Table of Contents

Executive Summary:

This documentation outlines the design and implementation of a complete Airtable-based prototype developed for BrandWorth based on our 67-373: IS Consulting course, which was aimed to streamline and automate the process of evaluating and financially valuing private companies. Our Airtable solution integrates several databases, surveys, calculations, and scripted automations that together deliver a robust Brand Strength Score and financial valuation to each client. Each component in the system plays a specific role in capturing, transforming, and communicating data-driven insights to BrandWorth’s stakeholders and their clients.

Firstly, the Evaluation Database houses raw client responses from the evaluation survey. These responses are mapped to weighted numeric values in a corresponding Normalized Evaluation Database. Through this normalization process, each answer contributes to a calculated Individual Brand Strength Score (BSS), which is then further processed into a company-wide BSS via a dedicated automation.

Next, the Financial Database collects three years of EBITDA, Net Sales, and Operating Profit Margin data. Placeholder formulas were implemented to estimate future performance trends and calculate a provisional Financial Value. These formulas are flexible and designed for easy substitution once BrandWorth finalizes their official financial valuation algorithm.

The DealStats Database was developed to simulate benchmarking logic by comparing client financial metrics to DealStats-inspired industry averages. Clients are scored based on key indicators like gross margin and EBITDA margin, and a pricing multiplier is derived from this score. This multiplier becomes a crucial input in the Final Valuation formula.

Lastly, the automations are central to maintaining the integrity and efficiency of the data pipeline. Automations create normalized records, calculate Brand Strength Scores, synchronize financial and pricing multipliers, and trigger emails to clients once all valuation fields are complete. These scripts ensure seamless communication between databases and timely output to stakeholders.

In conclusion, together, this Airtable system provides a scalable and semi-automated solution that reflects BrandWorth's existing processes while preparing for their future growth. It gives structure to their previously manual workflow and lays the groundwork for more advanced analytics and client engagement going forward.

Syntax Key:

- ‘’ = columns in the database
- Italicized = database or form name

Evaluation Database

The evaluation database was created to store the answers to the evaluation survey that BrandWorth clients filled out. The answers in the evaluation database are connected to the attributes in the normalized evaluation database, where each response is turned into a number that contributes to their individual brand strength score.

The complete set of attributes/questions involved in the evaluation survey and the scores corresponding to each answer can be found in this spreadsheet in the tab titled “BW-QUESTIONS-OLIVIER-2022-08-24”

The second column in the normalized spreadsheet corresponds to the summation of all the individual scores to represent the final Brand Strength Score for the company based on that single evaluation survey.

Financial Database

Attributes collected through the *Financial Database Form:*

- EBITDA Most recent year
- EBITDA Prior year
- EBITDA 2 years ago
- Net Sales Most recent year
- Net Sales Prior year
- Net Sales 2 years ago
- Operating Profit Margin Most Recent Year
- Operating Profit Margin Prior Year
- Operating Profit Margin 2 years ago

Columns that get calculated after form submission:
NOTE: These formulas are random for the purpose of being able to calculate the correct values for the IS Consulting class. They are simply in place formulas until BrandWorth knows how their algorithm to calculate 'Financial Value' works.

- Estimated Net Sales:
  - `{Net Sales Most recent year} * (1 + (({Net Sales Most recent year} - {Net Sales Prior year}) / {Net Sales Prior year} + ({Net Sales Prior year} - {Net Sales 2 years ago}) / {Net Sales 2 years ago}) / 2)`
- Estimated EBITDA
  - `{EBITDA Most recent year} * (1 + (({EBITDA Most recent year} - {EBITDA Prior year}) / {EBITDA Prior year} + ({EBITDA Prior year} - {EBITDA 2 years ago}) / {EBITDA 2 years ago}) / 2)`
- Estimated Operating Profit Margin
  - `{Operating Profit Margin Most Recent Year} + (({Operating Profit Margin Most Recent Year} - {Operating Profit Margin Prior Year}) + ({Operating Profit Margin Prior Year} - {Operating Profit Margin 2 years ago})) / 2`
- Financial Value
  - `(({Estimated Net Sales} * ({Estimated Operating Profit Margin} / 100)) * 0.36355) + ({Estimated EBITDA} * 1.05)`

DealStats Database

The DealStats Database was created to simulate benchmarking logic used by BrandWorth in comparing client companies to industry averages, especially when full access to DealStats' proprietary datasets is not available.

This database plays a critical role in calculating a company-specific pricing multiplier, which reflects how the financial profile of a client compares to typical acquisition targets in their industry (NAICS 332999).

