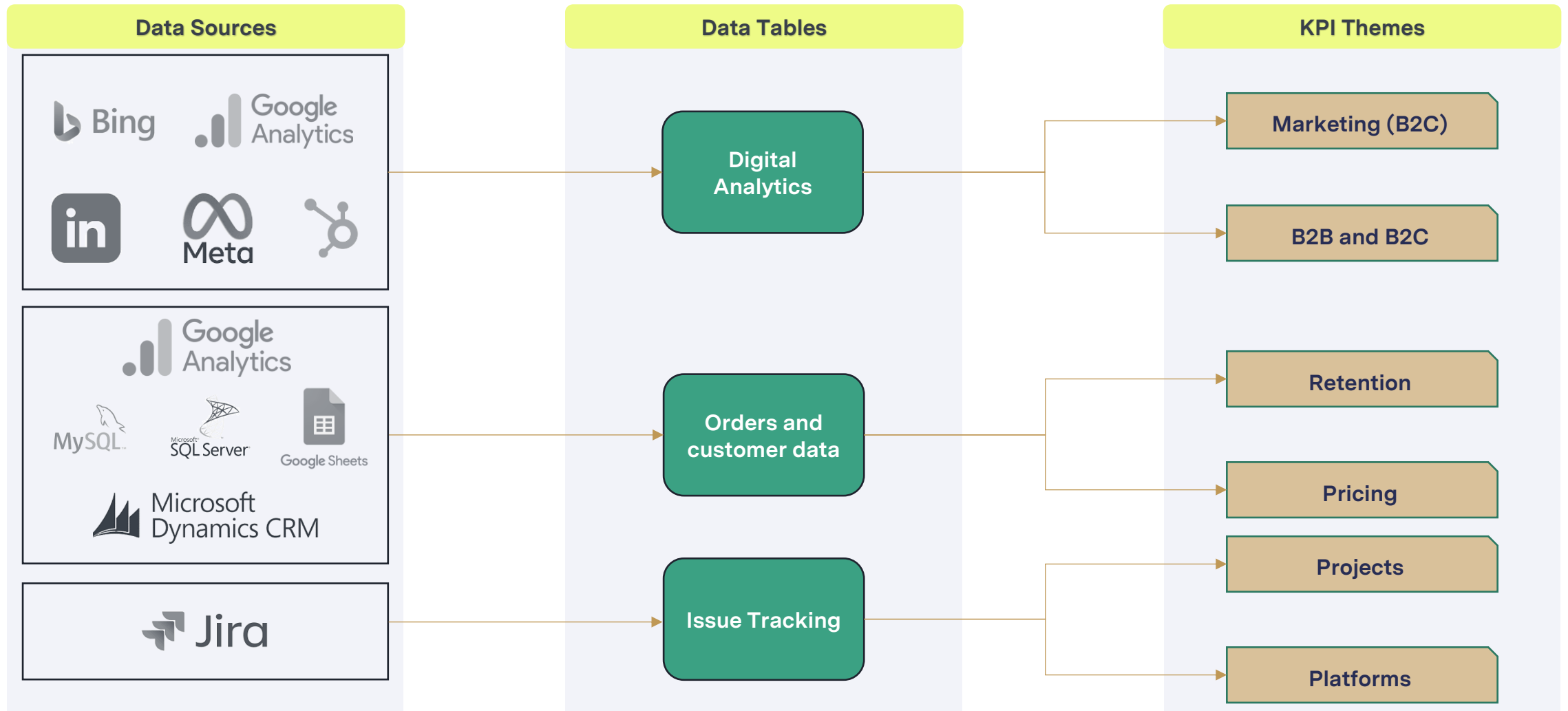
# KPI metrics matrix

| KPI Summary Worksheet                 |                                   |                           |   |                |  |                        |                      |                                  |                     |          |  |   |                     |            |
|---------------------------------------|-----------------------------------|---------------------------|---|----------------|--|------------------------|----------------------|----------------------------------|---------------------|----------|--|---|---------------------|------------|
| #                                     | KPI                               | Primary Domo Source table | Calculation   | By Salesperson | By Device Type (Mobile, Desktop, etc.) | New/Returning Customer | By State / Geography | By Campaign (Unique Campaign ID) | Campaign Type (TBD) | By Brand | By Source (Google, Meta, LinkedIn, etc.) | By Channel (Social, Paid Search, Organic Search, Referral, Affiliate) | By Customer Segment | By Package |
| <b>2.00 Marketing (B2C)</b>           |                                   |                           |   |                |  |                        |                      |                                  |                     |          |  |   |                     |            |
| <b>Lead &amp; Opportunity Metrics</b> |                                   |                           |   |                |  |                        |                      |                                  |                     |          |  |   |                     |            |
| 2.01                                  | Emails sent                       | P                         | Sum (emails sent to unique email addresses)   |                |  | D                      | A                    | A                                | A                   | A        | A  | A   | Infeasible          |            |
| 2.02                                  | Open rate                         | P                         | # of opens / # of emails sent   |                |  | D                      | A                    | A                                | A                   | A        | A  | A   | Infeasible          |            |
| 2.03                                  | Click rate                        | P                         | # of clicks / # of emails sent  |                |  | D                      | A                    | A                                | A                   | A        | A  | A   | Infeasible          |            |
| 2.04                                  | Delivered rate                    | P                         | # of emails delivered / # of emails sent  |                |  | D                      | A                    | A                                | A                   | A        | A  | A   | Infeasible          |            |
| 2.05                                  | Hard bounce rate                  | P                         | # of emails bounced / # of emails sent  |                |  | D                      | A                    | A                                | A                   | A        | A  | A   | Infeasible          |            |
| 2.06                                  | Unsubscribed rate                 | P                         | # of unsubscriptions / # of emails sent   |                |  | D                      | A                    | A                                | A                   | A        | A  | A   | Infeasible          |            |
| 2.07                                  | # of impressions                  | A                         | Sum (total number of views content receives)  |                |  | D                      | A                    | A                                | A                   | A        | A  | A   |                     |            |
| 2.08                                  | # of engagements                  | P                         | Total number of reactions, comments, and shares that content receives                     |                |  | Infeasible             | Infeasible           | A                                | A                   | A        | A  | A   |                     |            |
| 2.09                                  | Click-through rate                | A                         | # of clicks / # of impressions  |                |  | D                      | A                    | A                                | A                   | A        | A  | A   |                     |            |
| 2.10                                  | Cost per mille (CPM)              | D                         | Total ad spend \$ / # of impressions * 1000   |                |  | D                      | A                    | A                                | A                   | A        | A  | A   |                     |            |
| 2.11                                  | Cost per click (CPC)              | A                         | Total cost / # of clicks  |                |  | D                      | A                    | A                                | A                   | A        | A  | A   |                     |            |
| 2.12                                  | Cost per acquisition (CPA)        | A                         | Cost / Total Transactions   |                |  | D                      | A                    | A                                | A                   | A        | A  | A   |                     |            |
| <b>SEO Metrics</b>                    |                                   |                           |   |                |  |                        |                      |                                  |                     |          |  |   |                     |            |
