



# MVP Delivery Alignment

## Predictive Analytics



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# Introduction

**Yeshiva University**, with a total enrollment of around 5500 students, occupies a very particular niche in the college fundraising environment. Being a Jewish university guided by Modern Orthodox (Torah u'Mada) principles, YU's fundraising constituency is primarily the Modern Orthodox community, in addition to the Jewish community at large who share YU's vision.

**DAV INC.** conducted a series of sessions with YU fund-raising stakeholders focused on understanding technology and process optimization opportunities and the users involved in each of them. We then empathized with specific personas and the current process they experience in a particular use case; out of that, we identify some pain points in the existing fund-raising process, technology that support those activities, data infused in the workstream, and the people most affected by it.

After early exploration of today's business landscape and an impactful use case, we determined a baseline recommendation will be provided to address initial pain points pertinent to the chosen use case. Further discovery and scoping sessions would be necessary to align stakeholders and determine an appropriate roadmap towards the completion of an MVP.





## Competitive Landscape Analysis

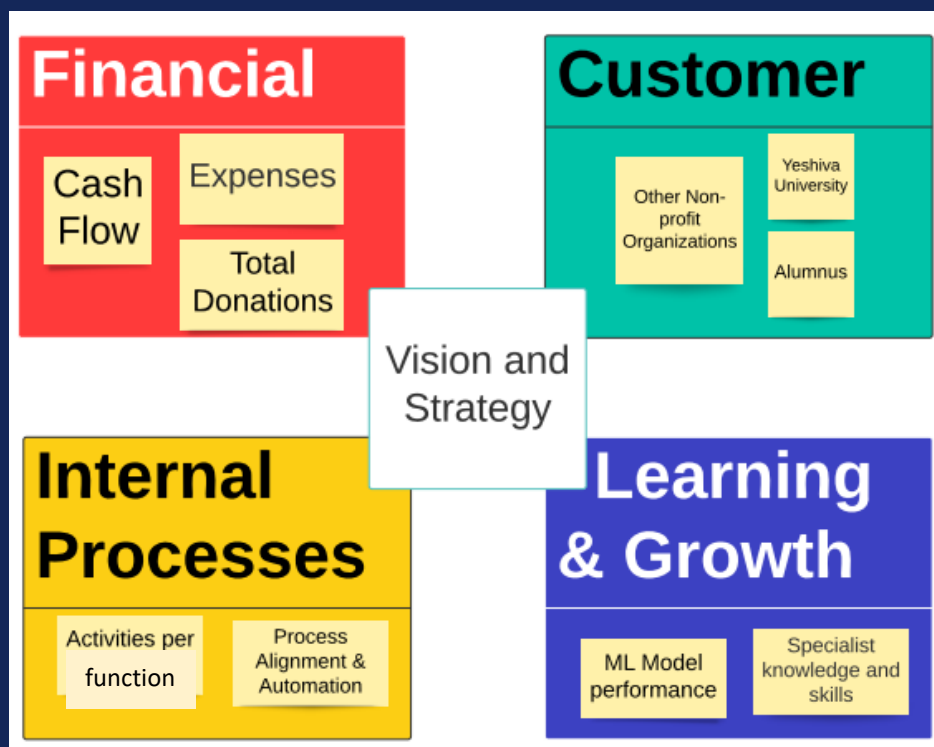
YU has two primary competitors in its fundraising endeavors. The first is Touro College, another Jewish university located in the New York City area, with a total enrollment of around 19,000 students. The second major competitor are various Jewish non-profit organizations (called “Tzedaka Organizations”). Since charity (Tzedaka in Hebrew) is a major Jewish value, and each donor only has a particular amount of money allocated to donate, non-profit organizations must compete for each dollar.

Our study will analyze YU’s fundraising efforts from a data-driven perspective and endeavor to propose solutions to increase YU’s fundraising efficiency and effectiveness.

