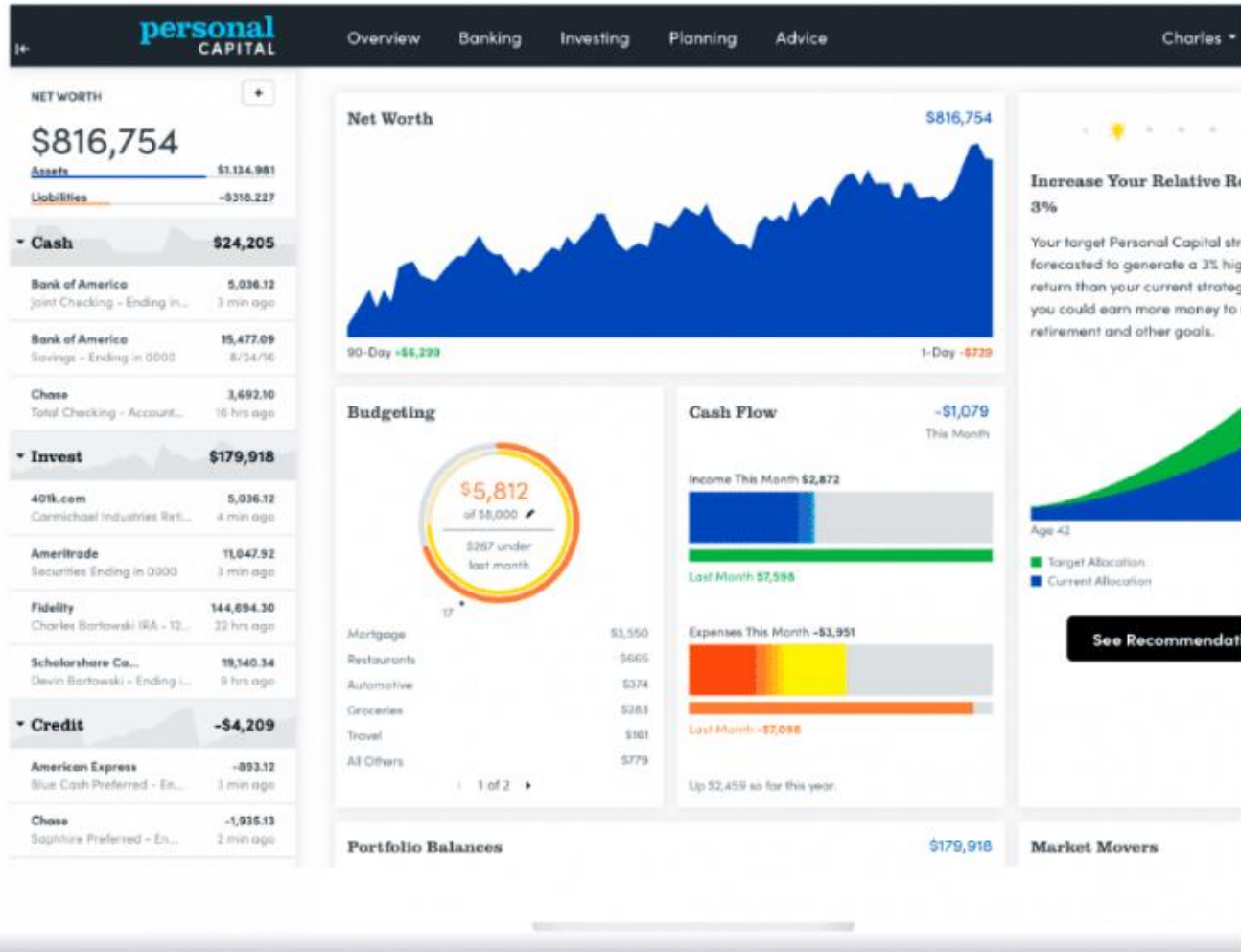WEALTH TECH
TRANSFORMATION

DevOps Project 1, Li Xuanguang

BCM Product & Capabilities

Product Description

- Wealth Management Platform
- Strong desktop app, weak mobile app
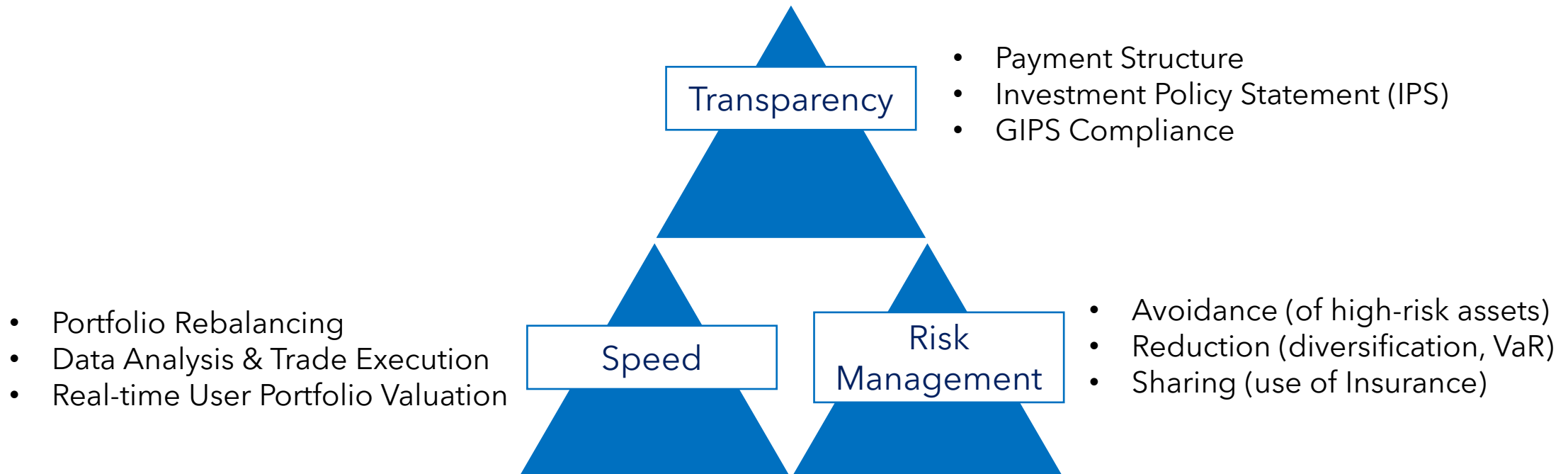- ~200K users on mobile, mainly retail investors

IT Capabilities

- Backend server hosted locally, scaling issues
- MERN Setup + Python for Data Processing
- MySQL database of 200mb size for user data
- No database to store market data which is used for portfolio management. Has to fetch with API.

Team Details

- Developer team of 3 under Jayson Lim
- Simon Quek is a MD from Private Banking
- Edmund Toh prefers local server setup
- Carol Ong has vast B2B sales experience in Tech, with some knowledge in Financial Products

3 Pillars of a Successful Wealth Management Platform

Transparency
- Payment Structure
- Investment Policy Statement (IPS)
- GIPS Compliance

Speed
- Portfolio Rebalancing
- Data Analysis & Trade Execution
- Real-time User Portfolio Valuation

Risk Management
- Avoidance (of high-risk assets)
- Reduction (diversification, VaR)
- Sharing (use of Insurance)

The Game Plan

Objective: Develop BCM as a leading Wealth Management Technology Platform, with Adherence to strict GIPS standards

Key Issues

Solution

1 How to create transparency and trust with users?

Strict Corporate Governance:
to achieve transparent pricing structure, IPS, and GIPS certification

2 How to enhance the speed for better user experience and portfolio trade executions?

in-**G**enious Technology Implantation:
to achieve portfolio rebalancing, real-time data analysis & trade execution, real-time user portfolio valuation

3 How to mitigate huge potential losses with proper risk management controls?

Domain Knowledge:
to achieve appropriate risk management measures (avoidance, reduction, sharing/risk transfer)

Implementing the SGD Strategy

Strict Corporate Governance

- **Disclosure of Conflicts of Interest** to clients on fee arrangements, subadvisory agreements if any, and situations where firm benefits from investment recommendations
- **Develop an Investment Policy** to understand client financial circumstances and risk profile, and seek frequent updates to the IPS.
- **Seek GIPS Compliance** to demonstrate highest ethical principles for performance reporting.

In-Genious Tech Implementation

- **Portfolio Optimization with Python Packages** which considers different portfolio balancing strategies (%-of-Portfolio, CPPI etc.)
- **Bloomberg Real-time Data Feed** for the latest financial data, order flow information, industry statistics etc. Additional **Alt Data Feed** if firm is doing complex strategies
- **C++ Trade Execution** to take advantage of high-volume asset movements for the best bid-ask offers.

