



 **Microsoft**  
Solutions Partner  
Data & AI  
Azure

# Marketing Activity Attribution & Analytics





## About Sigmoid

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# Sigmoid is an emerging leader in data engineering and AI solutions.



**750+**  
Employees



Work with **30+**  
Fortune 500 firms



**>97%**  
CSAT score



**200+**  
ML models operationalized



**5000+**  
Data pipelines built

Backed by

**SEQUOIA**

## Awards and Recognition

**500™**

Technology **Fast 500**  
2023 NORTH AMERICA  
Deloitte.

**\* ISG**

Provider Lens 2023 Quadrant

**Analytics Services**  
Rising Star, U.S. ★

Report releasing Jan 2024



**America's  
Fastest-Growing  
Private Companies**



**Open Source data  
solution provider  
of the year**



**FORRESTER**  
**Now Tech:**  
**AI Consultancies,**  
Q1, 2021 Report

Major Contender in

**EVEREST GROUP**

**Analytics and AI Services Specialists**  
PEAK Matrix (2022)

## Offices



New York



San Francisco



Dallas



Lima



Bangalore



Amsterdam

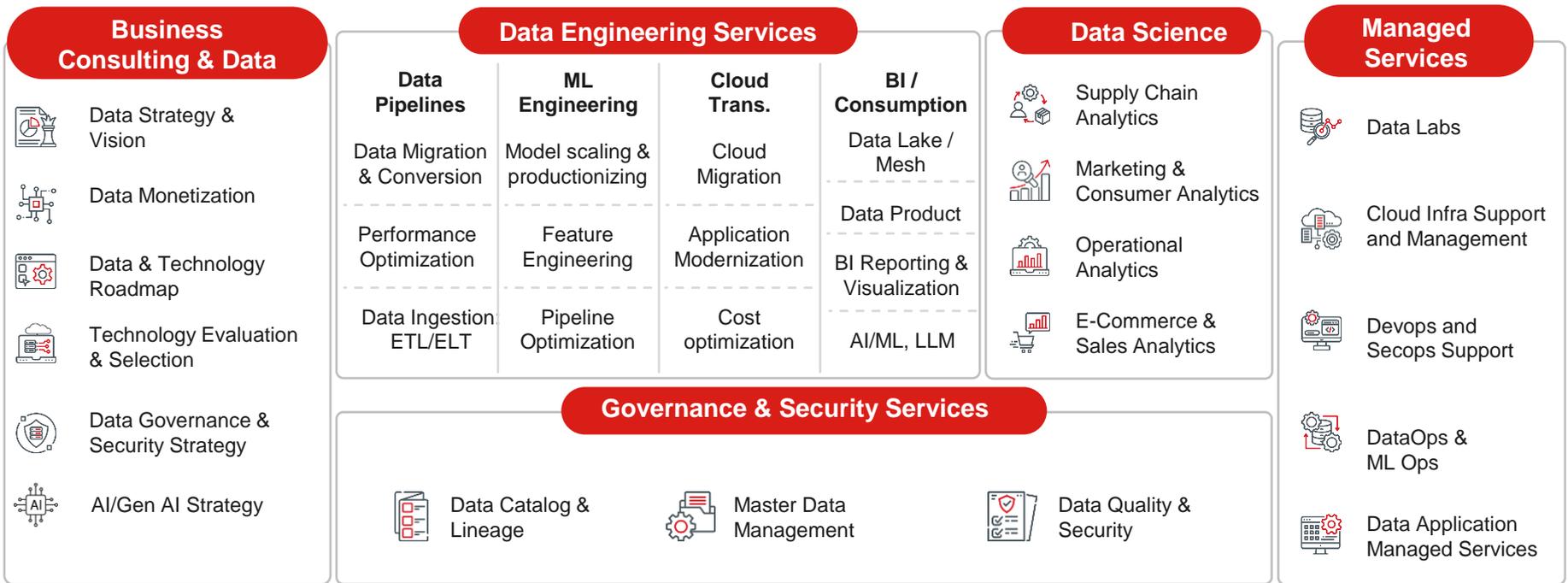


London



Sao Paulo

# Enabling Business Transformation with Full-Service Capability Suite



Sigmoid has worked with more than Five large customers to design, build and deploy solutions in Azure

## Data Processing & Transformation:

- **Azure Databricks:** Collaborative Apache Spark-based analytics platform to be used for big data processing and machine learning.
- **Azure HDInsight:** Managed cloud service for processing big data using popular open-source frameworks like Hadoop and Spark.