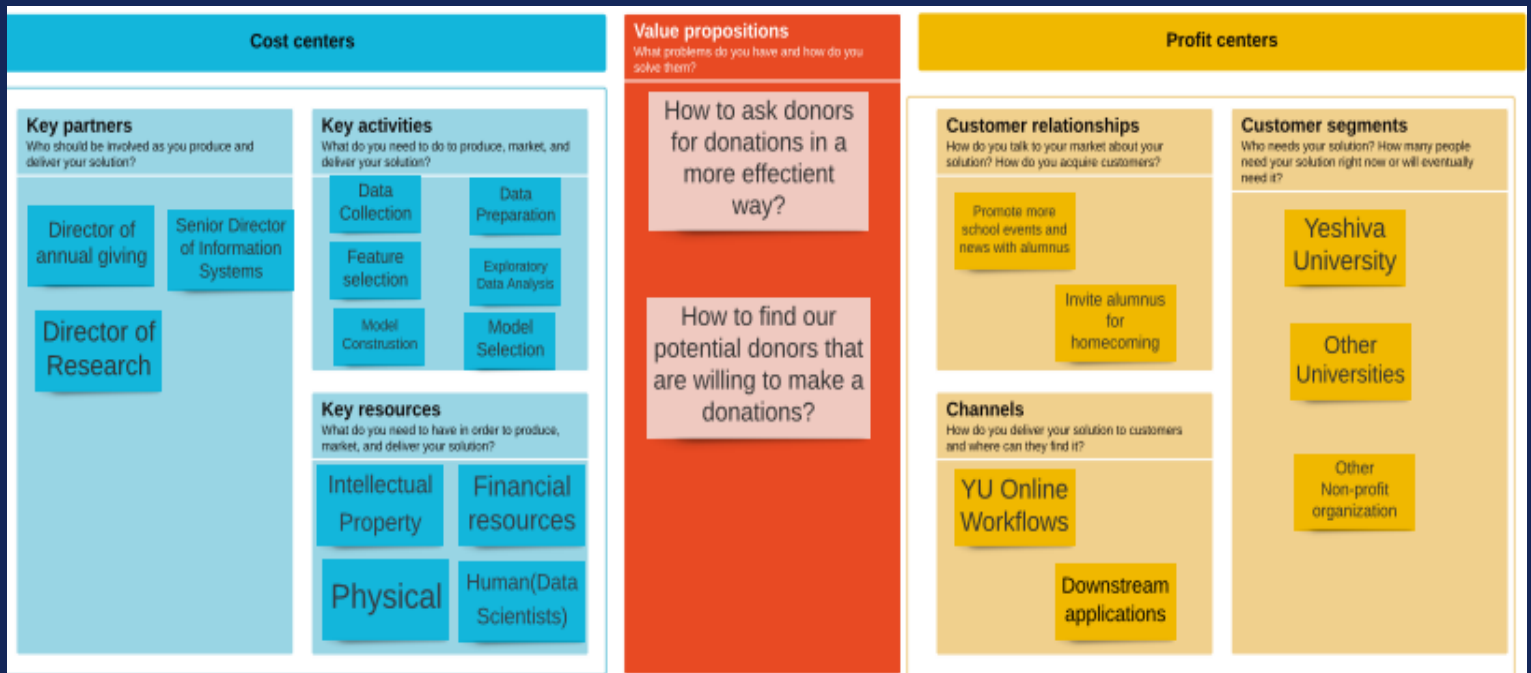


# Balanced Scorecard

This balanced scorecard involves measuring four main aspects of a business: learning and growth, internal processes, customer, and financial. It is a performance metric used to identify, improve, and control a business's various functions and resulting outcomes. The customers of our service are Yeshiva University, alumni, and other non-profit organizations. The financial information includes cash flow, expenses, and total donations. The internal processes are the activities per function and processes alignment and automation. Finally, the learning and growth are the machine learning model performance and the specialist knowledge and skills.



# Business Model Canvas



## Recommended OKRs

The framework described below includes several items which help YU fund-raising employees prioritize, align, and measure the outcome of their efforts. The benefits of the framework include better focus on results that matter, increased transparency, and better strategic alignment.

## DAV INC. proposed OKRs

1. Increase Donations Size (\$)
  - Increase donations by 5% from \$43M in 2020 to \$45.15M by 2022
  - Increase AVG donation by 5% from \$4,647 in 2020 to \$4,879.35 by 2022
2. Increase Amount of Donors
  - Increase number of donors by 5% from 9,274 in 2020 to 9,737 by 2022
  - Increase AVG donation by 5% from \$4,647 in 2020 to \$4,879.35 by 2022
3. Target Marketing Spending
  - Achieve a Cost Per Lead of less than \$100



# Yeshiva University Roles for Co-Creation

## Required

- Product Owner: Director of Annual Giving (Technical Project Lead)
- Architect/SME: Senior Director of Information Systems

## Optional

- Data Engineers
- Data Scientists (Director of Research)

## Product Owner

- Co-leads Iteration Planning Meeting (IPM)
- Prioritizes Stories
- Answer Questions
- Accepts Completed Stories
- Looks at Success Measures

## Architect/SME

- Investigates key Technologies and Approaches
- Answer Technical Questions
- Envision Future Evolution /Implementation of the Solution