| 2.13                                  | Search visibility                 | NA                        |   |                |  |                        |                      |                                  |                     | X        |  |   |                     |            |
| 2.14                                  | Keyword rankings                  | NA                        |   |                |  |                        |                      |                                  |                     | X        |  |   |                     |            |
| 2.15                                  | Organic impressions               | P                         |   |                | A                                      | Infeasible             | Infeasible           |                                  |                     | A        |  |   |                     |            |
| 2.16                                  | Crawled pages                     | NA                        |   |                |  |                        |                      |                                  |                     | X        |  |   |                     |            |
| 2.17                                  | Domain authority                  | NA                        |   |                |  |                        |                      |                                  |                     | X        |  |   |                     |            |
| <b>Website Metrics</b>                |                                   |                           |   |                |  |                        |                      |                                  |                     |          |  |   |                     |            |
| 2.18                                  | Total website visits              | A                         | Sum (website visits)  |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.19                                  | # of bounces                      | A                         | Sum (# of bounces)  |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.20                                  | Bounce rate                       | A                         | # of bounces / # of website visits  |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.21                                  | Total qualified website visits    | A                         | # of website visits - # of bounces  |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.22                                  | Page views                        | A                         | Sum (# of page views)   |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.23                                  | Time spent on page                | X                         | Sum (Minutes spent on page)   |                | X                                      | X                      | X                    | X                                | X                   | X        |  | X   |                     |            |
| 2.24                                  | Time spent on site                | A                         |   |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.25                                  | # of abandonments                 | D                         | Sum (# of abandonments) = # sessions user adds to cart - # sessions user makes a purchase |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.26                                  | Abandonment rate                  | D                         | # of abandonments / # of total qualified website  |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.27                                  | Browse rate                       | D                         | # of browses / # of total qualified website visits  |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.28                                  | Purchases                         | A                         | # of unique revenue-producing transactions  |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.29                                  | Purchase conversion rate          | D                         | # of unique revenue-producing transactions / # of qualified website sessions              |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| 2.30                                  | Lead conversion                   | D                         | # of actions / # of website visitors  |                | A                                      | A                      | A                    | A                                | A                   | A        |  | A   |                     |            |
| <b>Other B2C Metrics</b>              |                                   |                           |   |                |  |                        |                      |                                  |                     |          |  |   |                     |            |
| 2.31                                  | RoM                               | NA                        | Revenue - marketing cost / marketing cost   |                |  |                        |                      |                                  |                     | X        |  |   |                     |            |
| 2.32                                  | Return on advertising spend (RoA) | P                         | Revenue from ads / cost of ads * 100  |                | A                                      | A                      | A                    | A                                | A                   | A        | A  | A   | X                   |            |

