INTER IIT
TECH MEET 15.0



MID PREP

LPL Financial

Advisor Investment Transition solution

1. About LPL Financials

LPL Financial founded in 1989, is the largest independent broker-dealer and a major wealth management firm in the United States with over 2.6 T USD of total advisory and brokerage assets serviced and custodied.

LPL advisors routinely evaluate whether clients should remain invested in their Current Investment (CI) strategy or transition to a Proposed Investment (PI) strategy. These transitions may include moving assets from brokerage accounts into advisory programs, reallocating retirement assets, roll over, replacing mutual funds or fixed-income products.

At first glance, a proposed investment may appear superior because it offers higher projected returns. However, returns alone do not establish client value. A transition may trigger taxes, surrender charges, advisory fees, transaction costs, liquidity constraints, and retirement-income implications that materially change the long-term outcome. this is an investment strategy problem statement. Teams must build a solution that evaluates a client's current portfolio, detects where a transition or reallocation would improve the client's net outcome, and suggests the changes, supported by transparent calculations.

2. The Problem

Today, advisors manually gather information across portfolio management systems, retirement planning tools, account records, product disclosures, and spreadsheets. The analysis is fragmented, time-consuming, and difficult to scale because costs, risks, and retirement impacts are often evaluated in isolation.

- Financial benefits may be overstated.
- Hidden costs may be overlooked.
- Retirement impacts may not be fully quantified.
- Advisors spend time assembling and validating data instead of engaging clients.
- Recommendations may lack a consistent and transparent rationale.
- Tax implications may have been overlooked

2.1 Investment Comparison

Return Scenario	Current Investment (CI)	Proposed Investment (PI)
6% Return	$1.0M	$1.0M
7% Return	$1.05M	$1.1M
8% Return	$1.1M	$1.2M

**This is an example table for illustrative purposes to compare the two portfolios after adjusting for various costs

At first glance, the proposed strategy appears attractive because of its higher expected growth potential. Once these costs are incorporated, the expected benefit can change significantly. The solution must determine whether the projected upside outweighs the total transition cost and improves the client's retirement outlook.

2.2 Transition Costs

Cost Component	Estimated Impact
Capital Gains Taxes	$25,000
Exit / Surrender Charges	$15,000
Transaction Costs	$5,000
Additional Advisory Fees	$10,000
Other Hidden Costs	Variable

- An example table for illustrative purposes, participants are advised to do extensive research before quoting numbers

Case question: Is the proposed investment truly better for the client after considering all costs, risks, taxes, and long-term financial outcomes?

2.3 Representative Scenario

A client holds approximately $700,000 across retirement assets, mutual funds, bonds, and managed investments and wants to evaluate whether existing mutual funds, annuity, and Traditional IRA holdings should transition to potentially better investment strategies. The advisor must compare the Current Investment (CI) with one or more Proposed Investment (PI) options and determine whether the transition delivers meaningful long-term net value, not simply higher projected returns. The evaluation must account for investment performance, fees, exit and surrender costs, taxes, liquidity, risk, and retirement-income impact before recommending whether to transition, partially transition, or retain the current investments.

Current Investment Portfolio

Current Holding	Current Value	Key Considerations
Mutual fund / S&P 500 exposure	$50,000	Current S&P 500 cost basis investment: $10,000; expense ratio: 0.75%; exit clause: 1%.
Vanguard Annuity	$100,000	Provider: Vanguard; 3% fixed lifetime income; 1.5% exit cost.
Traditional IRA	$200,000	Retirement asset; client age: 50.
Real estate	$250,000	Real estate fund of fund.
Alternative investments	$100,000	Allocation across crypto, bonds, and gold.

**This is an example table for illustrative purposes to show the current portfolio of an user

Proposed Investment Portfolio

Current Holding	Proposed Holding	Key Considerations
Mutual fund / S&P 500 exposure	Nasdaq-oriented mutual fund / strategy	1% expense
Vanguard Annuity	Fidelity annuity	3.25% fixed return
Traditional IRA	IRA Roth	Retirement asset; client age: 50.
Real estate	Retain as-is	Include unchanged holding in total portfolio projection.
Alternative investments	Retain as-is	Include unchanged holding in total portfolio projection.

**This is an example table for illustrative purposes to show the changes which are recommended

Scenario decision required:
The solution should:
• Evaluate whether the Proposed Investment (PI) delivers a better net outcome than the Current Investment (CI) at retirement age 60, after considering returns, fees, taxes, exit costs, risk, liquidity, and retirement-income impact.
• Extend the comparison through retirement at ages 70, 80, and 90 to determine whether the PI continues to provide better income sustainability, portfolio longevity, and overall financial outcomes.
• Research and recommend investment models that are expected to perform better then proposed investment model.

Case question:
Considering transition costs, taxes, risk, retirement income, and long-term portfolio sustainability, which investment strategy provides the best overall outcome for the client from age 60 through age 90, and why?

This is just one scenario the model should work for other various scenarios.

3. Hackathon Challenge

Build an Advisor Transition Intelligence Solution that compares a client's Current Investment (CI) with one or more Proposed Investment (PI) strategies, quantify the true net benefit, surfaces hidden costs and trade-offs, models market and retirement scenarios, and produces an explainable recommendation supported by transparent calculations.

3.1 Historical Back-Testing

Back-test the Current Investment (CI) and Proposed Investment (PI) using the same historical market periods to determine whether the proposed strategy would have delivered a consistent improvement after fees, taxes, and transition costs.
The back test should support configurable periods such as 1, 3, 5, and 10 years and compare:
• Cumulative and annualized returns for Current Investment (CI) and Proposed Investment (PI).
• Volatility, downside performance, and maximum drawdown.
• Net performance after advisory fees, taxes, transaction costs, and surrender or exit charges.
• Time required for the PI to recover transition costs and reach break-even. • Impact on projected retirement income, portfolio longevity, and ending wealth.