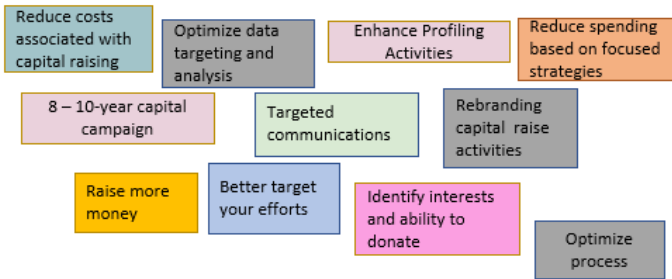


# Design Thinking Artifacts

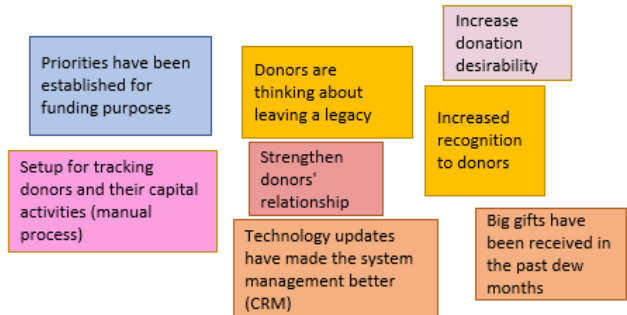


## EMPATHY MAP: BUSINESS LANDSCAPE

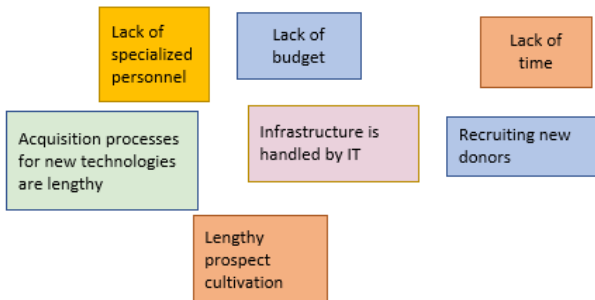
### What are your business goals?



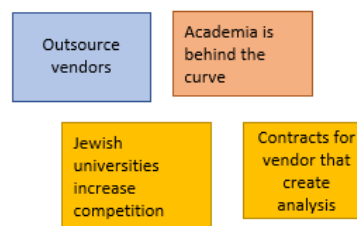
### What are your successes today?



### Internal difficulties or concerns?



### External Challenges?



## JOURNEY MAP: AS-IS DATA STRATEGY

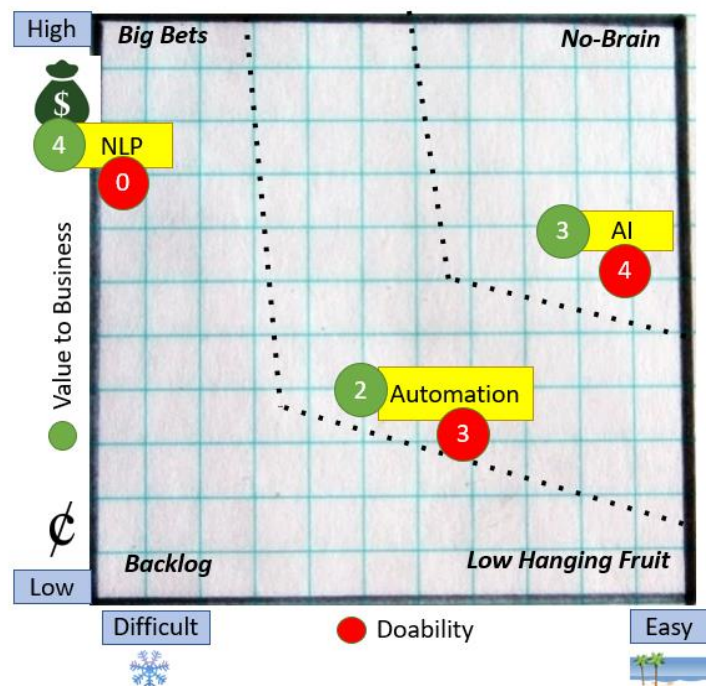
PHASES: COLLECT | ORGANIZE | ANALYZE | INFUSE

	Collect	Organize	Analyze	Infuse
	<p>Alumni gets added to database as they graduate</p> <p>Parents get added to the system as students Enroll</p> <p>CRM</p> <p>Admissions direct the inquiries to be added to database</p> <p>Connectors move data from admissions</p>	<p>Removing duplicates is a manual process</p> <p>1 database</p> <p>Star Schema</p>	<p>SSRS for reporting/ CSV output</p> <p>No advance graphing capabilities</p> <p>No freedom or ways to explore data</p>	<p>Dashboards exists but not currently used</p> <p>VP gets reports to keep track of raising capabilities</p> <p>No automation</p> <p>Siloed process/ Data ownership is rigid</p>

