Using Customer Retention Analytics to Predict Churn

Executing analytics on HelloFresh's customer data to identify churn root causes and design strategies to increase retention.

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Steering Committee Presentation on December 6, 2021

Agenda

1   **HelloFresh and Meal Kit Industry Overview**

2   **Analytics Objectives Assessment**

3   **Analytical Opportunities Selection**

4   **Solution: Impact, Plan, Schedule and Team Composition**
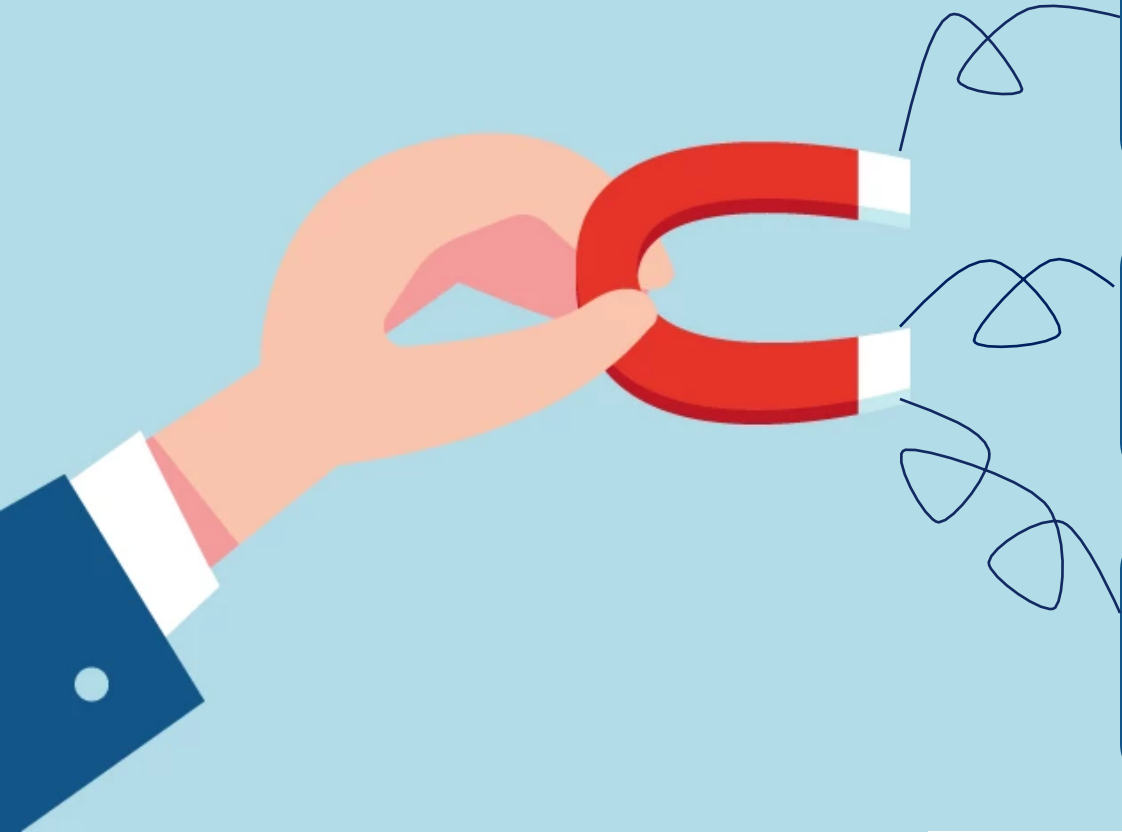
5   **Risk and Mitigation Strategies**

6   **Financials Assessment**

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Executive Summary

Background
- HelloFresh delivers step-by-step recipes and fresh, pre-portioned ingredients right to your door. With $4.4B USD revenue and 7+ million customers worldwide, HelloFresh has proven to be a top contender in the meal-kit delivery industry.

Problem: HelloFresh's customers are leaving.
- Customers are opting out of their subscription plans at increasing rates
- Average Retention Rate: 40% for 1st year, 25% for 2nd year

Analytics Solution:
- Utilize data mining and natural language processing to identify categories of operational inefficiencies
- Build Customer Retention Models to identify correlation and root causes for churn

Source: LinkedIn, *Retention analysis: 6 steps to analyze & report on retention*

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The Meal Kit Delivery Industry is Profitable & Growing

The global meal kit delivery services market size was valued at USD 10.26 billion in 2020 and is expected to expand at a compound annual growth rate (CAGR) of 13.0% from 2021 to 2028.