## Data Analytics & Visualization:

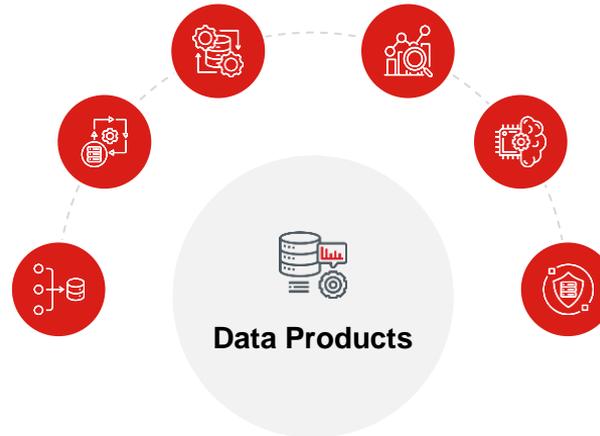
- **Azure Synapse Analytics:** Analytics service which will be used for analyzing large amounts of data using either serverless or provisioned resources.
- **Power BI:** Business intelligence tool to be used for creating interactive visualizations and reports.

## Data Storage & Management:

- **Azure Data Lake Storage:** Scalable and secure data lake for storing large amounts of structured and unstructured data would be considered.
- **Azure SQL Database:** Managed relational database service for structured data storage.

## Data Ingestion & Integration:

- **Azure Data Factory:** Creating data pipelines to move and transform data from various sources.
- **Azure Event Hubs:** Real-time data ingestion from applications, devices, or any data streams would be done.



## Machine Learning & AI:

- **Azure Machine Learning:** End-to-end platform for building, training, and deploying machine learning models.
- **Cognitive Services:** Pre-built AI services for vision, speech, language, and decision-making.

## Security & Compliance:

- **Azure Active Directory:** Identity and access management service.
- **Azure Policy & Blueprints:** Tools for implementing governance and compliance across Azure resources.

Sigmoid's implementation of solutions in Azure involves leveraging a combination of services and tools tailored to specific business needs. Sigmoid would collaborate between data engineers, data scientists, business analysts, and other stakeholders as it is essential to align the implementation with business goals and ensure success.



# Key Pillars of Marketing Measurement & Analytics

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# What is in mind of CMOs today?



## End Objectives

- Omnichannel connectivity
- Real time data driven marketing
- Improving ROIs Paid / Owned / Earned channel connectivity - cross channel examples on connectivity
- Always On Consumer Experiences Increased visibility on marketing performance



## Analytics Layer

- MTA (Multi-touch attribution)
- MMM (Marketing mix modeling)
- Campaign Optimization
- A/B Testing
- Social Media Analytics
- Market Segmentation and Audience Analytics