## STORYBOARDS: DATA USE CASE AND PERSONAS

Use Case	Data Source	Capabilities	Persona
Incorporating AI to your workflow to better target donors	CRM / structured data is donors' data	Vendors due low-level donor targeting /email campaigns etc.	Director of annual giving/ highly technical role
Automation enhancement	CRM / SSRS Reporting Layer (source system) –structured data	Reporting production and delivery (CSV with graphs / YOY)	Senior Director of Information Systems/ Highly technical role
Tech mining to remove noise on the data from news and reports / NLP	Source System / web scraping NLP – unstructured data	External Report / Setup by name	Director of Research/ Highly technical

## PRIORITIZATION MATRIX





# Strategic & Analytical Discovery



## YU Donation Strategy Summary

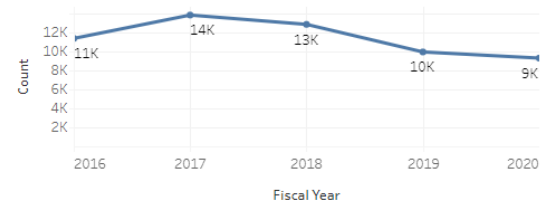
### Gift Stats

Fiscal Year	Amount	Avg	Max	Count
2016	\$39,260,742	\$3,461	\$1,000,000	11,344
2017	\$44,310,868	\$3,211	\$2,430,198	13,799
2018	\$37,812,172	\$2,949	\$2,099,500	12,820
2019	\$36,784,615	\$3,708	\$1,573,000	9,920
2020	\$43,092,588	\$4,647	\$2,526,000	9,274

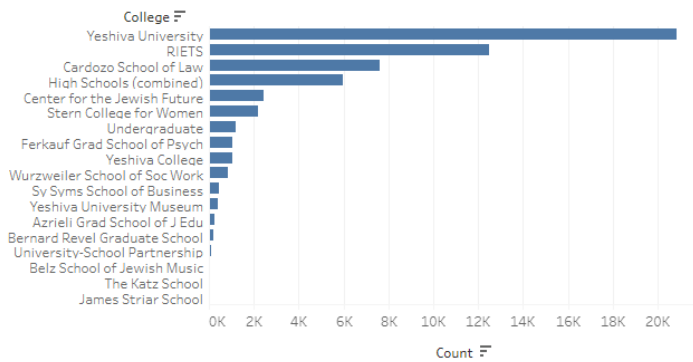
### Donation Sum



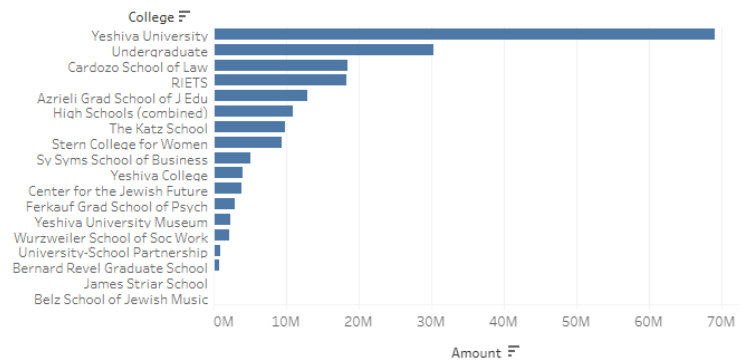
### Donation Count



### College Count



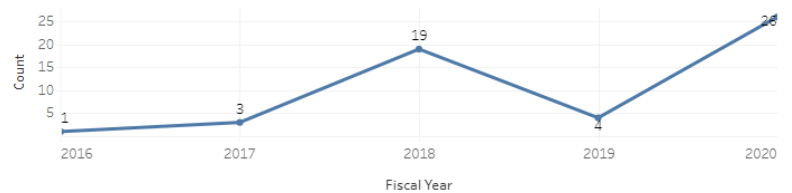
### Total Raised By College



### Katz School Total Raised



### Katz School Count of Donations





## YU Donation Analytical Summary

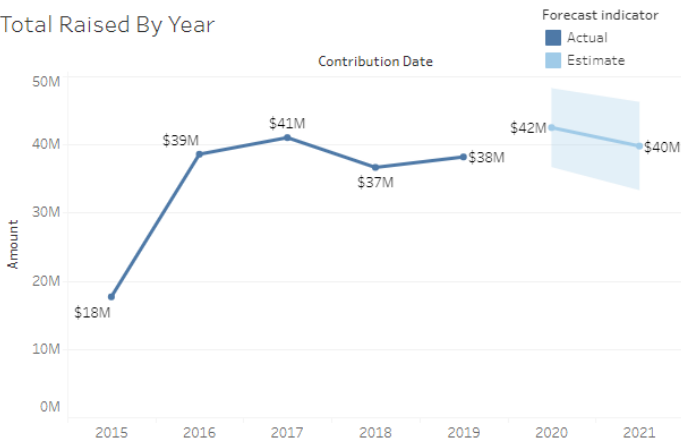
Highest Total Raised By Zip

Zip	Amount
10022	\$14,598,998
7039	\$11,666,606
7631	\$11,644,554
M4T 2S3	\$8,873,106
7666	\$5,576,134
7632	\$4,871,544
10128	\$4,298,789
11559	\$4,274,752
10065	\$4,175,207
10463	\$4,009,511