- USD 12.73 billion revenue in 2021.
- Expected to grow more than double in next 7 years.

$12.7B
Revenue

13.6M
Customers

- Approximately 13.6 million active customers based in the U.S.

- 17% of consumers in the U.S. have subscribed to a meal kit service at some point.

17%
Population

150+
Companies

- 150+ companies are serving the similar products in the U.S.

Source: "Meal Kit Delivery Services Market Share Report, 2021-2028." Meal Kit Delivery Services Market Share Report, 2021-2028, Apr. 2021, https://www.grandviewresearch.com/industry-analysis/meal-kit-delivery-services-market.

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Overview | Analytics Objectives | Solution | Risks | Financials

HelloFresh Is America's #1 Meal Kit

HelloFresh aims to provide every household with wholesome, homemade meals – no shopping and no hassle.

o HelloFresh is a meal kit delivery service that ships weekly boxes of fresh ingredients along with recipes to help make mealtime easier.

o Everything required for delicious meals is carefully planned, carefully sourced, and delivered to the front door of each customer at the time most convenient for them.

Founded
November 2011
Berlin, Germany

Revenue
€3.75 Billion
($4.4 Billion)

Meals Delivered
600+ Million

Employees
15,000+

Customers
7.7 millions +

Subsidiaries
- Green Chef
- EveryPlate
- Chef's Plate

2011 | 2012 | 2013 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020

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Overview | Analytics Objectives | Solution | Risks | Financials

A Top Contender in the Industry

HelloFresh has the largest market share (56.6%) of the meal kit companies in the U.S. as of 2020.

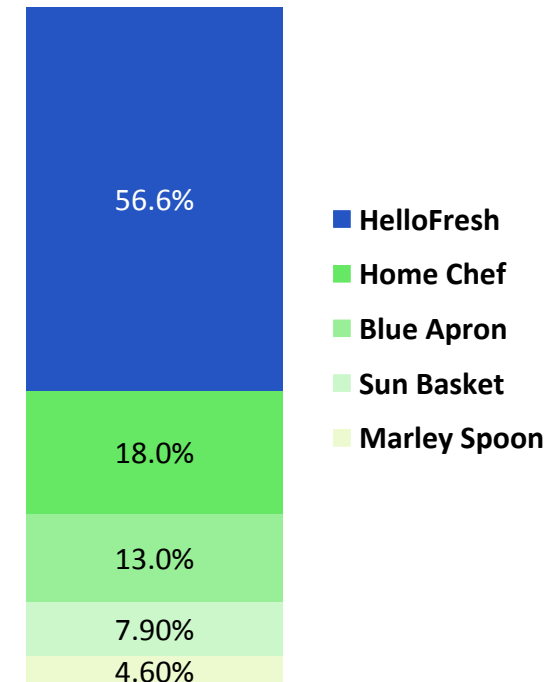## Internal (Meal-Kit Delivery) Competitors

External Competitors

Estimated Market Shares of Meal Kit Companies in the U.S. as of 2020

- 56.6% — HelloFresh
- 18.0% — Home Chef
- 13.0% — Blue Apron
- 7.90% — Sun Basket
- 4.60% — Marley Spoon

Source: Wunsch, Nils-Gerrit. "United States: Meal Kit Companies Market Shares 2020." *Statista*, 29 Mar. 2021, https://www.statista.com/statistics/1200051/meal-kit-companies-market-shares-united-states/.

