Bid-Crusade: Formulas & Scoring Reference

This document explains every formula and calculation used in the Results section of the website and the exported CSV files.

1. Pre-Disaster Metrics (Sales Log Table)

These are shown in the Results tab under the auction log before any disaster is applied.

Column	Formula	Example
Base Price	Fixed per asset (from database)	Rs.21 Cr
Sold Price	Final bid amount at sale	Rs.28 Cr
Premium (%)	((Sold-Base)/Base) x 100	((28-21)/21)x100 = +33%

2. Disaster Multiplier Table

When a disaster code (W, X, Y, or Z) is applied, each asset's sold price is multiplied based on its category (A, B, C, or D).

Disaster	Cat A	Cat B	Cat C	Cat D
W	x1.20 (+20%)	x1.00 (0%)	x1.00 (0%)	x0.80 (-20%)
X	x1.00 (0%)	x1.20 (+20%)	x1.00 (0%)	x0.80 (-20%)
Y	x1.00 (0%)	x0.80 (-20%)	x1.20 (+20%)	x1.00 (0%)
Z	x1.00 (0%)	x1.00 (0%)	x0.80 (-20%)	x1.20 (+20%)

Post-Disaster Value of a single asset:

```
Post-Disaster Value = Sold Price x Disaster Multiplier(Category)
```

3. Post-Disaster Team Metrics

3.1 Total Invested

```
Total Invested = Sum of all Sold Prices for the team's assets
```

3.2 Post-Disaster Value (Total)

```
Post-Disaster Value = SUM(Sold Price x Multiplier) for each asset
```

3.3 ROI (Return on Investment)

```
ROI = (Post-Disaster Value - Total Invested) / Total Invested
```

Displayed as a percentage. Positive = profit, negative = loss.

3.4 Category Investment

```
Category Investment[X] = Sum of Sold Prices for all assets in category X
```

3.5 Max Exposure

```
Max Exposure = Max(CatInv[A], [B], [C], [D]) / Total Invested
```

Displayed as a percentage. Lower is better (more diversified).

3.6 Vertical Presence

Each asset belongs to a hidden vertical (V1-V4). The system checks if the team has at least one asset in each vertical.

```
Vertical Count = Number of distinct verticals where team owns >= 1 asset
```

4. Organizer Scoring (out of 50)

The Organizer Score is composed of Business Strength + Bonus.

4.1 Business Strength (out of 40)

```
Business Strength = Vertical Score + Risk Score + ROI Score
```

Vertical Score (out of 15)

```
Vertical Score = (Vertical Count / 4) x 15
```

Verticals Covered	Score
4/4	15.0
3/4	11.25
2/4	7.5
1/4	3.75
0/4	0

Risk Score (out of 15)

```
If Max Exposure <= 45%  ->  Risk Score = 15
If Max Exposure > 45%   ->  Risk Score = 0
```

This is a binary threshold -- either full marks or zero.

ROI Score (out of 10)

ROI Range	Score
ROI >= 20%	10
12% <= ROI < 20%	7
5% <= ROI < 12%	4
ROI < 5%	0

4.2 Bonus (out of 10)

The bonus depends on how many of these 3 conditions are met:

#	Condition	Requirement
1	Diversification	Verticals=4 AND assets>=5

2	ROI Threshold	ROI >= 12%
3	Risk Management	Max Exposure <= 45%

Conditions Met	Bonus
3 of 3	10
2 of 3	6
1 of 3	3
0 of 3	0

4.3 Final Organizer Score

```
Organizer Score = Business Strength + Bonus
                = (Vertical + Risk + ROI Score) + Bonus
```

Maximum possible: 50 (40 + 10)

5. CSV Export Contents

5.1 Master Sheet (Bid-Crusade_Master_Sheet.csv)

Contains 4 sections: (1) Auction Log with sale order, IDs, prices, premiums, teams. (2) Team Summary pre-disaster. (3) Per-asset post-disaster breakdown with multipliers. (4) Team Summary post-disaster with all scores.

5.2 Team Sheets (Bid-Crusade_[TeamName].csv)

One file per team with: (1) Purchase log with all asset details. (2) Summary with totals. (3) Post-disaster breakdown with multipliers, profit/loss, and ROI.

6. Vertical Names (Hidden from Participants)

Code	Full Name
V1	Core Value Creation
V2	Enablers & Technology
V3	Market Access & Distribution
V4	Stability & Strategic

7. Key Constants

Parameter	Value
Initial Budget per Team	Rs.100 Cr
Number of Teams	8
Total Assets	40
Categories	A, B, C, D (visible)
Verticals	V1-V4 (hidden)

8. Bid Increment Rules

Current Price Range	Min Increment
< Rs.15 Cr	Rs.1 Cr
Rs.15 - Rs.25 Cr	Rs.2 Cr
> Rs.25 Cr	Rs.4 Cr