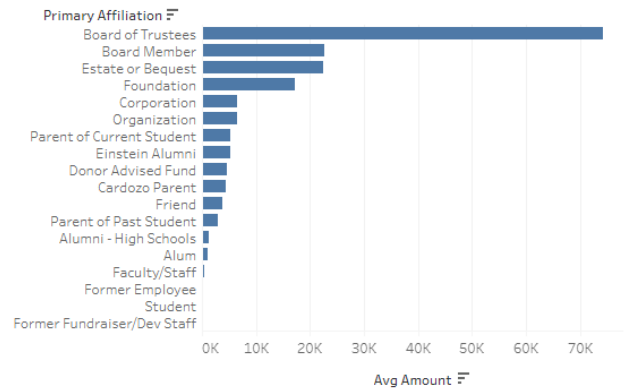
Highest Total Raised By County

County	Amount
Bronx	\$7,507,732
Brooklyn	\$1,371,255
Staten Island	\$66,974
Queens Village	\$1,238
Manhattan	\$15

Total Raised By Year



Avg Amount By Primary Affiliation



# Current Flow | Processes & Personas



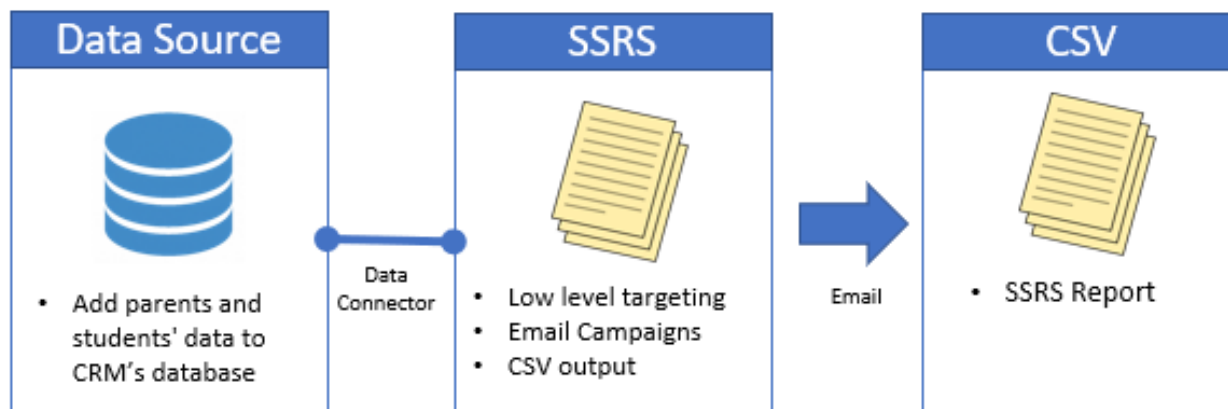
YU Admissions Department  
Business Analyst



SQL Server Reporting Services  
Business Analyst



YU Department of Institutional Advancement  
Director of Annual Giving



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# DAV INC. Proposed Recommendation



# DAV INC. POV | Predictive Analytics Building Blocks

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## Use Case: Infuse ML Model Output to Support Fund-Raising Workstreams at YU

Through DAV INC. methodology, we arrive at our recommendation based on the key building blocks of a predictive analytics layer.

We believe pursuing this use case first will set you up from an optimization paradigm to your stakeholders.

We propose building an MVP for this use case focusing on the building blocks of a predictive analytics layer (~ 6 weeks).

The benefit of this MVP is that you can act on the use case with faster time to value.



