Fall 2022 Report

Pareto Solutions

Pareto Solutions

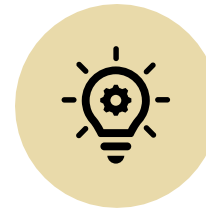## The Team

57
CONSULTANTS

50+
CLIENTS

10
YEARS

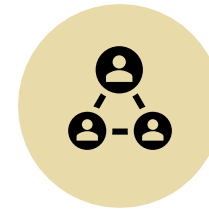## Our Values

Entrepreneurial Drive

Meritocratic Leadership

Innovative Growth

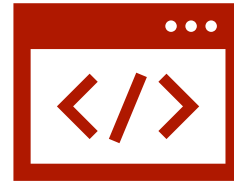Sustainable Commitment to Diversity

Extensive Mentorship

Current Trajectory

Expanding into larger-scale fintech, investment banking, manufacturing, etc. firms while maintaining a Chicago small business presence

INDUSTRIES

Branching into digital consulting via personalization algorithm development, ranking models, and data analytical reports

TECH

Hosting weekly alumni sessions and consulting panels for personalized pre-professional guidance

ALUMNI

Future Goals

Diversify the scope of **tech** engagements by capitalizing on industry trends like cloud migration, machine learning forecasting, etc.

Promote **diversity** recruitment by hosting outreach events, including a women in consulting panel with Women in Business

Strengthen **alumni** connections through newsletters, formalized trainings, and more

Expand to engagements with **global** companies to leverage our international talent

Maintain a **tight-knit culture** through clubwide retreats and an extensive mentorship program

Clients

Pareto Solutions worked with a diverse array of industries on engagements ranging from personalization algorithm development to market entry strategies
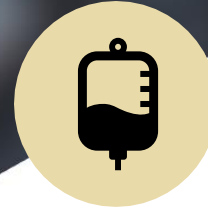
Mental health service creating personalized anxiety relief supplements

Medical tech company focusing on non-invasive therapy techniques

Fintech company exploring partnership opportunities

CPG company expanding in the B2B space

B2B platform connecting sustainable **fashion** start-ups with retail

Mental Health Service

Summary

We developed a minimum viable product and expansion strategy for a medical supplements quiz

Problem

The client wanted to expand its supplement package offerings and connect customers with nutrients that best match their mental health needs

Approach

- Competitor research of nutritional matching quizzes
- Engineering a personalization algorithm
- Website integration plan

Deliverable

Mental and nutritional health quiz, Python code with extensive documentation for adaptability, customer page UI/UX mock-up, competitor analysis and expansion strategy slide deck

Impact

10
Competitors Analyzed

26,000+
Supplement Combinations

Results

Using the quiz and personalization algorithm, the client can transition from the one size fits all supplement package model to capture input on customers' mental health priorities to match them with personalized sets of nutrients and diagnose concerning medical conditions

Mental Health Supplement Industry Overview

Financials

$8.3 B

Market Value in 2022

- 8% CAGR growth rate
- Projected value of $15.7 B in 2030
- Vitamins and minerals: 6.9% CAGR