## Data Layer

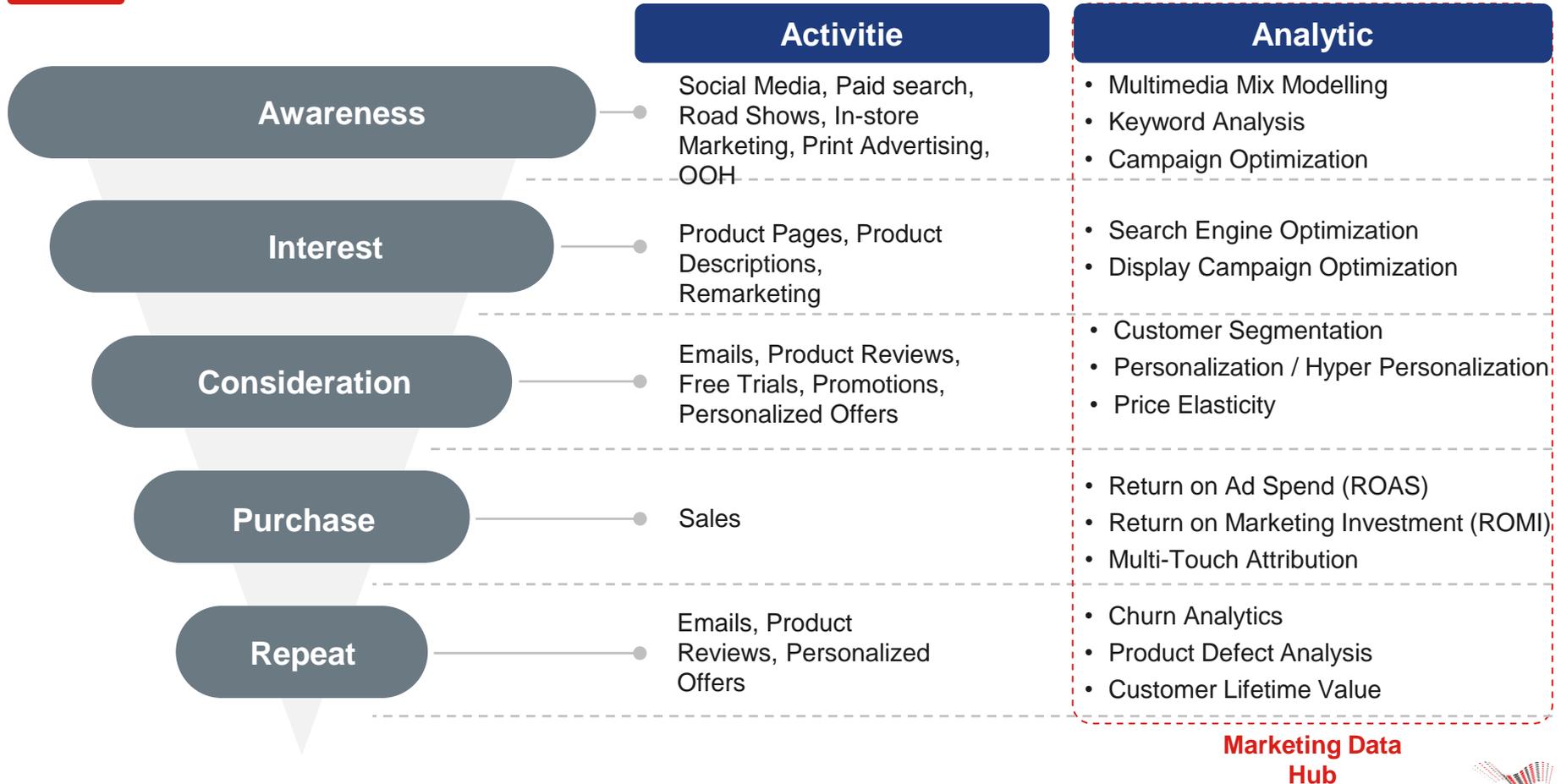
- Real time digital measurement
- Enhanced Collection and use of first party data
- Real time and standard reporting
- Strong Data Governance and Quality



## Driver KPIs

- Revenue
- Profitability
- ROI on marketing investment
- Market Share
- Brand Penetration
- Customer Lifetime Value
- Churn
- Return on Advertising Spend (ROAS)

# Analytics Support across the Marketing Funnel



# Marketing Analytics- KPIs and Use Cases



## KPIs for CMO

- Personalized Shopping Experience
- NPS and Branding
- Repeat Purchase



## Use case

- Personalized Offers
- Sentiment Analysis
- Consumer Profiles
- Churn Analytics



## Benefits Delivered

- **12%** uplift in average conversion rate
- **20%** increase in prediction accuracy
- **2.5x** increased accuracy in predicting churn



- Return on Ad Spend
- Attribution across multiple touch points
- Estimate Impact of Changes

- Dashboarding & Reporting
- Multimedia Mix Modelling / Multi Touch Attribution
- Customer Lifetime Value Calculation

- **30-45%** reduction in time spent in creating reports
- **11%** improved Campaign effectiveness
- **70%** of users who were likely to churn were rightly identified