Summary of the feasibility of deriving a metric across multiple dimensions and gap assessment against existing sources

|            |  |
|------------|--|
| A          | Available in DOMO data tables/dashboard directly         |
| D          | Not available in the dashboard but derivable from source |
| P          | One or more dimensions not available                     |
| X          | Not available at all                                     |
| Infeasible | Cannot be derived due to API/ Source data limitations    |
| NA         | Not Applicable   |

# Current state data lineage diagram



# KPI availability summary

| Availability by key dimensions (Current State) |              |                              |                                  |                        |
|--|--------------|------------------------------|----------------------------------|------------------------|
| Category                                       | Desired KPIs | Fully Available <sup>1</sup> | Partially Available <sup>2</sup> | Derivable <sup>3</sup> |
| Category 1                                     | 26           | 11                           | 9                                | 6                      |
| Category 2                                     | 3            | 1                            | 1                                | 1                      |
| Category 3                                     | 12           | 3                            | 4                                | 5                      |
| Category 4                                     | 8            | 5                            | 2                                | 1                      |
| Category 5                                     | 6            | 2                            | 3                                | 1                      |
| Category 6                                     | 15           | 3                            | 10                               | 2                      |
| Total  | 70           | 25                           | 29                               | 16                     |

Notes:

1. Fully available KPIs are available in the reporting suite across all the relevant dimensions

2. Partially available KPIs have data available for some of the required dimensions

3. Derivable KPIs indicate that the dataflows in the reporting suite are linked to the necessary fields and these KPIs can be built/derived with the existing data

# Digital marketing KPI's (1/2)

## Leads & Opportunities

Last Refreshed: 21 hours ago

Business  
Select

Product Line  
Select

Campaign Name  
Select

Source  
Select

Country  
Select

Region  
Select

Device Type  
Select

Time Period  
Last 7 Days MTD QTD **YTD** LTM Custom Date Range

Note: The time range in each toggle is derived based on the selected 'End date'. In case a future date is selected, one day prior to the current date will be applied.

