Module 1: KPI Foundation & Analysis Framework

Google Ads Performance Analysis Mastery Course

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Module Overview

Duration: 5 Days (Week 1)
Daily Time: 30 minutes
Objective: Master the metrics that matter and build your analytical mindset

By the end of this module, you will:

- Understand the hierarchy of Google Ads KPIs
- Master KPI calculations and relationships
- Apply attribution models to real campaign analysis
- Build your personal KPI dashboard
- Diagnose performance issues using KPI frameworks

Day 1: The KPI Hierarchy

Learning Objectives

- Understand the three-tier KPI pyramid
- Identify primary vs. secondary KPIs
- Learn the cascade effect of KPI improvements

The Three-Tier KPI Pyramid

⛰️ Tier 1: Business Impact KPIs (The Peak)

These directly measure business success:

- **ROAS (Return on Ad Spend)**: Revenue ÷ Ad Spend
- **CPA (Cost Per Acquisition)**: Ad Spend ÷ Conversions
- **Revenue**: Total income from campaigns
- **Profit Margin**: (Revenue - Total Costs) ÷ Revenue

⛰️ Tier 2: Performance Driver KPIs (The Middle)

These influence Tier 1 metrics:

- **Conversion Rate (CVR)**: Conversions ÷ Clicks × 100
- **Average Order Value (AOV)**: Revenue ÷ Number of Orders
- **Cost Per Click (CPC)**: Ad Spend ÷ Clicks
- **Conversion Value**: Average value of each conversion

⛰️ Tier 3: Engagement Signal KPIs (The Foundation)

These affect overall performance:

- **Click-Through Rate (CTR)**: Clicks ÷ Impressions × 100
- **Impression Share**: Impressions ÷ Total Available Impressions
- **Quality Score**: Google's 1-10 rating of ad relevance
- **Ad Position**: Average position in search results

The Chain Reaction Effect

> Higher CTR → Higher Quality Score → Lower CPC → Lower CPA → Higher ROAS

Real-World Example: E-commerce Fitness Equipment

Initial State:

- CTR: 2.1%
- Quality Score: 6
- CPC: $2.40

- CPA: $45
- ROAS: 3.2:1

After Optimization:

- CTR: 3.4% (+62%)
- Quality Score: 8 (+33%)
- CPC: $1.85 (-23%)
- CPA: $34 (-24%)
- ROAS: 4.1:1 (+28%)

KPI Priority by Campaign Type

Campaign Type	Primary KPIs	Secondary KPIs	Monitor
Lead Generation	CPA, Conversion Volume	CTR, Quality Score	ROAS (if tracking lead value)
E-commerce	ROAS, Revenue	AOV, Conversion Rate	Impression Share
Brand Awareness	Impression Share, Reach	CTR, Engagement Rate	View-through conversions

Day 1 Exercise

Scenario: Online course platform Search campaign

Current Performance:

- Impressions: 50,000/month
- Clicks: 1,500
- CPC: $3.50
- Conversions: 75
- Conversion Value: $150/course
- Ad Spend: $5,250

Tasks:

1. Calculate CTR, CVR, CPA, and ROAS
2. Identify the weakest KPI against benchmarks (CTR: 3.5%, CVR: 5-7%, ROAS: 3:1)
3. Project new ROAS if CTR improves to 4% (assume 15% CPC reduction)

Solutions:

- CTR: 3%, CVR: 5%, CPA: $70, ROAS: 2.14:1

- Weakest: ROAS (2.14:1 vs 3:1 benchmark)
- Projected: 2.52:1 ROAS with improved CTR

Day 2: KPI Relationships & Calculations

Learning Objectives

- Master advanced KPI calculations
- Understand interdependencies between metrics
- Build formulas for composite KPIs

Core KPI Formulas

Revenue-Based KPIs

```
ROAS = Total Conversion Value ÷ Ad Spend
Target ROAS = Target CPA × Conversion Rate
Break-even ROAS = 1 ÷ Profit Margin
```

Cost-Based KPIs

```
CPA = Ad Spend ÷ Conversions
Target CPA = Average Order Value × Profit Margin
Effective CPA = (Ad Spend + Operational Costs) ÷ Conversions
```