- Marketing ROI
- Campaign Spend Optimization
- Historical Analysis

- Marketing ROI Modelling
- Amazon Ad Spend Optimization
- SEO Optimization

- **Improved ROI**, due to ability to modify campaigns mid-flight
- **25%** Improvement in Return On Advertising Spend
- **12%** increase in Product Page views



## MAA - Solution Features

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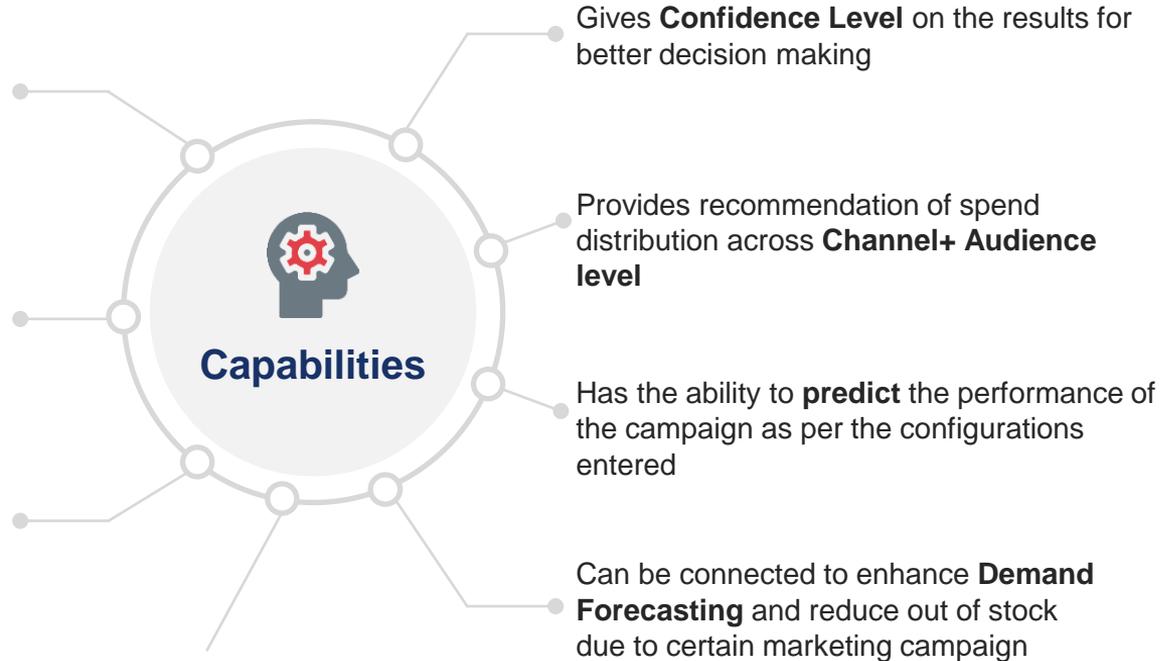
# MAA – Marketing Activity Attribution is a fully automated end to end solution

Ability to generate **weekly ROI (Online and Offline)** for any digital campaigns (Both BAU as well as New Campaigns)

ROI, Effectiveness and CTR is generated at **Campaign + channel+ audience + creative + placement + tactic level**

No restrictions on keeping and cell as **dark** – Model is tuned to figure out test and control pairs depending on marketing activities and its impact

**Analyses performance at DMA level,** thereby providing visibility on best & worst performing marketing regions



# Solution Flow

### Data sets

**Sales**

**Digital Campaigns**

**Weather**

**Demographics**

Historical Datasets

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Product Master-data

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Custom Mapping Files



### Machine Learning Models

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Geo-Segmentation Model to general dynamic A/B testing DMA groups

Spend-Asymmetry model to assign sales uplift against Marketing Activities on DMA level