**Self-Service**

**Smarter Integration**

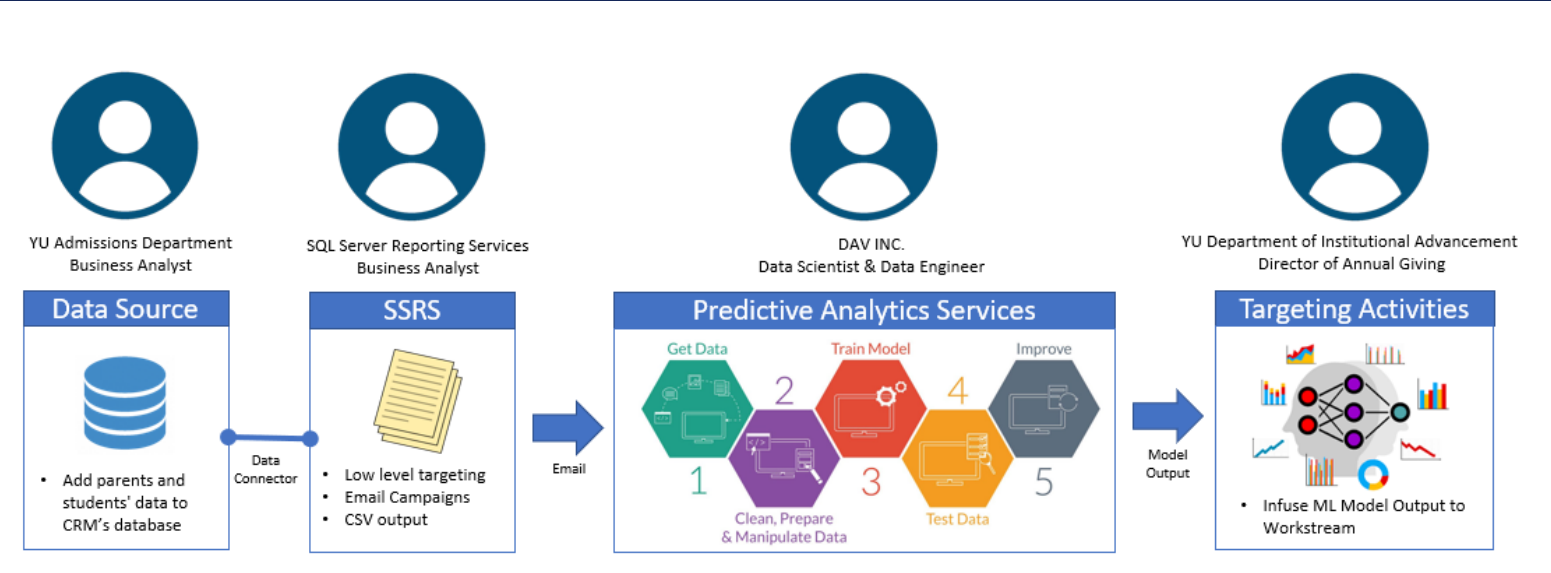
**Augmented Knowledge**

**Governance**

**Unified Lifecycle**



# MVP Proposed Flow | Process & Personas





# MVP Statement

**Title:** YU Fund-Raising, Predictive Analytics

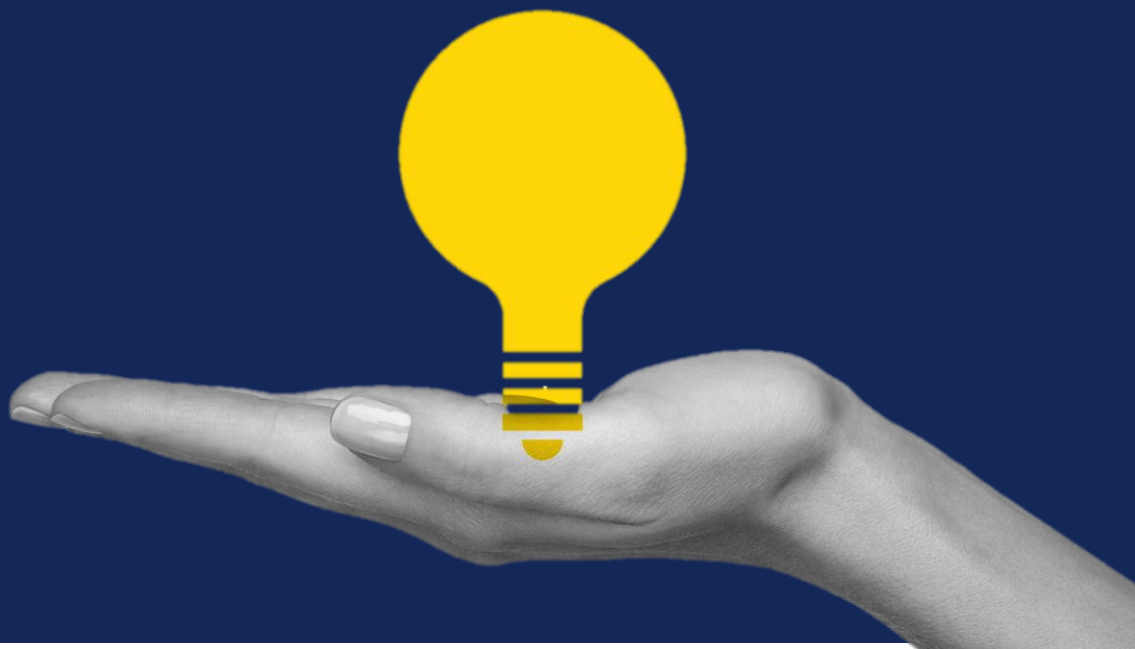
**If we provide:** YU fund-raising employees, donors' data