Our Business Model is Convenient

HelloFresh's service is a great way to reduce the burden of meal planning and grocery shopping. It's also a good option if you enjoy cooking but simply don't have enough time for extensive meal prep.
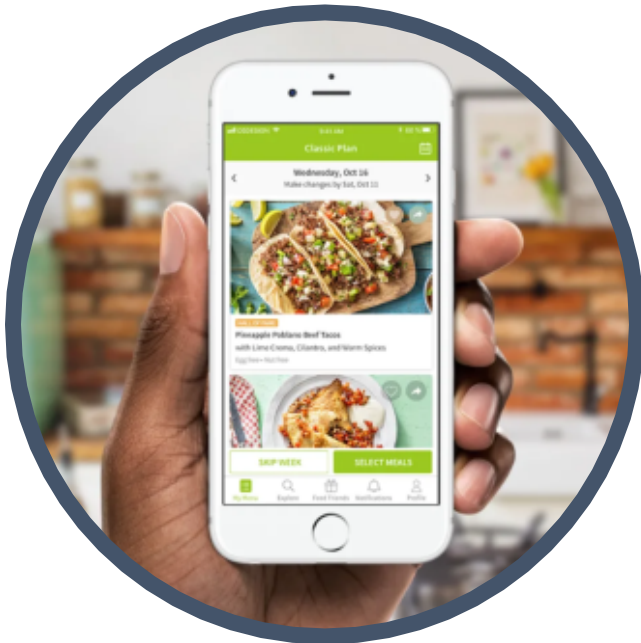
1. Pick a Plan

2. Get your Delivery

3. Cook & Enjoy!

Surge in Demand From Young, Two-Person Households

Increasing preference for homemade meals among millennials is a major factor contributing to the growth of the market.
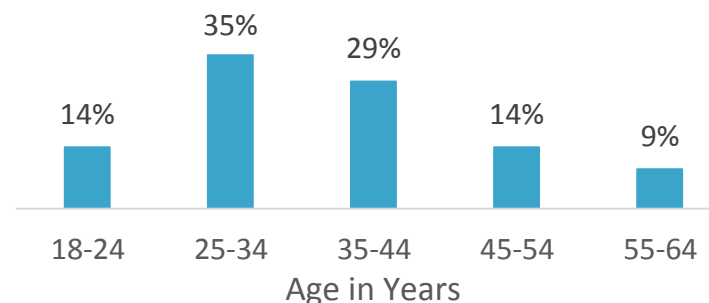
Characteristics

o Higher income

o Health-conscious

o Food safety conscious

o Fast-paced lifestyle

o Less time for meal preparation & grocery shopping
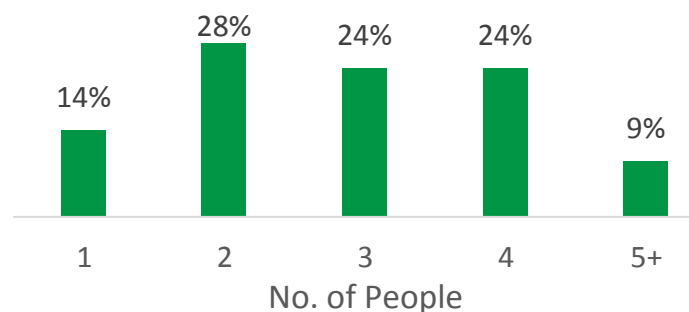
Gender

Male 56%

Female 44%

Age

14% — 18-24
35% — 25-34
29% — 35-44
14% — 45-54
9% — 55-64

Age in Years

Consumption

4.2 Orders

Orders per Customer

61 USD

Average Order Value

### Household Size

14% — 1
28% — 2
24% — 3
24% — 4
9% — 5+

No. of People

Source: "Industry Market Research, Reports, and Statistics." IBISWorld, https://www.ibisworld.com/united-states/market-research-reports/meal-kit-delivery-services-industry/.

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Overview | Analytics Objectives | Solution | Risks | Financials

Marketing & Services Need More Investment in Analytics

By assessing the 5 components of HelloFresh's value chain, we can identify key analytical opportunities.
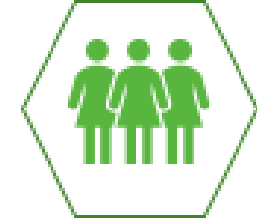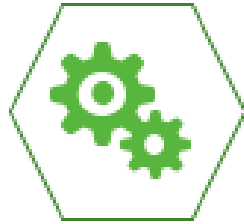
Inbound Logistics	Operations	Outbound Logistics	Marketing & Sales	Services
• Supplier Performance Management • Cost Planning	• Waste Minimization Performance • Sales Forecast Improvement	• Shipping and Tracking System • Route Optimization	• **Price Optimization** • Return Maximization on Advertisement • **Promotion Optimization**	• Customer Lifetime Value • **Customer Retention Rate**

Assessing Analytical Opportunities in Customer Retention, Price Optimization, and Promotion Optimization