Quasi Experimental Design

Ridge Regression Model

Correlated Attribution Model



### Model Deliverables

ROI Reporting at all granularities

Model Interim Reports

Spend Recommendation

DMA weekly level MAA Report



### Marketing Events - Weekly per DMA

Channel	Campaign	Creative	Audience	Spend	Impressions
M1	Facebook Campaign - Social Organic Boost	ThinkBigger Mayim	Neuriva Affinity Audience	\$230	2104
M2	Facebook Campaign - Social Organic Boost	TikTok Reel	Neuriva Affinity Audience	\$115	159
M2	YouTube Neuriva Q3 2021 Full Funnel	ThinkBigger Mayim	Catalina Prevagen Buyers	\$304	760

### Weekly Incremental Data

Marketing Spend Data

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Marketing Activity Data

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Offline & Online Sales Data

### Weekly per DMA - Model Outputs

Channel	Campaign	Creative	Audience
<p>ROI : 1.95 CTR : 1.47%</p>	Campaign - Social Organic Boost <p>ROI : 1.3 CTR : 3%</p>	ThinkBigger Mayim <p>ROI : 2.1 CTR : 4.3%</p>	Neuriva Affinity Audience <p>ROI : 1.1 CTR : 11.4%</p>
<p>ROI : 1.77 CTR : 18.1%</p>	Neuriva Q3 2021 Full Funnel <p>ROI : 2.1 CTR : 1.47%</p>	TikTok Reel <p>ROI : 0.7 CTR : 30.1%</p>	Catalina Prevagen Buyers <p>ROI : 0.86 CTR : 6.1%</p>



## Sample Dashboards

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# Sample Dashboards

Channel	ROI	Effectiveness	Incremental Units	Spend	CPM	Touchpoints	Efficiency
Channel1	0.45	2.08	18,740	\$952,319	105.88	8,994,252	0.02
Channel2	8.97	36.67	70,326	\$756,181	39.22	19,729,543	0.93
Channel3	0.40	6.51	32,660	\$1,366,857	272.47	5,076,476	0.02
Channel4	0.42	0.97	8,943	\$485,879	52.52	9,250,849	0.02
Channel5	1.41	3.83	145,077	\$1,697,471	44.84	7,858,768	0.09
<b>Total</b>	<b>1.79</b>	<b>5.90</b>	<b>1,019,193</b>	<b>\$6,527,621</b>	<b>37.76</b>	<b>172,880,021</b>	<b>0.16</b>

Campaign	ROI	Effectiveness	Incremental Units	Spend	CPM	Touchpoints	Efficiency
MOVE-FREE-PRIMEDAY-JUNE2021	30.19	46.42	21,016	\$8,954	21.99	452,747	2.11
Organic Social Boost 13 on 10/2	17.30	2.34	628	\$865	3.22	268,158	0.73
Organic Social Boost 12 on 9/28	15.59	2.59	562	\$859	3.96	216,951	0.65
Brand4 Q3 Display	13.39	2.24	12,109	\$21,968	4.07	5,399,624	0.55
VMS-Brandseeker-2021	11.92	94.47	643,158	\$491,322	72.14	6,797,274	1.31
<b>Total</b>	<b>1.79</b>	<b>5.90</b>	<b>1,019,193</b>	<b>\$6,527,621</b>	<b>37.76</b>	<b>172,880,021</b>	<b>0.16</b>

Audience	ROI	Effectiveness	Incremental Units	Spend	CPM	Touchpoints	Efficiency
MOVE-FREE-SITE-VISITORS-90-DAYS	39.40	45.09	4,106	\$1,562	17.08	91,497	2.64
LOOKALIKE-US-10% Brand3-DIC PURCHA...	32.24	47.78	7,228	\$3,146	20.80	151,293	2.30
LOOKALIKE-US-5% Brand3-DIC PURCHA...	26.56	46.39	9,585	\$5,138	24.87	206,625	1.87
Brand1-Elderberry-Brandseeker	26.27	132.31	215,424	\$65,454	40.20	1,628,181	3.29
Brand1-Brandseeker	21.26	101.01	327,365	\$174,111	41.73	9,973,873	2.64
<b>Total</b>	<b>1.79</b>	<b>5.90</b>	<b>1,019,193</b>	<b>\$6,527,621</b>	<b>37.76</b>	<b>172,880,021</b>	<b>0.16</b>