Trends

- Growth of prioritizing holistic health – 66% of individuals are significantly interested in boosting gut health
- Covid sparked a high demand for immune system nutrients
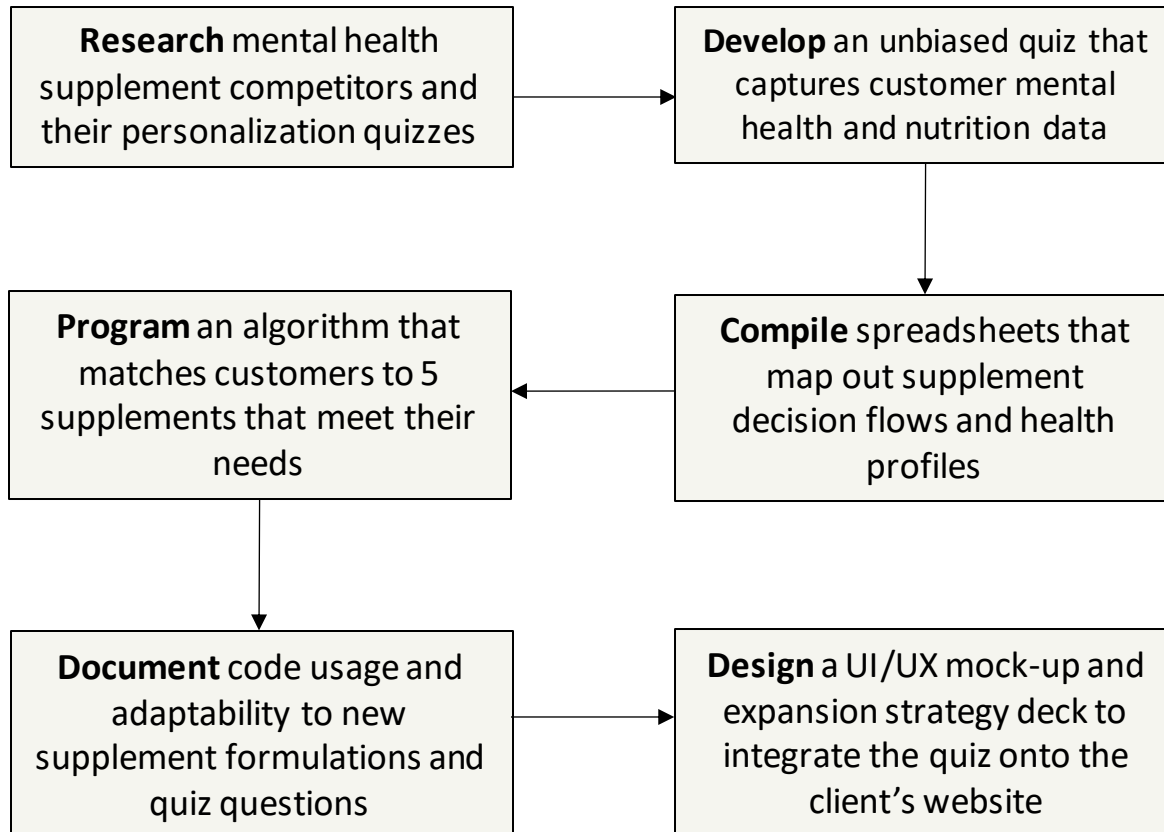- Prioritization of organic, vegan, and natural ingredients with eco-sustainable packaging

Innovations

- Technical advances to include a higher concentration of prebiotics in supplements
- Incorporation of nootropics and adaptogens into formulations
- Growth of liquids, snacks, gums, sprays, and creams used as nutritional supplements

Consumer

75%

Of American Adults Consume Dietary Supplements

- 8.4% of American adults are depressed
- 31.1% of American adults suffer from anxiety at some point in their lives

Workflow

Research mental health supplement competitors and their personalization quizzes

→ **Develop** an unbiased quiz that captures customer mental health and nutrition data

Program an algorithm that matches customers to 5 supplements that meet their needs

← **Compile** spreadsheets that map out supplement decision flows and health profiles

Document code usage and adaptability to new supplement formulations and quiz questions

→ **Design** a UI/UX mock-up and expansion strategy deck to integrate the quiz onto the client's website

Tools

Python (pandas, NumPy)

Google Sheets API

Figma

Impact

- Potential to recommend **26,000+** unique supplement combinations instead of a one size fits all nutrient package

- **Automated diagnosis** of critical mood, dietary, etc. factors based on user input to increase the response time of mental health support

Workflow (cont.)

Quiz Strategy & Development

- Determined **market openings** that best fit the client's supplement niche

- **Analyzed** the UI/UX design, tone, and intrusiveness of competitor quizzes

- Developed **neutral, unbiased** quiz **questions** targeting mood, diet, sleep, and exercise habits
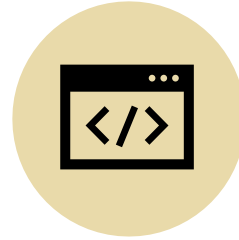
Customization Algorithm

- **Engineered** a data pipeline to transfer quiz results to the matching model

- Created supplement mapping, health threshold, and inventory tracking **spreadsheets**

- **Programmed** an algorithm that matches customers to the top 5 supplements in stock that meet their health needs

Website Integration

- **Designed** a UI/UX mock-up on Figma to convey supplement recommendations to customers in an informative manner

- **Researched** spreadsheet integration with the client's current database, personalized decision flows, and customer-driven adaptability of recommendations
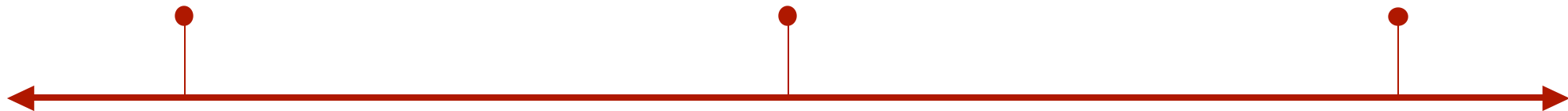
Medical Tech Company