	Background & Problem	Opportunity	Benefits
Customer Retention Analytics	• No or few actions on keeping customers • Retention Rate is 25% in two-year range • Retention rate is low compared to competitors and a good industrial standard • Customers could switch to competitor with low to zero costs	• Collect and analyze data to locate main cause of customer loss • Create a strategy to keep customers • Maximize customers satisfaction by analyzing customer behaviors	• Increase customers satisfaction and retention rate • Increase recurring subscription revenues and profits • Balance the costs between customer acquisition and retention
Price Optimization	• Price for meal differs based on the number of orders and portions placed • Competitors have fixed pricing	• Re-organize pricing strategy • Process automation to meet the demand with correct price and eliminate human error	• Increase customers satisfaction • Increase new customers • Increase recurring subscription revenues and profits • Balance the costs between customer acquisition and retention
Promotion Optimization	• Only new customers receive promotion • One general promotion; no customized promotions	• Predictive analytics that targets customers that would benefit mostly from additional promotions • Increase verity of discount and promotion options to new and existing customers	• The ability to accurately predict revenue, profit, and demand • Increase in new customers • Cost reduction on customer acquisition

Customer Retention is the Optimal Analytics Opportunity

By evaluating the Profit Margin, Market Growth, Supply Chain Efficiency, and Ease of Implementation for each opportunity, Customer Retention Analytics had the highest score.

SCORES: 1 – VERY LOW   2 – LOW   3 – MEDIUM   4 – HIGH   5 – VERY HIGH

	PROFIT MARGIN	MARKET GROWTH	EASE TO SUPPLY CHAIN EFFICIENCY	EASE OF IMPLEMENTATION	OVERALL SCORE
Customer Retention Analytics	4	3	4	5	16
Price Optimization	3	4	3	2	12
Promotion Optimization	4	4	2	3	13

Our Top Challenge is to Retain Customers

Because a high customer retention rate is an integral component of success, we evaluated the challenges HelloFresh faces when trying to retain their customers.

HelloFresh has few initiatives and strategies for keeping customers

1

3

Retention rate is LOW compared to main competitor and a good industrial standard

4

The entrance of threat is HIGH in competitive meal-kit delivery industry

Current Retention Rate is 25% in two-year range and 42% on one-year range

2

5

Customers could switch to competitor with LOW to ZERO cost
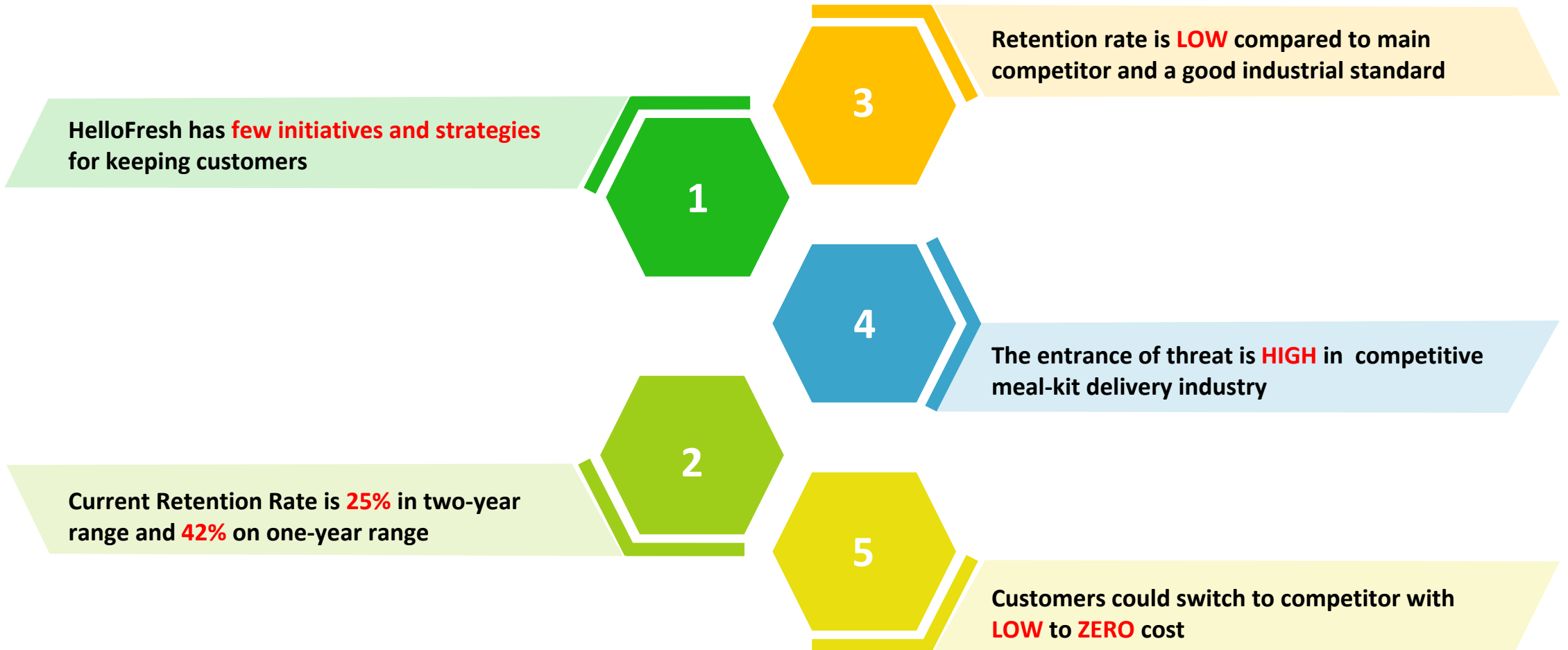
Source: McCarthy, Daniel. "HelloFresh Has a Bigger Customer Retention Problem than Blue Apron." LinkedIn, LinkedIn, 10 Mar. 2018, https://www.linkedin.com/pulse/hellofresh-has-bigger-customer-retention-problem-than-daniel-mccarthy/.

