



Real-World Case Study on Strategic Finance and Budgeting

Moving Theory into Practice

April 13, 2022



Session Agenda

Introduction & Review of our process for today

Review of the case study materials and questions

Get to Work !!

Discussion/Readouts from the teams

Reflection on what we learned



Introduction and Review of our process for today

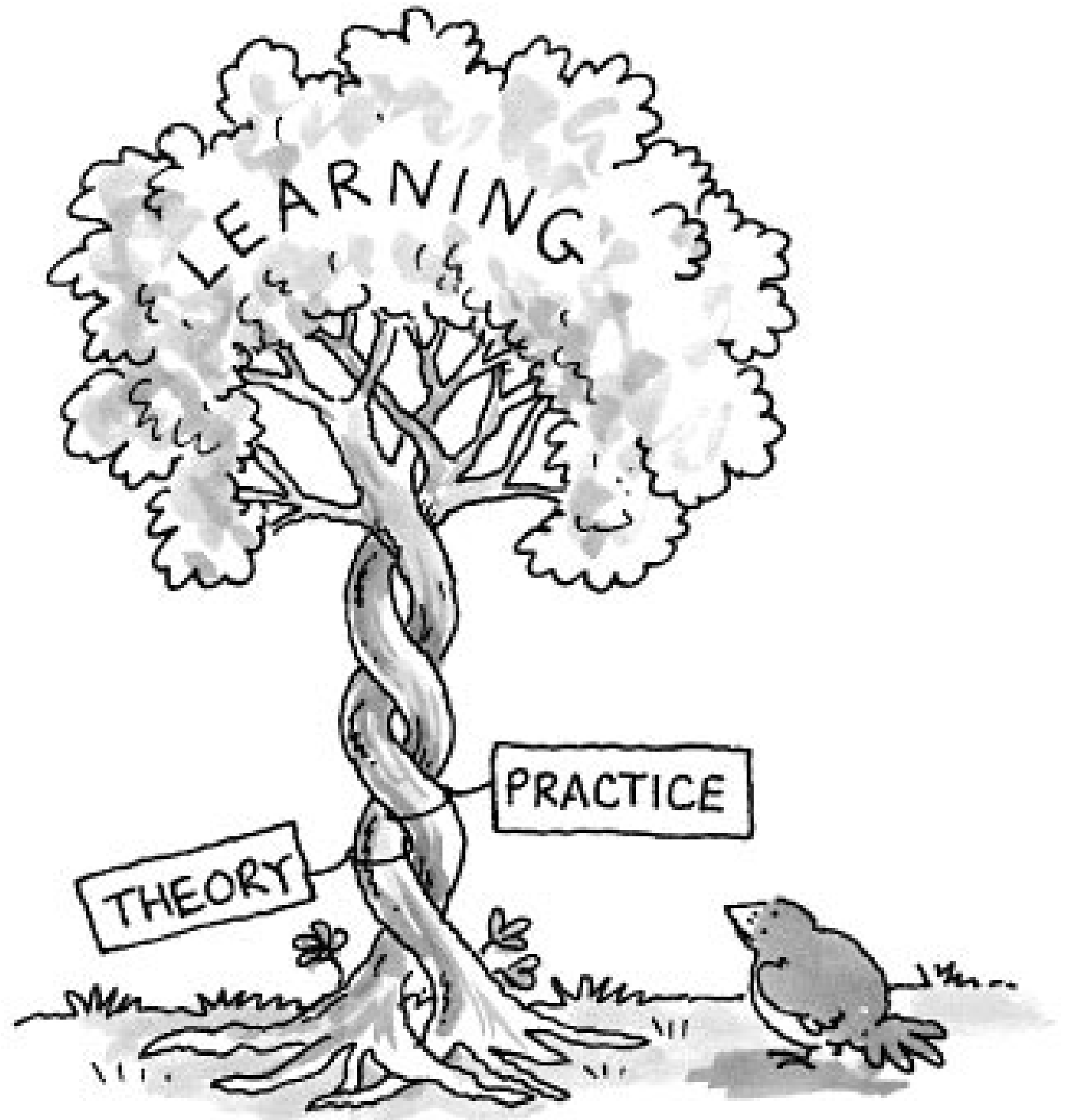
INTRODUCTION



Rob Sarnie
Professor of Practice
at the WPI Business School

- Education
 - ✓ BS - Accounting and Finance (Bridgewater State)
 - ✓ MBA – Concentration in Computer Information Systems (Suffolk)
- Work Experience
 - ✓ Non Profit –Group Purchasing Association – 2 years
 - ✓ Manufacturing – Ionics – 6 years
 - ✓ Financial – Fidelity Investments – 23 years
 - ✓ Currently at WPI – Since Aug 2019
- Personal Life
 - ✓ I am old
 - ✓ Married to my wife Marilyn
 - ✓ 2 Children – Rachel, Jared
- Passions
 - ✓ Coaching and Mentoring the leaders of the future
 - ✓ Boston Sports
 - ✓ Disney
- FinTech groups I am collaborating with currently
 - ✓ WPI Wall Street FinTech Project Center
 - ✓ Mass FinTech Hub
 - ✓ Worcester FinTech Lab