3.2 Illustrative Back-Test Output

Back-Test Period	Current Investment (CI) Net Outcome	Proposed Investment (PI) Net Outcome	Decision Evidence
1 Year	Calculated	Calculated	Short-term impact and transition drag
3 Years	Calculated	Calculated	Break-even and downside behavior
5 Years	Calculated	Calculated	Medium-term consistency
10 Years	Calculated	Calculated	Long-term value and retirement impact

Guardrail
Historical results should be presented as evidence of decision-making, not as a guarantee of future performance. The recommendation must disclose the test period, assumptions, data coverage, and calculation methodology.

Investor-Ready Proposal
Create an investor-ready proposal that the advisor can share directly with the client. The proposal should provide full transparency into the comparison between the Current Investment (CI) and Proposed Investment (PI), including expected returns, all assumptions, fees, taxes, transition costs, risks, liquidity considerations, retirement impact, and the time required to reach break-even.
The proposal should clearly show:
• Why is the transition being considered and how it aligns with the client's goals.
• Expected CI and PI outcomes across multiple market and retirement scenarios.
• Gross projected returns versus net expected returns after all charges and taxes.
• Hidden costs, risks, trade-offs, and the potential cost of remaining in the current strategy.
• Back-testing results, key assumptions, data sources, and calculation methodology.
• A clear recommendation, supporting evidence, and conditions under which the recommendation may change.

Expected output: A concise, client-friendly proposal that gives the investor a transparent view of expected returns, total costs, risks, retirement implications, and the rationale for proceeding with or declining the transition.

3.3 Deliverables and Datesting

Required Deliverable	Specifications
Plan and Solution Design	PDF, maximum 5 pages; includes advisor solution design.
Technical Report	PDF, maximum 10 pages; documents the approach, implementation, assumptions, and solution outcomes.
Source Code	ZIP containing all source code, configuration, and dependency files.
Dataset	Excel file (.xlsx/.csv) or an opensource dataset link. The dataset must be downloadable without authentication or authorization.
README	.md file containing setup and execution instructions.
Results	.csv or .json file containing solution outputs/results.
Client Proposal	Investor-ready PDF, maximum 5 pages.
Final Presentation	.pptx or PDF, maximum 12 slides; includes the endto-end solution/demo (5 mins). (To be submitted to OC during the main meet)

Milestone: Final Submission
End Term Submission Date: 04/12/2026

3.4 Evaluation Criteria

Dimension	Weight	Description
Design	20%	Solution design rationale, required data elements, proposed data sources, and representative business scenario.
Research and Financial Rigor	25%	Quality of market, product, tax, cost, risk, and retirement research; credibility of assumptions and data sources.
Execution	35%	Working prototype or accessible link that allows the team to present and demonstrate the end-to-end solution), README, investor-ready PDF and final presentation of the solution
Responsible AI and Data Transparency	10%	Appropriate handling of PII, data-source and licensing awareness, disclosure of AI-assisted work, and transparency of assumptions.
Presentation	10%	Overall clarity, visual design, and professionalism of the final presentation.

Clarifications and FAQ

1. **How do we submit?**
   As a single ZIP file through the organizers' submission process. The organizers share submissions with LPL.
2. **What must the ZIP contain?**
   All eight deliverables listed in table, in the formats and page limits given there.
3. **Hackathon breakdown:**
   Teams must create multiple client personas and document assumptions for each (retirement income need, withdrawal rate, inflation, tax profile, state of residence, other income, risk tolerance, liquidity need). The final deliverable must be robust enough to handle completely new personas with variable PI.
4. **What is the "Demo video"?**
   A recorded demo of deployed application or accessible link that shows the end-to-end solution, within the 5-minute limit. To be presented in the final meet as well without making changes to the solution.
5. **Do we only solve the scenario in section 2.3?**
   No. Section 2.3 is a reference scenario. Solutions must work for multiple client personas and portfolio situations, not be hardcoded to one case.
6. **Should we only compare CI with PI, or also suggest a better strategy?**
   Both. The solution should evaluate the transition and recommend the strategy with the best overall outcome for the client.
7. **Will a standard set of client assumptions be provided?**
   No. Teams define their own personas and assumptions and must document them. The final solution should be able to take in new persona and existing portfolio to make it better.
8. **Which tax rules apply?**
   Current U.S. federal tax rules and relevant state taxes for each persona. Document the tax year, assumptions and sources used.
9. **Some product details are missing from the scenario. What should we do?**
   Make reasonable assumptions and document them.

10. **How is the "best overall outcome" decided?**
    Teams define and justify their own method. It must be clearly explained in the submission.
11. **Is a dataset provided?**
    No. Use credible, publicly available financial and economic data.
12. **Can we use synthetic data?**
    Only where real data is unavailable, and it must be clearly labelled as synthetic.
13. **Can we use AI tools?**
    Yes, but AI-assisted work must be disclosed in the README or Technical Report.
14. **Tax Laws:** Teams should apply current U.S. federal tax rules and relevant state taxes based on each client persona, clearly documenting the tax year, assumptions, and sources used.
15. **Note:** If the approach is not core financial/mathematical and AI/ML approaches are being utilized the teams have to make sure appropriate guardrails are in place, with respect to US Federal guidelines.
16. **Results file:** Maintain a fixed schema throughout the database for the created personas to back test the strategy on. Allowed file types: CSV or JSON.