**With:** An applied layer of advance analytics

**We will address the risk of:** Unfocused prospecting initiatives and marketing untargeted resource spending

**By measuring:** Prospects to donor's conversion rate, Before and after cost per lead, increase donations before and after infusing ML output to YU workstreams

**We know we've arrived if:** Donations increase, the number of donors increase and the cost per lead is reduced



# Value Proposition

**Automated Workflows:** leverage automation and existing resources to improve end-to-end user flows

**Enhanced Insights:** leverage ML models to better predict donors and donations

**Productivity Gains:** Meet fund-raising goals by leveraging predictive analytics

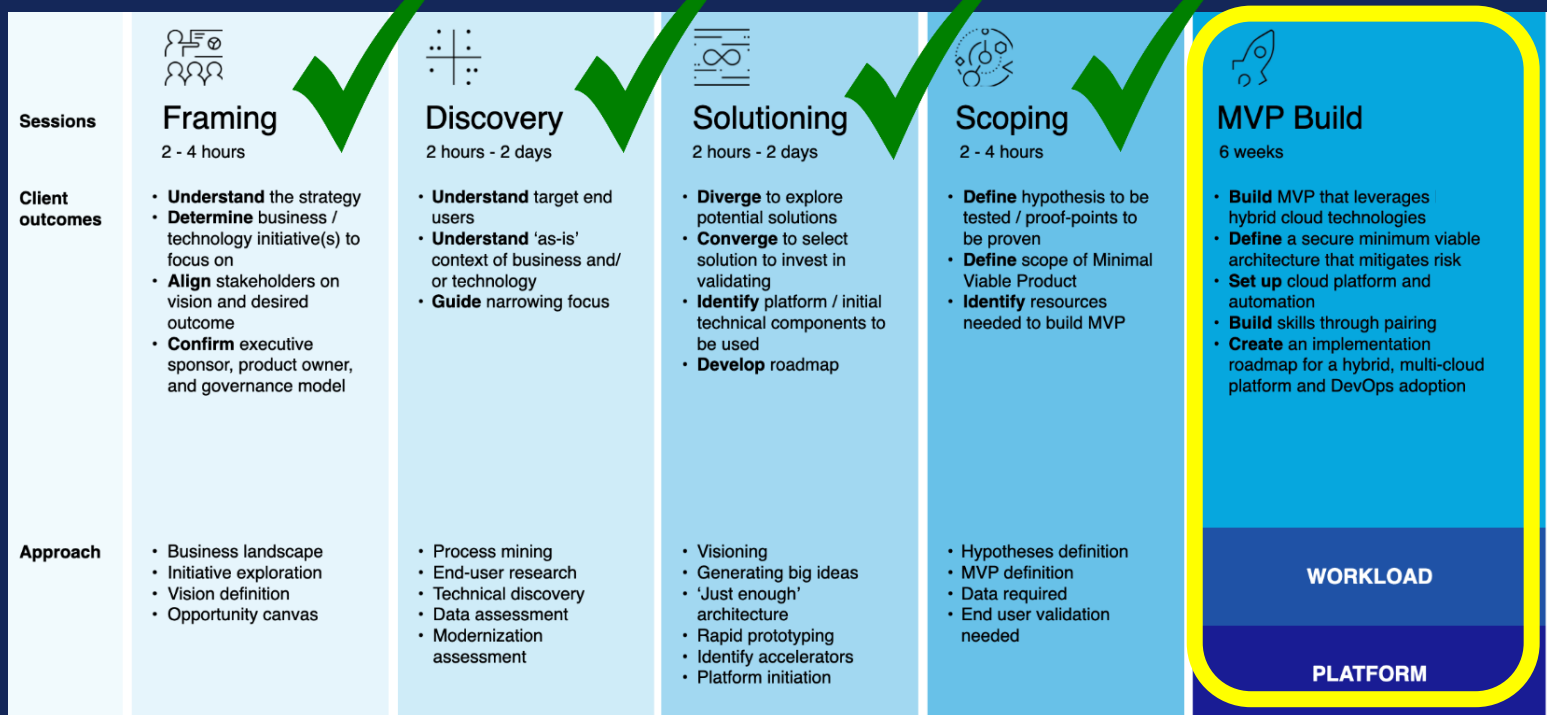
**Ease of Use:** Simplify workflow integration