Turning Theory into Practice



The End Game



We will be leveraging
what we learned
earlier today

**Be a Trusted Advisor, Consultant, and Leader by
Turning Financial Data into Knowledge, into Action, into Results**



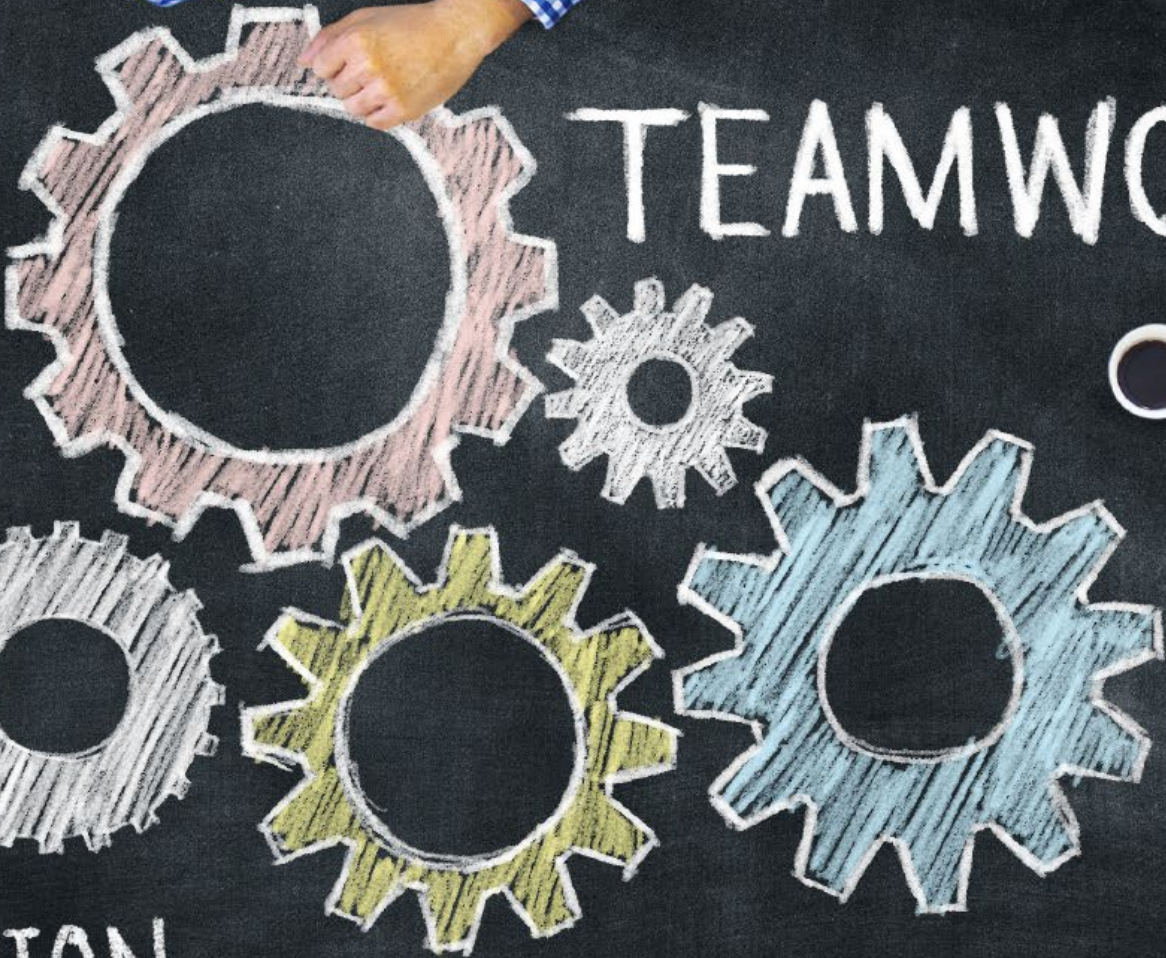
GOALS 

TEAMWORK

SUCCESS 

VISION 

SKILLS 





We are going to get our
hands dirty

Be In The

MOMENT





Document the team's thinking and journey



Do research inside and outside the case study materials

Be Creative



Ask Questions and Have Fun



Each team will do the same case study and questions
but I will ask your team to answer only 1 or 2 of the questions



Review of the Case Study

Case Study: Umicore Electrical Materials USA Inc.