We Will Use Customer Retention Analytics to Reduce Churn

Our Customer Retention Analytics models will help identify where and when customers churn, determine why customers churn, and identify how to improve retention.

Identify **Where & When** Customers Churn

Determine **Why** Customers Churn

Identify How to **Improve Retention**

Source: Retention analysis: 6 steps to analyze & report on retention

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Overview | Analytics Objectives | **Solution** | Risks | Financials

The Largest Cost are Concept Analysis & Development, Which is Offset by the Increase in Revenue & Market Share

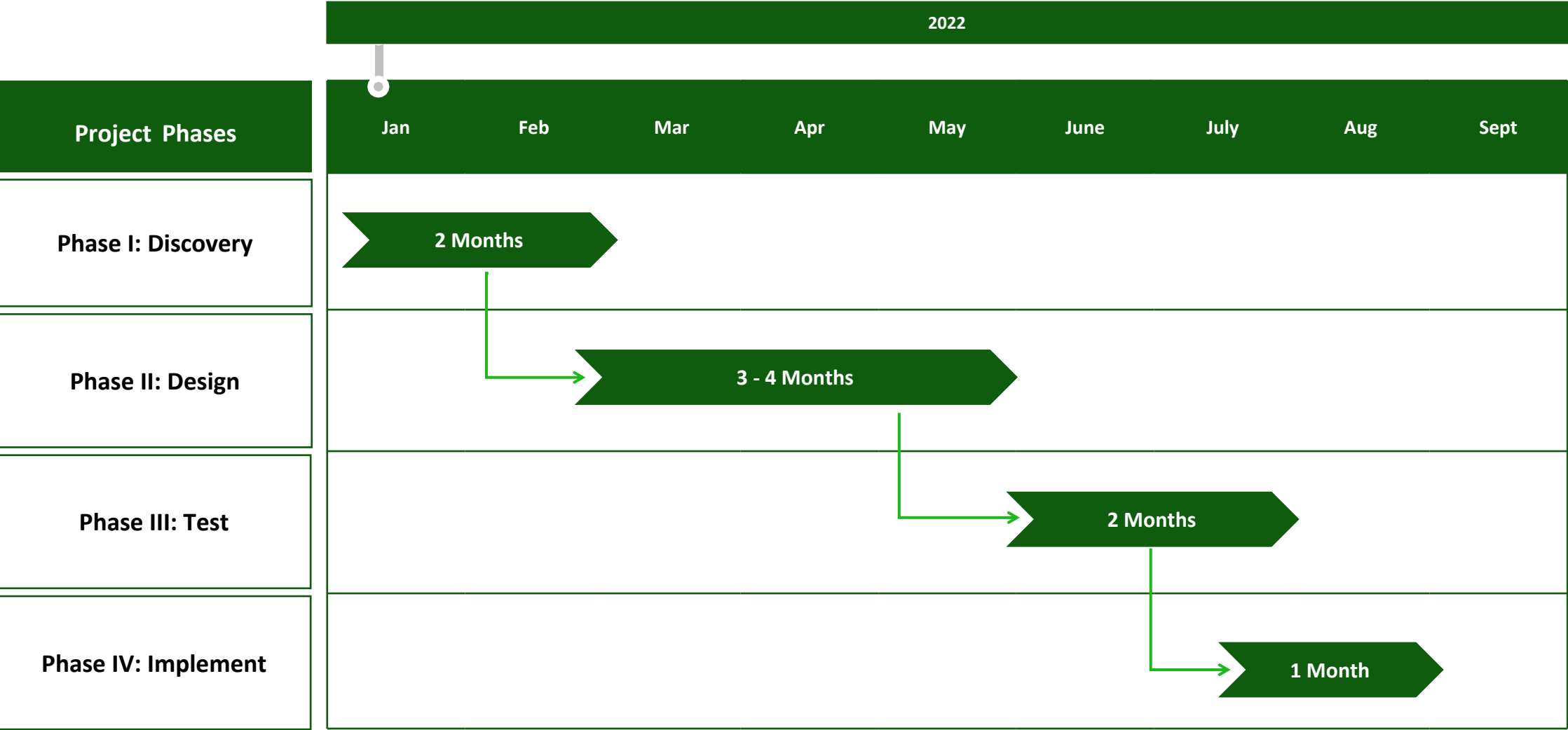|	Costs	Benefits

Tangible	• **Project Cost**
	    • Phase I: Concept Analysis (e.g., data gathering, cleaning, and mining)
	    • Phase II: Hardware Procurement (e.g., cloud space, server, and system)
	    • Phase II: Development
	    • Phase III: Test & Validation
	    • Phase IV: Industrialization (e.g., access cost, distribution cost)
	    • Phase I-IV: Training
	• **Operating Costs**
	    • Phase II: Software Licensing
	    • Phase II: Software Customization
	    • Phase II-IV: Maintenance Cost
	    • Phase I-IV: Labor Cost
		• **Revenue growth**
		    • Sales benefits
		    • Operations impacts
		        • Customer Acquisition Cost Reduction
		• **Retention rate increase**
		• **Market share increase**

Intangible	• **Opportunity Cost (implicit)** • **Potential Loss of Employee Morale**	• **Morale** – positive impact on employees • **Increased Customer Satisfaction Rate** • **Strategic Impact** – supports strategic initiatives (e.g., increased brand awareness, improved customer service) • **Competitive Impact (e**.g., increased loyalty and market share) • **Improved Reputation & Brand Awareness**