Creative	ROI	Effectiveness	Incremental Units	Spend	CPM	Touchpoints	Efficiency
760x600	85.78	2.18	151	\$43	0.62	69,669	3.54
728x90	69.01	2.26	587	\$207,350	0.80	260,350	2.83
320x50	62.14	2.15	2,504	\$983	0.84	1,163,090	2.55
300x600	61.73	2.23	2,718	\$109	0.88	124,548	2.54
300x250	67.92	2.12	2,744	\$1,113	0.89	1,292,671	2.18
<b>Total</b>	<b>1.79</b>	<b>5.90</b>	<b>1,019,193</b>	<b>\$6,527,621</b>	<b>37.76</b>	<b>172,880,021</b>	<b>0.16</b>

**Date Range**  
02/04/2021 - 06/11/2021

**Brand**  
 Select all  
 Brand1  
 Brand2  
 Brand3  
 Brand4

**Spend Category**  
 All  
 Amazon  
 Offline

**Channel**  
All

**Campaign**  
All

**Audience**  
All

**Creative**  
All

ROI  
**1.68**

Spend  
**\$8.24M**

Incremental Profit  
**\$13.81M**

**Spend vs ROI - All**

Campaign	ROI	Effectiveness	Incremental Units	Spend	CPM	Touchpoints	Efficiency
MOVE-FREE-PRIMEDAY-JUNE2021	30.19	46.42	21,016	\$9,954	21.99	452,747	2.11
Organic Social Boost 13 on 10/2	17.30	2.34	628	\$865	3.22	268,158	0.73
Organic Social Boost 12 on 9/28	15.59	2.59	562	\$859	3.96	216,951	0.65
Brand4 Q3 Display	13.39	2.24	12,109	\$21,968	4.07	5,399,624	0.55
VMS-Brandseeker-2021	12.08	89.41	678,349	\$530,640	69.94	7,587,277	1.28
<b>Total</b>	<b>1.68</b>	<b>5.08</b>	<b>1,184,527</b>	<b>\$8,242,868</b>	<b>35.34</b>	<b>233,272,396</b>	<b>0.14</b>

**Calculation by Campaign Name**

**Brand Data Till**  
 Brand4 23 October 2021  
 Brand3 23 October 2021  
 Brand2 23 October 2021

**Brand**  
 Select all  
 Brand1  
 Brand2  
 Brand3  
 Brand4

**Spend Category**  
 All  
 Amazon  
 Offline

**Campaign**  
 Select all  
 \_CNBrand1Q42021\_CC...  
 \_CNBrand3Q421\_LCCP...  
 \_CNBrand4Q42021\_C...  
 ADVANCED-Q4-CON...  
 ADVANCED-Q4-RETA...  
 AN-RR-MK-US-CN-B...  
 AN-RR-MK-US-CN-B...  
 Brand1-DISPLAY-Q4

ROI  
**1.11**

Spend  
**\$6.69M**

Incremental Profit  
**\$7.4M**

**Spend vs ROI - All**

Channel	ROI	Effectiveness	Incremental Units	Spend	CPM	Touchpoints	Efficiency
Channel1	0.13	1.63	9,794	\$865,050	144.11	6,022,565	0.01
Channel2	1.36	2.26	346,712	\$2,782,050	18.00	153,465,542	0.13
Channel3	0.58	6.95	74,094	\$1,845,285	173.00	10,666,267	0.04
Channel5	2.20	2.13	102,702	\$480,670	14.13	48,321,508	0.15
Channel6	1.78	1.53	67,690	\$535,435	12.10	44,233,802	0.19
<b>Total</b>	<b>1.11</b>	<b>2.29</b>	<b>600,992</b>	<b>\$6,690,490</b>	<b>25.47</b>	<b>262,689,684</b>	<b>0.09</b>