Inputs Collected

The following fields were added manually to each DealStats record to simulate DealStats-driven financial performance indicators:

- `'Gross Profit Margin'`
- `'Operating Profit Margin'`
- `'EBITDA Margin'`
- `'Target Age'` (in years)

Each of these indicators is compared to predefined ranges that simulate industry benchmarks. These thresholds were set based on public DealStats summaries or assumed averages for the 332000 NAICS family:

Metric	**Value Range**	**Score Contribution for Category (+)**
Gross Profit Margin	> 60%	5
	40-60%	3
	< 40%	1
Operating Profit Margin	> 20%	5
	10-20%	3
	< 10%	1
EBITDA Margin	> 20%	5
	10-20%	3
	< 10%	1
Target Age	> 20 years	3
	10-20 years	2
	< 10 years	1

As we see above, the total possible score across all four categories is 18.

dealstats_score Calculation: Using an Airtable script, the individual category scores are summed into a new field called `'dealstats_score'`.

This value is used to reflect how strong a company's financial and operational health is in relation to industry benchmarks.

newpricing_multiplier Field: Based on the `dealstats_score`, a pricing multiplier is assigned in a new field called `'newpricing_multiplier'`. This multiplier is a critical part of the client's Final Valuation and follows this logic:

Mapping DealStats Score -> Pricing Multiplier

dealstats_score	pricing_multiplier	Rationale
16-18	1.2	Excellent financials – top of market
13-15	1.1	Above average profitability
10-12	1.0	Meets benchmarks
7-9	0.9	Below average – some concern
< 7	0.8	Weak performance – high risk

This scoring system helps BrandWorth simulate the impact of favorable (or unfavorable) market positioning on their valuation model, in the absence of complete DealStats data.

Automations

Automation: 'Setting Pricing Multiplier in Clients DB'

- Trigger: When a new record is created or updated in the DealStats Database
- Actions:
    1. Find the corresponding record in the Clients Database using `Company Name`
    2. Copy the value from `'newpricing_multiplier'` in DealStats Database
    3. Paste it into `'Pricing Multiplier'` field in the Clients Database

‘Create Norm DB Record’ Automation:

Trigger: When a record in the *Evaluation Database* is created.
Actions:

- Creates a record in the *Normalized Evaluation Database* (Let’s call this record x).
- It also sets the record_id columns in the *Evaluation Database* and the *Normalized Evaluation Database* to the record id of record x.

Evaluation Survey Questions 1-45 Automations

In order to translate each response to the survey questions, we created a series of automations that run after the evaluation database is created. By using scripts in the automations, we can update the values in the normalized database based on the response to the questions in the evaluation survey, especially if the questions have a dependence on the response to another question. We grouped the responses into 45 groups based on a primary question in this spreadsheet and had the secondary questions fall within the same automation.

When the evaluation survey is completed, the normalized evaluation database is populated with the correct scores for each response. The scores are then summed to form the final Brand Strength Score in the normalized database.

‘BSS’ Automation:

Trigger: When a record in the *Normalized Evaluation Database* is created:
Actions:

- We retrieve all records in the *Normalized Evaluation Database* where Company Name = “Humtown”
- The “Max Positive Score” and “Max Negative Score” is retrieved from the *Clients Database*.
- For all records in the *Normalized Evaluation Database* where Company Name = “Humtown”, average the ‘Individual BSS Score’ over all of these records.
- Add the absolute sum of “Max Negative Score” to the average that you just found. Let’s call this value X.
- X/(Absolute Value of “Max Positive Score” + Absolute Value of “Max Negative Score). This is the final BSS.
- We store this final BSS in the record in the *Clients Database* where ‘Company Name’ is ‘Humtown’.

‘Setting 'Pricing Multiplier' in Client DB’ Automation:

Trigger: When a record in the *Deal Stats Database* is created:
Actions:

- We retrieve the record in the *Clients Database* where Company Name = “Humtown”.
- We take the value stored in ‘newpricing_multiplier’ in the *Deal Stats Database* and store it in ‘Pricing Multiplier’ in the *Clients Database.*

‘Setting 'Annual Financial Estimate' in Client DB’ Automation:

Trigger: When a record in the *Financial Database* is created:
Actions:

- We retrieve the record in the *Clients Database* where Company Name = “Humtown”.
- We take the value stored in ‘Financial Value’ in the *Financial Database* and store it in ‘Annual Financial Estimate’ in the *Clients Database.*

‘Sending Email’ Automation:

Trigger: When ‘Final Valuation’ is not equal to 0. This means that ‘Brand Multiplier’, ‘Pricing Multiplier’, and ‘Annual Financial Estimate’ are all filled in and not blank.
Action:

- Sends an email to the email stored in ‘client_email’ in the *Clients Database.* This is the message provided in the email:

> Hello Valued Client,
>
> Thank you for answering the surveys to help us identify the strength and value of your brand. We have provided our analysis below:
>
> Brand Strength Score: ‘BSS’from *Clients Database*
>
> Final Valuation: ‘Final Valuation’ from *Clients Database*
>
> BrandWorth is here to help you improve this score so you can become a top competitor in your industry. Contact us about our services and pricing plan and you could be our next successful client.
>
> Best Wishes,
>
> The BrandWorth Team