Umicore Electrical Materials USA Inc., a division of Umicore SA of Belgium, manufactures contact materials, including clad metals, tapes, buttons, absorber rods, and brazing materials for the electronics industry. This ISO 9001 and 14001 certified facility employs 40 people in Attleboro, Massachusetts.

Among Umicore SA's environmental goals is to reduce metal emissions to both air and water. In 2020, the impact of metal emissions to air fell by 67% compared to 2015, mainly thanks to further efforts to improve filtration and process efficiency. Compared to 2015, after correction for activity levels, the impact of metal emissions to water in 2020 fell by 59%.

The US facility has been using a vacuum degreaser which holds 2,000 pounds of perchloroethylene (PCE), which is changed out annually. Working with the degreaser manufacturer, Umicore was able to extend the changeout to 18 months, resulting in a 2,000-pound reduction in PCE over three years. EH&S staff at the facility want to eliminate the use of PCE entirely, to benefit worker health and safety and reduce cost. Working with the degreaser manufacturer and a chemical manufacturer, Umicore identified a new vacuum degreaser that could be used with an alternative solvent blend of propylene glycol ethers, called Metalnox M6386.

An EH&S assessment was conducted on the original solvent versus the identified alternative using P2OASys, which determined that Metalnox M6386 is a safer alternative than PCE. Moreover, parts cleaning tests performed by the TURI lab determined that the Metalnox/degreaser solution cleaned parts much better PCE. Thus, the TUR team deemed the proposed new process to be technically feasible and superior to the existing PCE process.

Financial Comparison

Financial data gathered by the TUR team is as follows:

Cost Comparison: Old vs. New Systems			
Cost item	Annual Costs		Capital Costs
	Old Machine (PCE)	New Machine (Metalnox)	New Machine (Metalnox)
Equipment investment	n/a	n/a	\$250,000
Training investment	n/a	n/a	\$7,280
Repairs	\$15,000	None in the first year and none expected for several years after	
Solvent/cleaner	\$4,851	\$2,736 for 80 gallons (expected to last a minimum of one year)	
Stabilizer to maintain acidity	\$2,410		
Booster ¹		If used, \$41 per year for a third of a gallon	
Waste disposal costs	\$2,200	\$110 per year for a 55-gallon drum	
Total costs	\$24,461	\$2,887	\$257,280

1 Booster is an additive that is required only if the Metalnox begins to deteriorate. Alternatively, the solution can be discarded and replaced when it begins to deteriorate.

In addition, the Metalnox/degreaser solution is expected to reduce electricity use by about 50%. The new degreaser is expected to last over 20 years.

- Capital cost of new equipment: \$260,000.
- Expected operating life of the new system is 20 years, minimum.
- As part of a major global corporation, Umicore Electrical Materials USA can borrow money in the EU at 4%.

Case Study: Framing and Questions to Answer

As a team, you will collaborate, discuss, research, debate, recommend and submit your work as one executive level management team. Informally, present your case study to the rest of the class. Be prepared to explain the financial analysis, clearly state the business benefits of the solution(s), address potential objections, address the financial pros and cons of the proposed solution, and describe any particular factors that may be important. Lastly, keep in mind the 3 “Be”s for executive-level presentations. Be Brief, Be Brilliant, and Be Gone.

1. Determine the following:

- a. What are the strategic pillars and goals this project aligns with for Umicore? Why do you think this way?
- b. What stakeholders will care about this project? List all stakeholders you can think of in priority order.
- c. What financial information has been provided that could justify the potential solution(s). If necessary, perform additional financial analysis, such as calculating Payback, NPV, IRR, etc.
- d. What additional financial information is needed? How might you obtain it? Consider outside information sources, Discount Rate (Cost of Capital), depreciation, informal Activity Based Costing, etc. If necessary, make reasonable financial assumptions. A bit of internet sleuthing and research is encouraged.
- e. What cost information is missing in your analysis that you wish you knew, found, or had?

2. What are the intangible qualitative or unexpected benefits for the proposed solution(s), such as reduced liability, positive marketing advantages and good PR, etc.? Recall that TURA requires that qualitative benefits be considered.