**Spend vs ROI - Brand1 All**

Channel	ROI	Effectiveness	Incremental Units	Spend	CPM	Touchpoints	Efficiency
Channel1	1.66	1.45	7,427	\$36,506	7.18	5,119,318	0.20
Channel2	3.97	1.55	223,261	\$470,831	3.26	144,242,777	0.47
Channel3	0.15	2.59	13,152	\$746,549	146.97	5,079,480	0.02
Channel5	1.75	1.94	56,454	\$261,377	8.99	29,068,022	0.22
Channel6	1.01	1.33	40,682	\$342,537	11.20	30,572,568	0.12
<b>Total</b>	<b>1.53</b>	<b>1.59</b>	<b>340,976</b>	<b>\$1,857,800</b>	<b>8.68</b>	<b>214,080,665</b>	<b>0.18</b>

**Date Range**  
16/01/2021 - 24/06/2021

**Brand**  
 Select all  
 Brand1  
 Brand2  
 Brand3  
 Brand4

**Spend Category**  
 All  
 Amazon  
 Offline

**Brand Data Till**  
 Brand1 23 October 2021  
 Brand2 23 October 2021  
 Brand3 23 October 2021  
 Brand4 23 October 2021

**Compare With**  
 Select all  
 Brand1  
 Brand2  
 Brand3  
 Brand4

**Spend Category**  
 All  
 Amazon  
 Offline



## Success Story

# Inflight campaign optimization with an agile MAA solution

## Case Background

- The client, a F500 CPG major, receives Marketing Attribution reports from Nielsen twice a year to optimize their marketing investments and campaign attributes for every brand
- They had no guided framework to modifying campaigns mid-flight
- They had challenges in identifying the most relevant KPIs for campaign effectiveness measurement

## Sigmoid Solution

Built a **control system based framework** to evaluate campaigns across locations and product segments, thereby assessing the impact of marketing activity on sales



Provided best recommendations to **improve campaigns mid-flight** along with automated reporting



Attributed offline aggregated sales to various channels, by utilizing information from multiple sources: DMPs, TV Planning, Social, Audience, Creatives, Coupons etc.



## Business Impact

**11%** improved Campaign effectiveness

**90%** savings on reporting costs

**Improved ROI**, due to ability to modify campaigns mid-flight



# Engagement Models

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# Sigmoid's Engagement Models

## Project Based



- Starts with consulting/scoping (2-3 weeks)
- Delivery Program Management
- Interim review
- Success criteria met and IP handover
- Option to continue with product support
- Fixed bid contract
- 3-5 months duration given complexity of problem

### Benefits

- Cost effective
- KPI/SLA/Outcome driven
- Suitable for Fixed scope of work
- Less overheads

## Staff Augmentation



- Understanding of skill requirements
- Profile match and rate card
- Onboarding and monthly billing
- Focused training based on client tech stack
- Project Management support
- 10% backup resources unbilled and trained

### Benefits

- Scalability
- Flexibility in resourcing
- Ability to change/redefine scope

## Hybrid-Flexi Model/Data Labs/CoE



- Mix of project and staff augmentation engagements
- Requirement gathering
- Requirement classification - as project or staff augmentation
- Joint delivery plan
- Secure resources internally from Sigmoid and bill monthly
- Dedicated PM, Engineering Managers
- Dedicated Management Consultant(s)
- Dedicated Team Leads and Product Owners

### Benefits

- Cost effectiveness by focus on output
- Ability to change/redefine scope/Change requests
- Risk/Reward linked to KPI/SLA

# Thank you



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Website: [www.sigmoid.com](http://www.sigmoid.com)

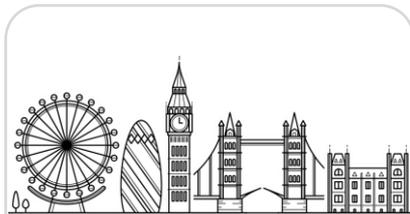


**'India Future Unicorn Award'**  
in Data Science category by Hurun India

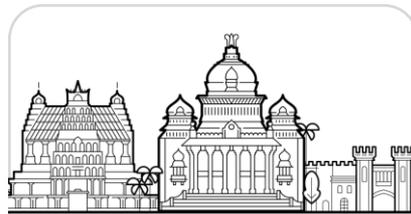
## Global presence:



**USA** (NY, SF, Dallas, Chicago)



**EU** (Amsterdam, London)



**India**  
(Bengaluru)



**LATAM** (Lima)