Performance KPIs

```
Conversion Rate = (Conversions ÷ Clicks) × 100
Click-Through Rate = (Clicks ÷ Impressions) × 100
Cost Per Click = Ad Spend ÷ Clicks
```

Advanced Composite KPIs

1. Value Per Click (VPC)

```
VPC = (Conversion Value ÷ Clicks)
```

Measures average value generated per click

2. Revenue Per Thousand Impressions (RPM)

```
RPM = (Revenue ÷ Impressions) × 1000
```

Useful for display and video campaigns

3. Assisted Conversion Value

```
ACV = Total Conversion Value - Last-Click Conversion Value
```

Shows value of assists in the conversion path

KPI Correlation Matrix

When This Increases →	CTR	CPC	CVR	CPA	ROAS
CTR	-	↓	↑	↓	↑
Quality Score	↑	↓	→	↓	↑
Bid Amount	→	↑	→	↑	↓
Landing Page Relevance	→	→	↑	↓	↑

Practical Calculation Exercise

Multi-Channel Scenario:

- Search Campaign: $5,000 spend, 100 conversions, $150 AOV
- Shopping Campaign: $3,000 spend, 80 conversions, $120 AOV
- Display Campaign: $2,000 spend, 40 conversions, $100 AOV

Calculate:

1. Individual campaign ROAS
2. Blended ROAS
3. Weighted CPA
4. Which campaign to scale based on marginal ROAS?

Solutions:

1. Search: 3:1, Shopping: 3.2:1, Display: 2:1
2. Blended ROAS: 2.86:1
3. Weighted CPA: $45.45
4. Shopping (highest ROAS and good volume)

Building Your KPI Dashboard

Essential elements:

1. **Period Comparison**: Current vs. Previous Period
2. **Trend Lines**: 7-day, 30-day moving averages
3. **Benchmarks**: Industry and internal targets
4. **Segmentation**: Device, location, time of day
5. **Alerts**: Automatic flags for significant changes

Day 3: Attribution Models & Their Impact

Learning Objectives

- Understand different attribution models
- See how attribution affects KPI interpretation
- Choose the right model for your business

Attribution Models Explained

1. Last-Click Attribution

- **What it measures**: Gives 100% credit to the final touchpoint
- **Best for**: Direct response campaigns
- **Limitation**: Ignores assist value

2. First-Click Attribution

- **What it measures**: Gives 100% credit to the first touchpoint
- **Best for**: Brand awareness analysis
- **Limitation**: Ignores conversion optimization

3. Linear Attribution

- **What it measures**: Distributes credit equally across all touchpoints
- **Best for**: Long sales cycles
- **Limitation**: Treats all touches as equal value

4. Time-Decay Attribution

- **What it measures**: More credit to recent touchpoints
- **Best for**: Short consideration cycles
- **Limitation**: May undervalue awareness efforts

5. Position-Based Attribution

- **What it measures**: 40% first, 40% last, 20% middle
- **Best for**: Balanced view of journey
- **Limitation**: Arbitrary credit distribution

6. Data-Driven Attribution (DDA)

- **What it measures**: Uses machine learning to assign credit
- **Best for**: Accounts with sufficient data
- **Limitation**: Requires 15,000 clicks, 600 conversions/month

Attribution Impact on KPIs

Case Study: B2B Software Company

Campaign	Last-Click CPA	DDA CPA	Difference
Brand Search	$45	$125	+178%
Generic Search	$250	$180	-28%
Display Prospecting	$500	$210	-58%
YouTube	$800	$190	-76%

Key Insight: Upper-funnel campaigns show dramatically better performance under DDA

Choosing Your Attribution Model

Decision Framework:

1. **Sales Cycle Length**
   - < 1 day: Last-click
   - 1-7 days: Time-decay
   - 7-30 days: Position-based
   - 30 days: Linear or DDA
2. **Campaign Mix**
   - Single channel: Last-click

- Multi-channel, same stage: Linear
- Full funnel: DDA or Position-based

3. **Data Volume**
   - Low volume: Last-click or Position-based
   - High volume: Data-driven

Day 3 Exercise

Attribution Analysis Challenge

Your account shows:

- Display Campaign: 1,000 clicks, 5 last-click conversions
- Generic Search: 500 clicks, 50 last-click conversions
- Brand Search: 300 clicks, 100 last-click conversions

Path analysis shows:

- 60% of Brand Search converters saw Display first
- 40% of Generic Search converters saw Display first

Questions:

1. Calculate true contribution of Display using linear attribution
2. How does Display CPA change?
3. Should you increase Display budget?