Comparison Period  
Previous Period Previous Year Same Period Two Years Ago Same Period Custom Date Range

Note: The 'Custom Date Range' toggle will be functional only when 'Custom Date Range' is selected in the Time Period.

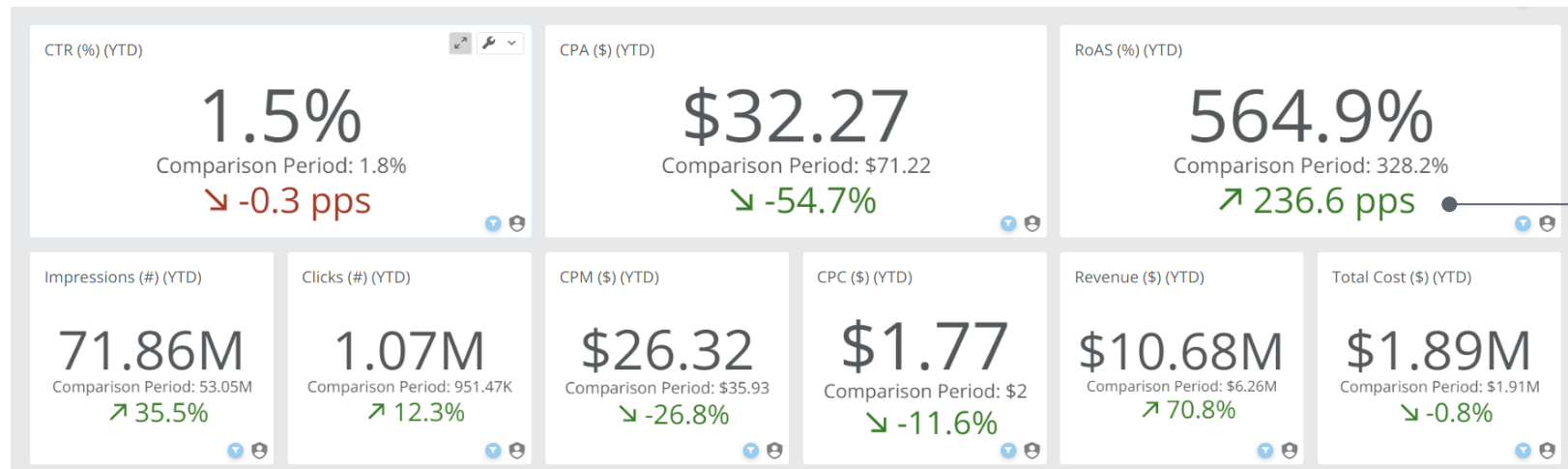
Start Date  
6/1/2024

End Date  
7/31/2024

Comparison Start Date  
5/1/2024

Comparison End Date  
5/31/2024

Time period toggles to help the user visualize data for different periods & compare against prior year



Comprehensive visibility into digital marketing conversion, ad spend and ROI across channels