Domain Knowledge

- **Proper Risk Management Framework** and compliance, to ensure that employees do not engage in reckless trading.
- **Hire Risk Management Professionals** to control the risk exposure in each asset class, and to ensure enough risk diversification.
- **Codify the Risk Framework** into the automated wealth management platform in order to manage the risk exposure of over ~200,000 users on the platform

AUM (millions): Status Quo Vs. Company Transformation
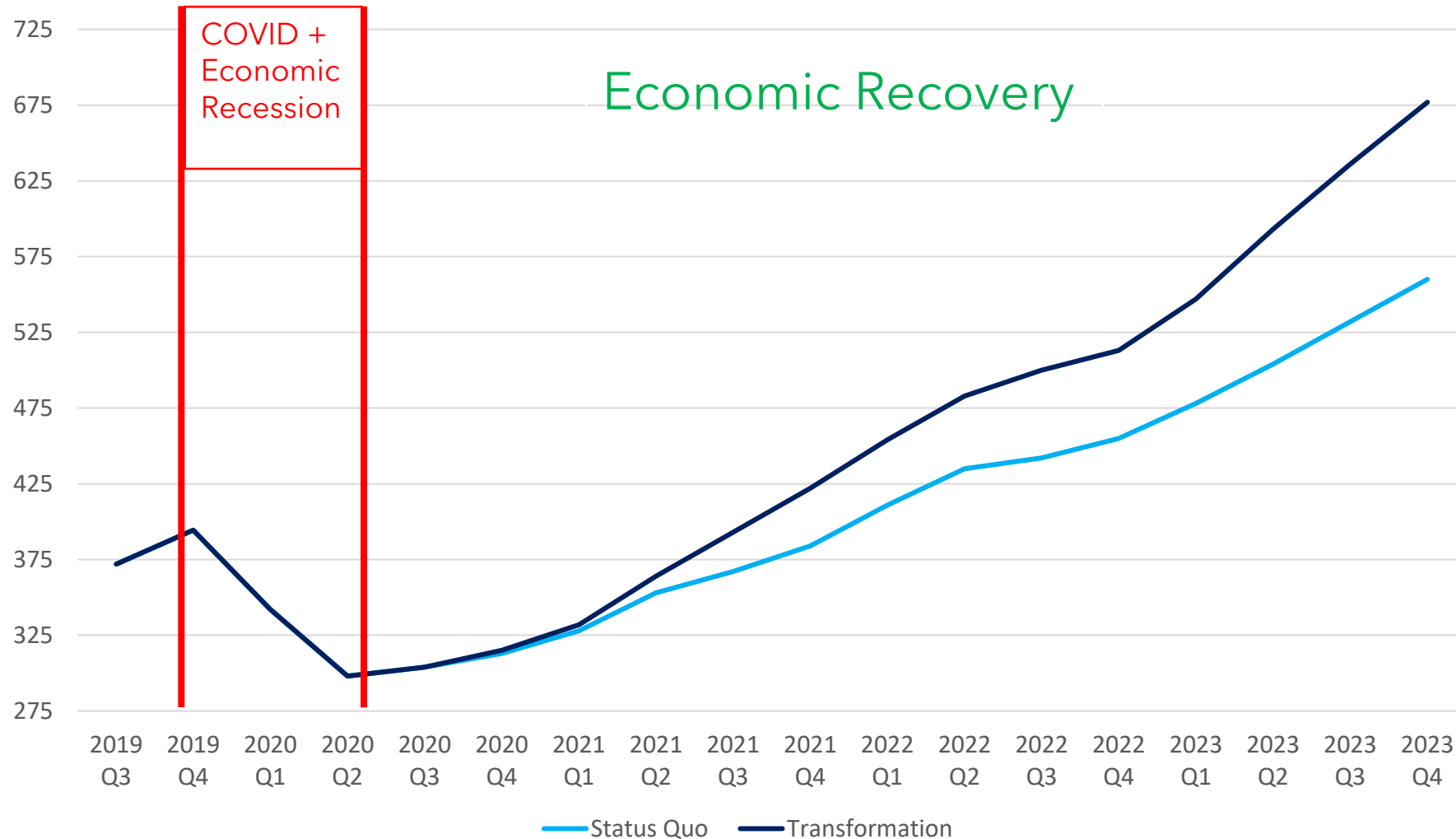
Model Assumptions Transformation

- Stricter corporate governance means GIPS certification, resulting in more investors hence higher AUM
- Better technology and superior domain knowledge results in better ROI and better risk control, limiting losses

Model Assumptions Status Quo

- Loose corporate governance means firm will not earn the trust of HNW investors so easily, resulting in slower growth in AUM from retail investors only.
- Inappropriate tech means mis-execution of trades
- Loose risk management means higher tail end losses.

Risk and Mitigations for Transformation

Risk	Mitigation

1

Regulatory Risks:
Changes in requirements
by the financial industry regulators

Company must understand the laws and regulations, and translate these information into machine-based rules so as to adhere to the new regulations

2

Operational Risks:
Algorithmic alteration by the firm to favour certain investments, resulting in misalignment of client interest

Division segregation within the firm,
i.e. sales vs investment strategy team, which may stop sales from influencing the strategy team's implementation of trading algorithms

3

Technological Risks:
Failure to mitigate extra load from more users that are onboarded on the platform itself

Build the technology on a scalable technology, i.e. Kubernetes, in order to successfully onboard users without crippling the entire platform.