Day 4: Attribution in Practice

Learning Objectives

- Implement attribution insights in optimization
- Build attribution-aware budgets
- Create multi-touch reporting

Setting Up Attribution in Google Ads

Step 1: Enable Attribution Reports

1. Navigate to Tools & Settings > Measurement > Attribution
2. Select your attribution model

3. Set lookback window (typically 30-90 days)

Step 2: Analyze Path Metrics

Key reports to review:

- Top Paths
- Path Length
- Time Lag
- Model Comparison

Step 3: Implement Insights

- Adjust budgets based on true contribution
- Modify bid strategies for assist-heavy campaigns
- Create campaign experiments with different models

Multi-Touch Budget Allocation

Formula for Attribution-Based Budgeting:

```
Adjusted Budget = Current Budget × (DDA ROAS ÷ Last-Click ROAS)
```

Example Reallocation:

Campaign	Current Budget	LC ROAS	DDA ROAS	New Budget
Display	$5,000	1.5:1	3.2:1	$10,667
Search	$10,000	4:1	3.5:1	$8,750
Shopping	$8,000	3:1	3.1:1	$8,267

Building Attribution Reports

Essential Attribution Metrics:

1. **Assisted Conversions**: Non-last-click conversions
2. **Assist/Last-Click Ratio**: Indicates assist value
3. **Path Length**: Average touchpoints to conversion
4. **Time to Conversion**: Days from first touch
5. **Cross-Device Conversions**: Multi-device journeys

Advanced Attribution Strategies

1. Incrementality Testing

- Pause campaigns to measure true lift
- Use geographic experiments
- Implement conversion lift studies

2. Custom Attribution Models

```javascript
// Example: Custom model giving more credit to first touch
if (touchpoint.position === 'first') {
  credit = 0.5;
} else if (touchpoint.position === 'last') {
  credit = 0.3;
} else {
  credit = 0.2 / middleTouchpoints;
}
```

3. Attribution by Segment

- New vs. returning customers
- High-value vs. low-value conversions
- Product categories

Day 4 Exercise

Build Your Attribution Framework

Using your account data:

1. Export path data for last 30 days
2. Calculate assist/last-click ratios by campaign
3. Identify your "hidden heroes" (high assist, low last-click)
4. Propose budget reallocation based on findings

Template Analysis:

- Campaign A: 500 assists, 100 last-click = 5:1 ratio
- Campaign B: 200 assists, 300 last-click = 0.67:1 ratio

- Which deserves more budget under multi-touch view?

Day 5: Module 1 Checkpoint

Knowledge Assessment Quiz

Question 1: Which KPI cascade is correct? a) Higher CPC → Higher Quality Score → Higher CTR b) Higher CTR → Higher Quality Score → Lower CPC c) Lower CTR → Higher CPC → Higher ROAS d) Higher Quality Score → Higher CPC → Lower ROAS

Question 2: A campaign has $10,000 spend and generates $35,000 in revenue. What's the ROAS? a) 2.5:1 b) 3.5:1 c) 4.5:1 d) 25%

Question 3: Under Data-Driven Attribution, upper-funnel campaigns typically show: a) Higher CPA than last-click b) Lower CPA than last-click c) Same CPA as last-click d) No measurable CPA

Question 4: Your CTR improves from 2% to 3%. Assuming this improves Quality Score and reduces CPC by 20%, how does this affect clicks with the same budget? a) 20% more clicks b) 25% more clicks c) 50% more clicks d) 66% more clicks

Question 5: Which attribution model gives 40% credit to first and last touch? a) Linear b) Time-decay c) Position-based d) Data-driven

Practical Assignment

Campaign Analysis Project

Using the provided dataset (or your own account):