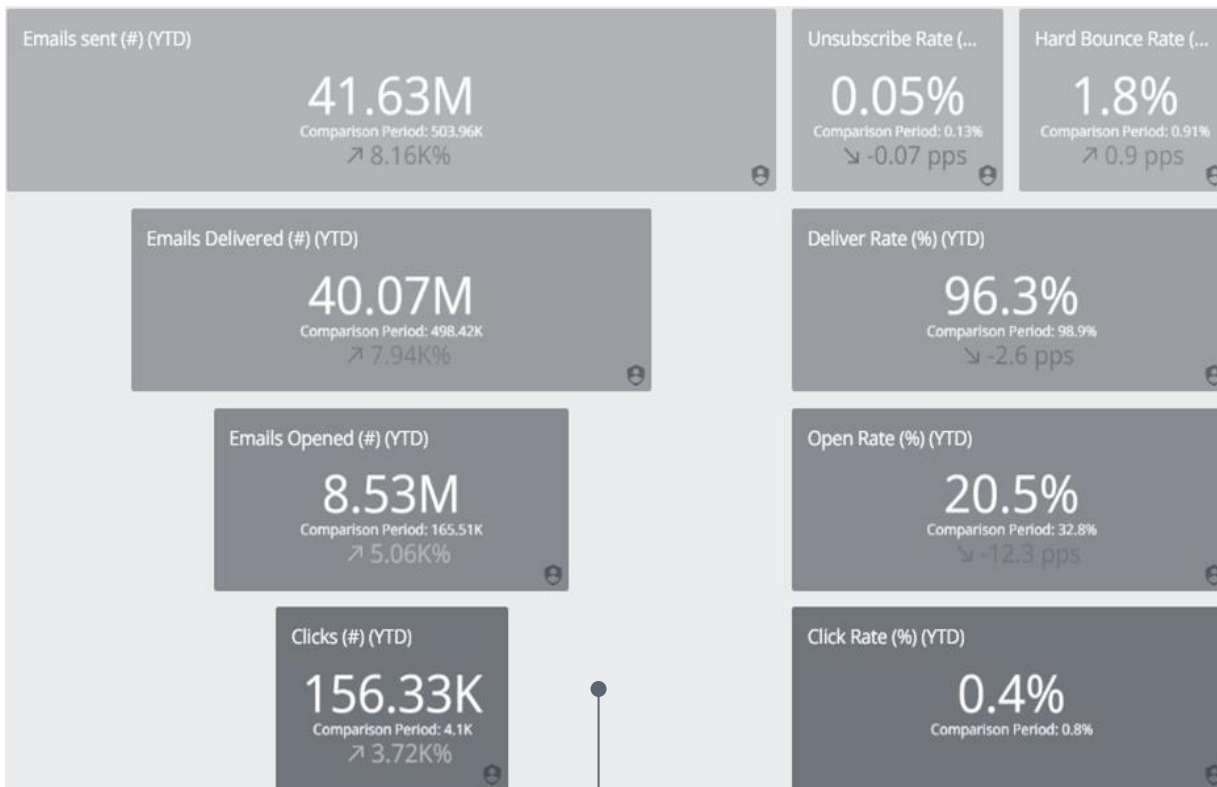
# Digital marketing KPI's (2/2)