- a) Is the company culture ready for this change? Why do you think this way?
- b) What are your risks of implementation? Did this factor into your cost analysis?
- c) What are the key metrics to show the project was successful? What key metrics do your companies use to show project success?
- d) Are there compensation incentives you would give to the implementation project team to ensure success?

3. Prepare a flip chart for presentation to the rest of the class that includes the following:

- a. Brief description of the business problem and solution(s). If there is more than one option state the relative pros and cons for each.
- b. What is the problem being solved and the true “Need” of your top 3 stakeholders being addressed.
- c. A summary of your financial analysis.
- d. Brief description of your proposed implementation plan with timing, effort, and team skills needed.
- e. What are other drivers that influenced your decision to implement?
- f. What potential business risks are there? How do you plan to deal with these?

4. Research:

- What information did you find **inside and outside** the case study via the internet or other sources that helped your research, analysis, and decisions?
- Cite your references also. No standard format for citations.

5. Conclusion:

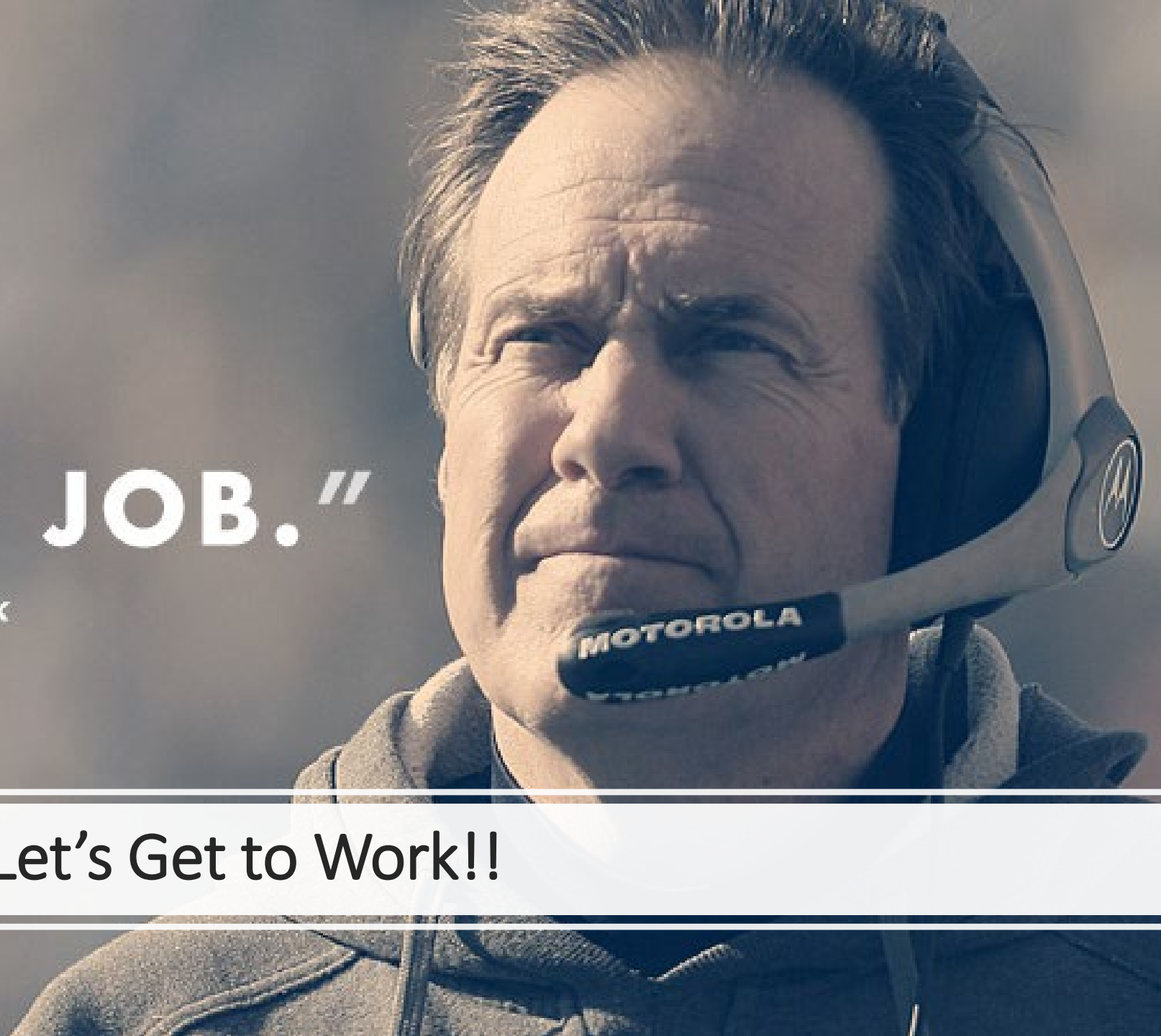
- What are your 3 biggest learnings and 3 biggest key takeaways about this case study?
- What was your team’s process to figure this out?
- Did you understand and leverage all your team’s skills and experiences?
- Were there challenges or disagreements within the team? What would you do differently next time?