Summary

We developed a commercialization strategy and identified potential exit opportunities for a medical tech startup

Problem

Help a medical tech startup with a range of business priorities

Approach

- Coordinate interviews
- Conduct market research
- Identify investors
- Formulate exit strategy

Deliverable

Report on business models of similar D2C companies, database of potential interviewees, list of potential investors, database of potential acquirers

Impact

100
Interviews Set Up

17
Acquisition Partners Identified

Results

Helped medical device startup collect and aggregate input from key market participants to develop a commercialization strategy for their product, identified potential investors for future funding rounds, and compiled a database of potential acquirers

Medical Tech Industry Overview

Financials

$489 B
Industry Value

- 5.5% (CAGR 2002-2022)
- $718.9 Billion projected revenue in 2029

Trends

- Chronic diseases such as cancer and diabetes are rising in prevalence and requiring medical devices for diagnostics and therapy
- Oncology is the largest disease segment in the industry
- Artificial intelligence is being used to improve FDA trials and automate administrative processes in hospitals

Innovations

- Surgical Robots
- AI diagnostic software
- Digital therapeutics for ADHD

Consumer

33.4 M
Overall Consumers

- Rising average age of population
- Chronic diseases are rising such as diabetes which is projected to rise to 643 million people globally in 2023

Workflow

Interviews	Market Research	Potential Investors

- Compile list of **250** potential interviewees across insurance companies, clinicians, ABA centers, and UChicago faculty

- Use email and phone **outreach** to contact potential interviewees and gather interest and availability

- Schedule and set up conversations between interviewees and client

- Research and compile report on **business models** of 5 successful and similar medical device companies

- Identify relevant FDA guidelines and **regulations** to incorporate into commercialization

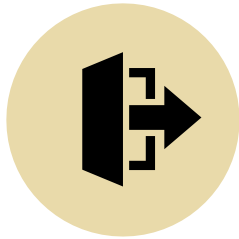- Research insurance policies and coverage requirements for similar medical devices

- Narrow down a provided list of 800 potential **investors** to those who have a connection with the client

- Supplement with **PitchBook research** to collect potential investors in the relevant market
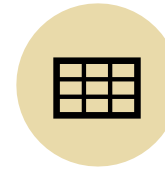
Workflow (cont.)

Exit Strategy

- Use PitchBook and other resources to identify potential **acquirers** of client

- Screen potential acquirers by level of similarity of previous acquisitions, considering factors like deal size, company type, FDA approval

- Develop **case studies** presenting various attributes and pros/cons of each of the selected acquirers
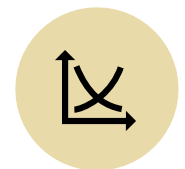
Tools

PitchBook	Excel	Tegus Market Research	Financial Statements Analysis

Impact

- Better understanding of FDA rules & regulations and process for **approval**

- Received input from key stakeholders to help **predict market response** to product and get a sense of market opportunities

- Shortlist of likely **investors** for future rounds of financing

- **Database** of potential acquirers who are likely to be receptive to M&A discussions

Other Engagements

Fintech Company Summary

We helped a fintech company identify ways to integrate their services with companies providing complementary services

Problem

Understand small and medium business (SMBs) vendor payment pain points. Identify avenues for front-end and back-end payment integration to alleviate those key pain points and enable one comprehensive platform for business management

Impact

1000+
Firms Contacted

Approach

- SMB Outreach
- Interviews
- Competitor/Partnership Research

Results

- Suggested key areas to develop the client's potential crossover product in and methods for integration with other systems

- Recommended partnerships with other companies in the fintech space

Deliverable

A 50+ page slide-deck for company executives and a revised version for founders, documentation of interview summaries and their backgrounds

CPG Company Summary

We assessed nine different markets for the client to expand into after their initial launch in Massachusetts

Problem

The client wanted us to conduct robust market and competitive landscape analysis specific to their product

Approach

- Develop research framework
- Test on an initial market
- Repeat process for other markets
- Synthesize findings

Deliverable

Comprehensive deck detailing the legal, market, and competitor landscapes for each market

Impact

9

Markets Analyzed

2

Recommended

Results

The client now has two markets to further investigate for immediate expansion due to high potential, as well as analyses of four markets with future potential to continue to observe and three markets with poor potential that they should avoid