Source: Strategy for Data Scientists - Chapter 6 [3]

Our Analytics Project Includes Data Discovery, Model Design, Testing, & Decision Making

Project Phases	Phase Activities	Outcomes
Phase I: Discovery	• Collect customer review data • Perform data cleaning • Execute exploratory data analysis including data mining, sentiment analysis, and linear regression	✓ **Identify key issues impacting customer retention**
Phase II: Design	• Conduct workshops with key stakeholders to align on & prioritize key issues • Combine related customer behavioral data from marketing, logistics, and customer service • Identify dataset, features, predictor variables, and algorithms for modeling	✓ **Align with key stakeholders** ✓ **Design models**
Phase III: Test	• Test and validate models • Compare results against key issues and identify discrepancies • Present findings to data & analytics team	✓ **Identify best performing model for implementation**
Phase IV: Implement	• Implement best performing model • Create business reporting for upper management & key stakeholder review • Share insights across the organization • Identify retention strategies	✓ **Monitor results** ✓ **Share insights** ✓ **Identify retention strategy**

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Overview → Analytics Objectives → Solution → Risks → Financials

The Four-Phased Project Takes Approximately 8 Months

Project Phases	2022								
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
Phase I: Discovery	2 Months								
Phase II: Design			3 - 4 Months						
Phase III: Test						2 Months			
Phase IV: Implement								1 Month	

Our Implementation Team Will Be Aligned and Collaborate With Key Stakeholders From Other Business Units