“DO YOUR JOB.”

— BILL BELICHICK

Let's Get to Work!!





Discussion/Readouts
from the teams



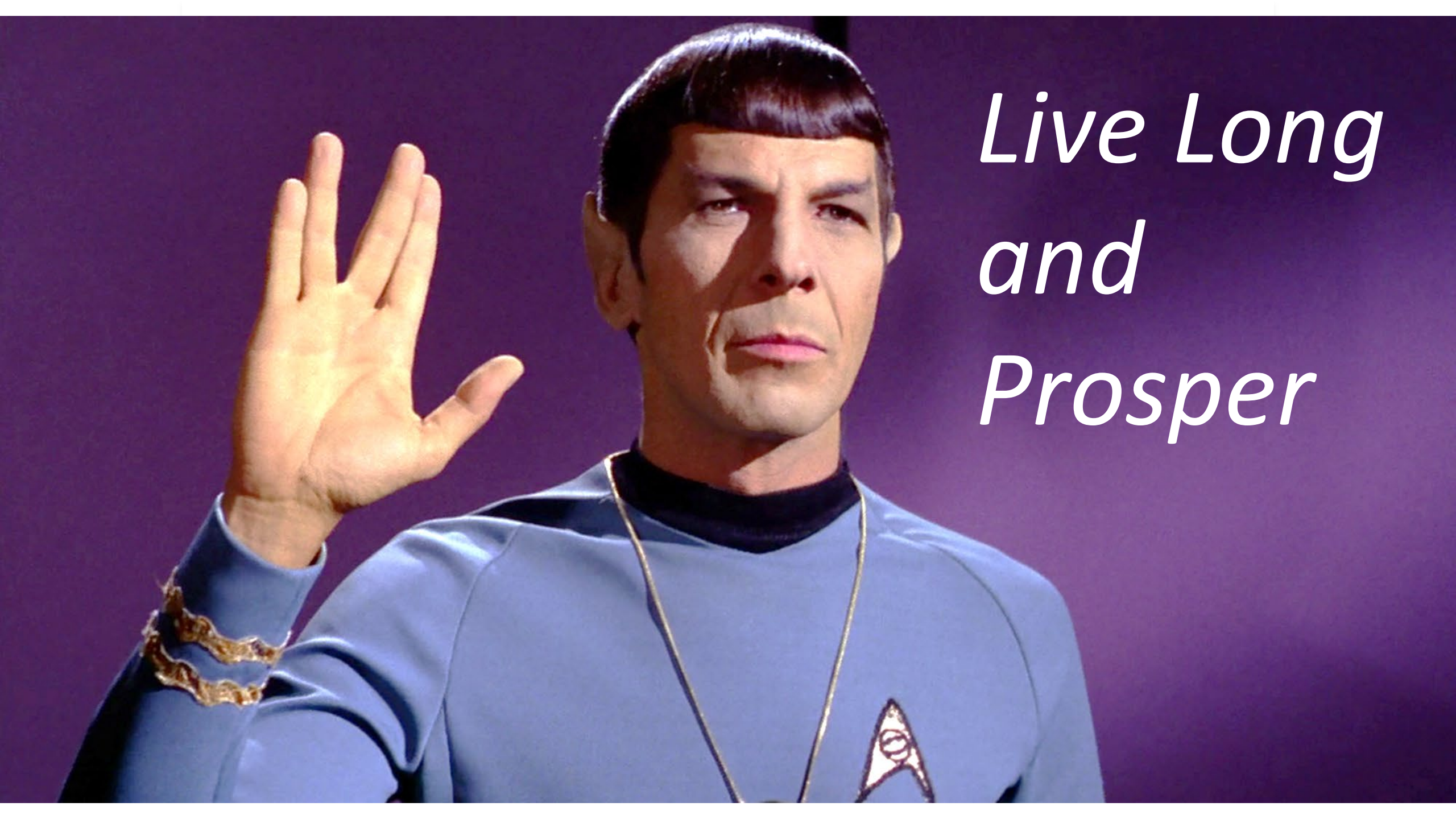
Reflection on
what we learned



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Any Questions?



*Live Long
and
Prosper*