**Improved Collaboration:** Breakdown process silos and promote synergies and business agility

# MVP Journey



# Working Together



# Weekly Project Flow

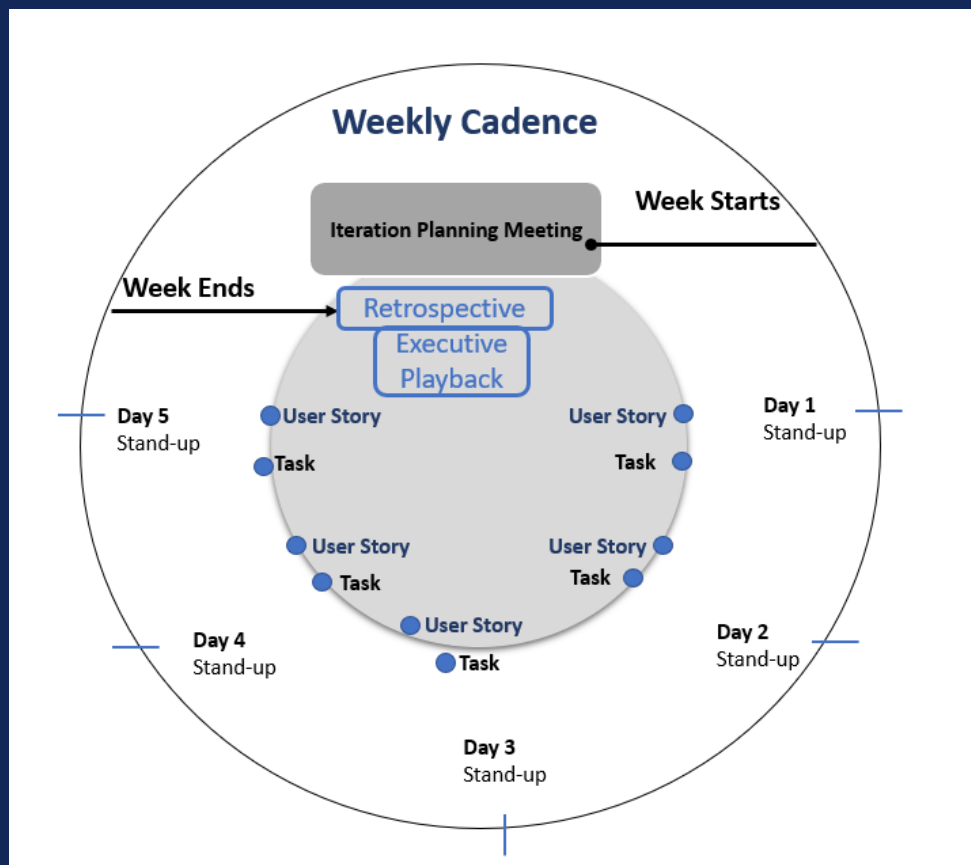
On MVP projects, *iterations* describe one week of dev work.

At the beginning of an iteration, we have an “**Iteration Planning Meeting**” (IPM), and the purpose of that meeting is to discuss the approach for the iteration, user stories, and tasks to complete.

At the end of an iteration, we have a “**Retrospective**” meeting to gather feedback and identify actions to ensure continuous improvement.

**Stand-Up** meetings are every day for a max of 15 minutes with the product owner and full delivery team.

**Executive Playbacks** showcase completed stories to larger stakeholder group.



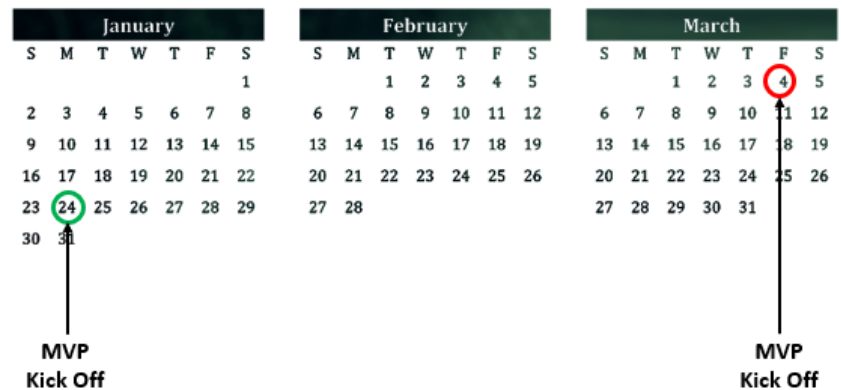


# Next Steps | MVP Build Proposed Schedule

1. Confirm MVP Kickoff
2. DAV INC. invested MVP (~6 weeks)

Week 1	Install and Configure Environment	Connect YU Data Sources
Week 2	Setup Data Pipelines	EDA
Week 3	Building the ML Model	
Week 4	Testing ML Model	Tracking Model Performance
Week 5	Governing ML Model	Infuse ML Model Outputs to YU Workstreams
Week 6	Reports & Dashboards	

## 2022





# Thank You

MVP Delivery Alignment  
Predictive Analytics