Stakeholders:
- Provide business context & insights to analytics team
- Review results from reports
- Evaluate retention strategies

  o Marketing
  o Customer Service
  o Product
  o R&D
  o Outbound Logistics

Strategic Decision Maker:
- Provide guidelines and assistance for manager and project team
- Stakeholder liaison

Project Manager:
- Align project to company's objectives
- Manage project plan
- Oversee project team and performance
- Ensure deadlines and targets are met

Project Team:
- Gather, clean, and analyze data from key business units
- Design models for retention analysis
- Test and validate models
- Build reports

Data Engineering Team (3 FTE)

Data & Analytics Vice President (6-8 hrs/wk)

Data Science Team (3 FTE)

Total FTE: 9

Key Internal Stakeholders (2-4 hrs/wk)

Data & Analytics Manager (1 FTE)

Business Analyst Team (2 FTE)

- - Informed / Consulted
— Direct Report

Overview | Analytics Objectives | **Solution** | Risks | Financials

Assortment Planning Mitigates the Risks of Data Quality, Customer Preference Shifts, & Data Security

Areas	Impact Level	Risks	Mitigation Strategies
Operational	**High**	**Poor-quality Data Barriers (Inaccurate/Incomplete/Unavailable Data)**	✓ Clearly define data strategy use cases to reflect the different ways that teams and departments will benefit
Strategic	**Medium**	**Customer Demand Shifts**	✓ Use real-time data to create dashboards identifying pain points in customer journeys ✓ Strengthen the monitoring of data model results
Legal	**Medium**	**Accidental Data Breaches**	✓ Keep security patches for all computers up-to-date and restrict employee usage of computers ✓ Educate employees on best security practices and ways to avoid socially engineered attacks

Source: Insights for professionals: 5 Data Quality Problems and their Solutions. (2018, November 13)Retrieved November 15, 2021, from https://www.insightsforprofessionals.com/it/storage/data-quality-problems-solutions.

We Expect to Achieve a NPV of $1M Over the Next 5 Years

Discount rate/ROI	10%							Notes
				Years				Estimated Rational
		1	2	3	4	5		
Project Investment								
Project expense								The year 1 one-time costs incur while collecting data and building a model, including purchasing hardware and testing. The training will be done for only the nine core team emplyees who are established employees at HelloFresh. Industrialization cost includes cost of access to the model
Concept analysis		$ (30,000.00)						
Hardware procurement		$ (30,000.00)						
Development		$ (30,000.00)						
Test & Valid		$ (30,000.00)						
Industrialization		$ (12,000.00)						
Training		$ (30,000.00)						
Total Project expense		$ (162,000.00)	$ -					
Operating Costs								A software license will last over the lifetime of the project. A customization will be done at year one and will be maintained by the team. Other operating expenses include labor cost salary.
Software Licensing		$ (9,000.00)	$ (9,000.00)	$ (9,000.00)	$ (9,000.00)	$ (9,000.00)		
Software Customization		$ (30,000.00)						
Maintenance Cost		$ (15,000.00)	$ (15,000.00)	$ (15,000.00)	$ (15,000.00)	$ (15,000.00)		
Other Operating Expenses		$ (30,000.00)	$ (30,000.00)	$ (30,000.00)	$ (30,000.00)	$ (30,000.00)		
Total Operating Cost		$ (84,000.00)	$ (54,000.00)	$ (54,000.00)	$ (54,000.00)	$ (54,000.00)		
Total Cost		$ (246,000.00)	$ (54,000.00)	$ (54,000.00)	$ (54,000.00)	$ (54,000.00)		
Project Benefits								
Sales benefits								
Incremental sales	$350,000/year		$ 350,000.00	$ 350,000.00	$ 350,000.00	$ 350,000.00		The year 1 fully focused on completing each phases and once solution implemented consecutive years will bring benefits.
Infrastructure changes								
Operations impacts								
Customer Acquisition Cost Reduction	$100,000/year		$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00		
Other benefit								
Total benefits			$ 450,000.00	$ 450,000.00	$ 450,000.00	$ 450,000.00		
	Annual total	$ (246,000.00)	$ 396,000.00	$ 396,000.00	$ 396,000.00	$ 396,000.00		
	NPV	$ (246,000.00)	$ 360,000.00	$ 327,272.73	$ 297,520.66	$ 270,473.33		
	Total NPV	$ 1,009,266.72						Total NPV over the 5 years