1. **KPI Audit (10 minutes)**
   - Calculate all Tier 1, 2, and 3 KPIs
   - Identify top 3 underperforming metrics
   - Compare to industry benchmarks
2. **Attribution Analysis (10 minutes)**
   - Compare last-click vs. data-driven CPA
   - Calculate assist/last-click ratios
   - Identify attribution winners/losers
3. **Optimization Plan (10 minutes)**
   - Propose 3 specific improvements
   - Project KPI impact of each change

- Prioritize by effort vs. impact

Reflection Prompts

1. **Which KPI relationship surprised you most?** Why do you think you hadn't noticed it before?
2. **How would switching attribution models change your optimization strategy?** Give a specific example.
3. **What's one KPI you've been over-focusing on?** What should you track instead?

Module 1 Completion Checklist

- [ ] Understand the three-tier KPI hierarchy
- [ ] Can calculate all major Google Ads KPIs
- [ ] Know when to use each attribution model
- [ ] Built a custom KPI dashboard template
- [ ] Completed attribution analysis exercise
- [ ] Identified account-specific KPI priorities

Key Formulas Reference Sheet

```
ROAS = Revenue ÷ Ad Spend
CPA = Ad Spend ÷ Conversions
CTR = (Clicks ÷ Impressions) × 100
CVR = (Conversions ÷ Clicks) × 100
CPC = Ad Spend ÷ Clicks
AOV = Revenue ÷ Orders
Quality Score Impact on CPC = Base CPC × (1 ÷ Quality Score Factor)
Attribution Credit = Model-Specific Weight × Conversion Value
Break-even ROAS = 1 ÷ Profit Margin
Target CPA = AOV × Profit Margin
```

Module Resources

Required Reading

1. **"Advanced Google Ads" by Brad Geddes**
   - Chapter 10: Understanding Quality Score
   - Chapter 11: Advanced Optimization Techniques
   - Chapter 12: Attribution and Analytics
2. **Google Best Practices**

- About attribution models
- Understanding Quality Score
- Conversion tracking setup

Tools & Templates

1. **KPI Dashboard Template** (Google Sheets)
   - Pre-built formulas for all KPIs
   - Automated period comparisons
   - Visualization charts
   - Access Template
2. **Attribution Analysis Worksheet**
   - Path analysis calculator
   - Model comparison tool
   - Budget reallocation planner
   - Download Worksheet
3. **Google Ads Scripts**

```javascript
// Quality Score Tracker
function trackQualityScore() {
  var report = AdWordsApp.report(
    'SELECT CampaignName, Keywords, QualityScore ' +
    'FROM KEYWORDS_PERFORMANCE_REPORT ' +
    'WHERE Status = ENABLED ' +
    'DURING LAST_30_DAYS'
  );
  // Process and alert on changes
}
```

Additional Resources

Videos & Courses

- Google Skillshop: Measurement Certification
- YouTube: "Attribution Models Explained" (Google Ads Channel)
- Coursera: "Google Ads Measurement and Optimization"

Industry Benchmarks

- WordStream: Google Ads Benchmarks by Industry
- Adalysis: Quality Score Benchmarks
- Search Engine Land: Average CTR by Industry

Communities & Support

- r/PPC Reddit Community
- Google Ads Community Forum
- PPC Chat Twitter Community (#ppcchat)

Weekend Challenge (Optional)

Advanced KPI Correlation Analysis

1. Export 90 days of campaign data
2. Create correlation matrix between all KPIs
3. Identify non-obvious relationships
4. Build predictive model for ROAS based on leading indicators
5. Test model accuracy on recent 30 days

Bonus: Create automated alert system for KPI anomalies

Next Module Preview

Module 2: Advanced Performance Diagnostics

In Week 2, you'll learn:

- The 5-step performance audit framework
- Advanced segmentation strategies
- Search query mining techniques
- Competitive gap analysis
- Building diagnostic dashboards

Get ready to become a Google Ads detective, uncovering hidden opportunities and solving performance mysteries!

Notes Section

Use this space to capture your key learnings, questions, and insights throughout Module 1:

[Your notes here]

Module 1 Complete! 🎉

You've built a strong foundation in KPI analysis and attribution. These skills will serve as the bedrock for all advanced optimization techniques in the coming modules.