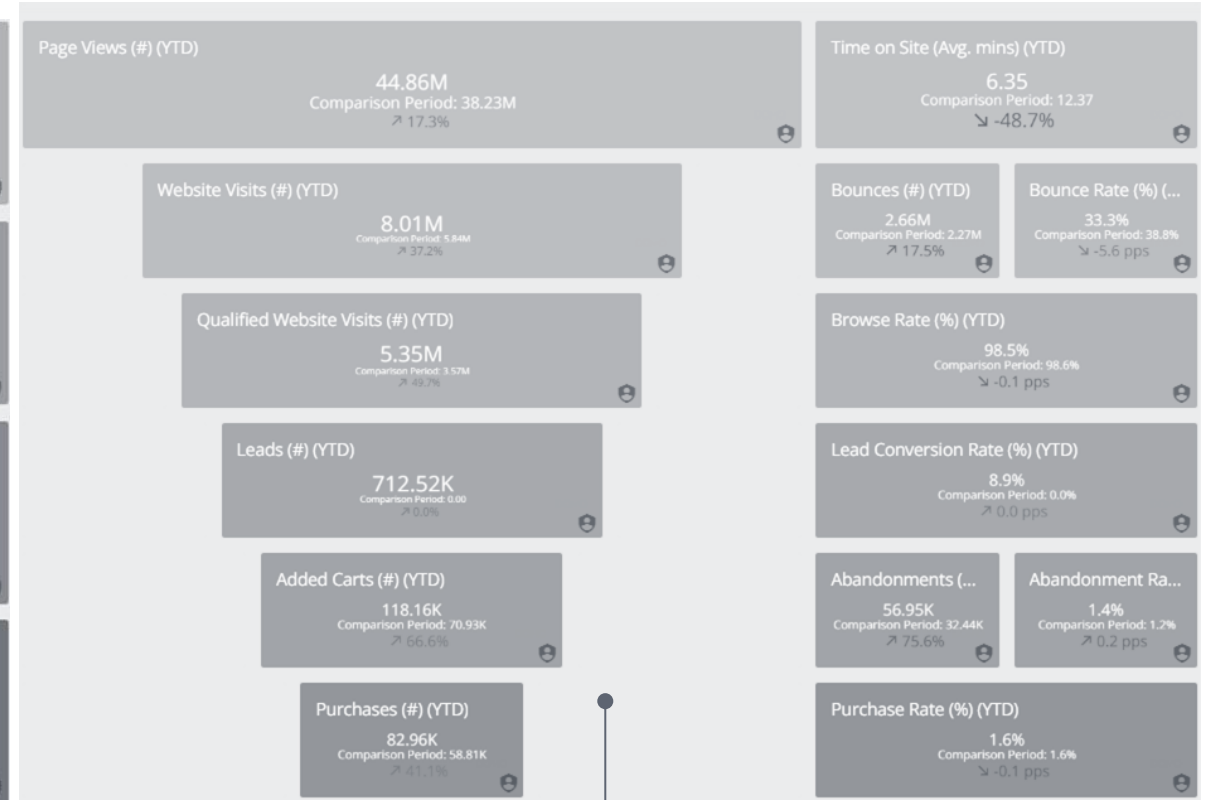
Campaign Summary

| Campaign name | Business   | Source | 3 ↑ 2 ↓ | Clicks | Impressions | Conversions | Cost        | Cost Per Click (CPC) | Cost Per Mille (CPM) | Click Through Rate (CTR) | Cost Per Acquisition (CPA) | 1 ↓ 2 ↑ | RoAS (%)  |
|---------------|------------|--------|---------|--------|-------------|-------------|-------------|----------------------|----------------------|--------------------------|----------------------------|---------|-----------|
| Campaign 1    | Business 1 | Google |         | 8,141  | 137,369     | 7,920       | \$1,119.90  | \$0.14               | \$8.15               | 5.9%                     | \$0.14                     |         | 99,984.5% |
| Campaign 2    | Business 1 | Google |         | 53,094 | 243,114     | 16,567      | \$13,452.35 | \$0.25               | \$55.33              | 21.8%                    | \$0.81                     |         | 16,357.8% |
| Campaign 3    | Business 1 | Google |         | 13,084 | 67,265      | 2,244       | \$11,163.84 | \$0.85               | \$165.97             | 19.5%                    | \$4.97                     |         | 11,266.7% |
| Campaign 4    | Business 1 | Google |         | 6,246  | 61,805      | 5,619       | \$3,718.34  | \$0.60               | \$60.16              | 10.1%                    | \$0.66                     |         | 8,091.8%  |
| Campaign 5    | Business 1 | Google |         | 4,997  | 11,145      | 439         | \$5,475.32  | \$1.10               | \$491.28             | 44.8%                    | \$12.47                    |         | 7,603.7%  |
| Campaign 6    | Business 1 | Google |         | 9      | 172         | 5           | \$10.29     | \$1.14               | \$59.83              | 5.2%                     | \$2.06                     |         | 3,352.8%  |
| Campaign 7    | Business 2 | Google |         | 65     | 146         | 5           | \$199.56    | \$3.07               | \$1,366.85           | 44.5%                    | \$39.91                    |         | 2,069.5%  |

# E-mail marketing and website traffic analysis



Summary of e-mail marketing performance along the customer journey to track conversion and optimize the campaign content



Summary of customer journey on the website for enhanced visibility into purchase conversion funnel