NPV:
+$1M over the next 5 years

Discount Rate:
10%

By Investing in Customer Retention Analytics, HelloFresh will Dominate the Meal-Kit Delivery Industry

Our Models

Using retention analytics, we will:
- Identify where and when customers churn
- Determine why customers churn
- Identify retention strategies

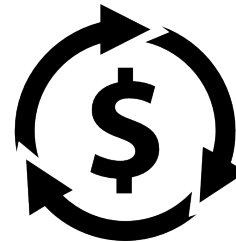### Our Plan & Team

It will take approximately **8** months and **9 FTE** to design, develop, test, and implement our models.

Our Risks & Mitigation Strategy

We identified mitigation strategies to manage **operational, strategic, and legal** risks.

Our ROI

We will achieve an acceptable ROI:
- Positive NPV of **$1M+** in 5 years
- Improved customer retention
- Increased market share

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11. "Industry Market Research, Reports, and Statistics." IBISWorld, https://www.ibisworld.com/united-states/market-research-reports/meal-kit-delivery-services-industry/.

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Appendix

Analyzing the Meal-Kit Delivery Competitive Industry

Supplier Power

Moderate number of ingredients providers and delivery option.

Threat of New Entry

Leading role in the industry with high brand loyalty, low barriers to entry, and low switching costs.

Substitutes

Large selections of substitutes with possible lower price including heat & eat packaged food in offline market, delivery apps from restaurant, and home cooked meals.

Buyer Power

Buyers include families, young professionals, and singles who are health-conscious, have time constraints, and are adaptable to technologies. Switching cost is zero to low.

Competitive Rivalry

High competition among firms with similar products and price range.

Moderate

Moderate

High

Moderate

High

Five Forces Analysis

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HelloFresh Current Financials Analysis

HelloFresh SE (HFG.F) €81.54

107.3% YoY revenue growth and positive margin were mainly driven by:

- Increase in active customers
- Increase in average order value and orders per customer
- Covid stay-at-home policy
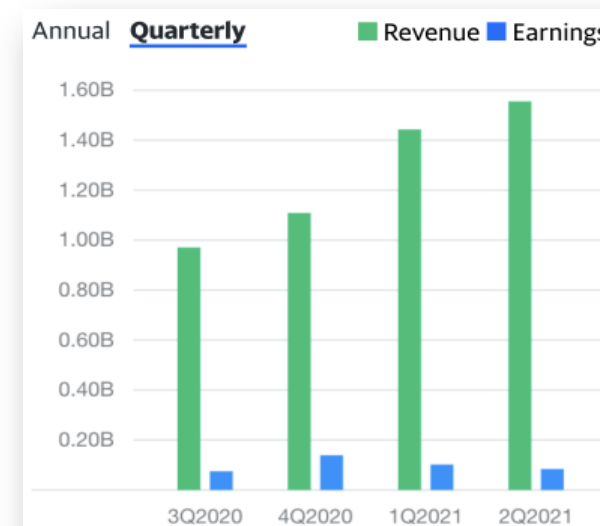
HelloFresh's Value Chain Built on Analytical Models

Inbound Logistics

1,500 Best-In-Class Suppliers
Quality & Sustainability Supplier Selection Process

Operations

Weekly Dynamic Forecasting System
Optimization, Efficiency, & Waste Minimization

Outbound Logistics

Connected Fleets
Track & Trace
Real Time Delivery Notifications

Marketing & Sales

Digital & Online Content Marketing

Services

Customization, Personalization, & High Convenience

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HelloFresh's Offerings and Targeted Customers

HelloFresh has many offerings to target their wide-range of customer demographics and preferences.

Meal Kits			Prepared Meals

EveryPlate	HELLO FRESH	GREEN CHEF	FACTOR_
"Value"	"Affordable Premium" (classic, veggie, family, etc.)	"Specialty" (vegan, gluten-free, etc.)	"Fully Prepared"

Price / serving: $5 → $$$ 12

- **2-4 Person Households**
- **Families with kids**

- **Working Professionals**
- **Young Adults**

- **Health-conscious**
- **Dietary preferences or restrictions**

- **1 person Households**
- **Targeted to Males**
- **Lunch opportunities**

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