

Digital Transformation in Hydrocarbon Sector

11th World Petrocoal Conference – 2021

Technology Support for Transition



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Something about me....

Hometown: Meerut, UP

Education: HBTU Kanpur, IIT Roorkee, Rice University (Houston)

Professional Interests: Technology Strategy, OCM, Monetization of Digital Assets, Data Science, Governance, Team Performance, Buying/Selling Process

One Fun fact about me:

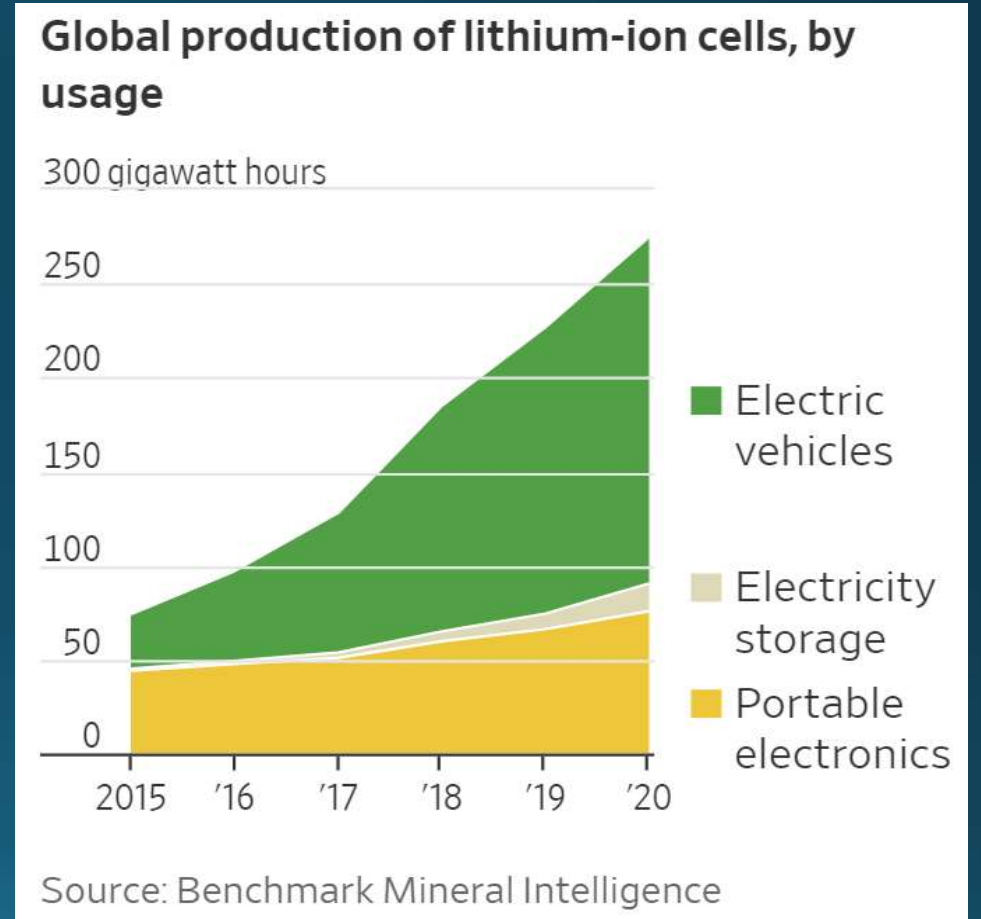
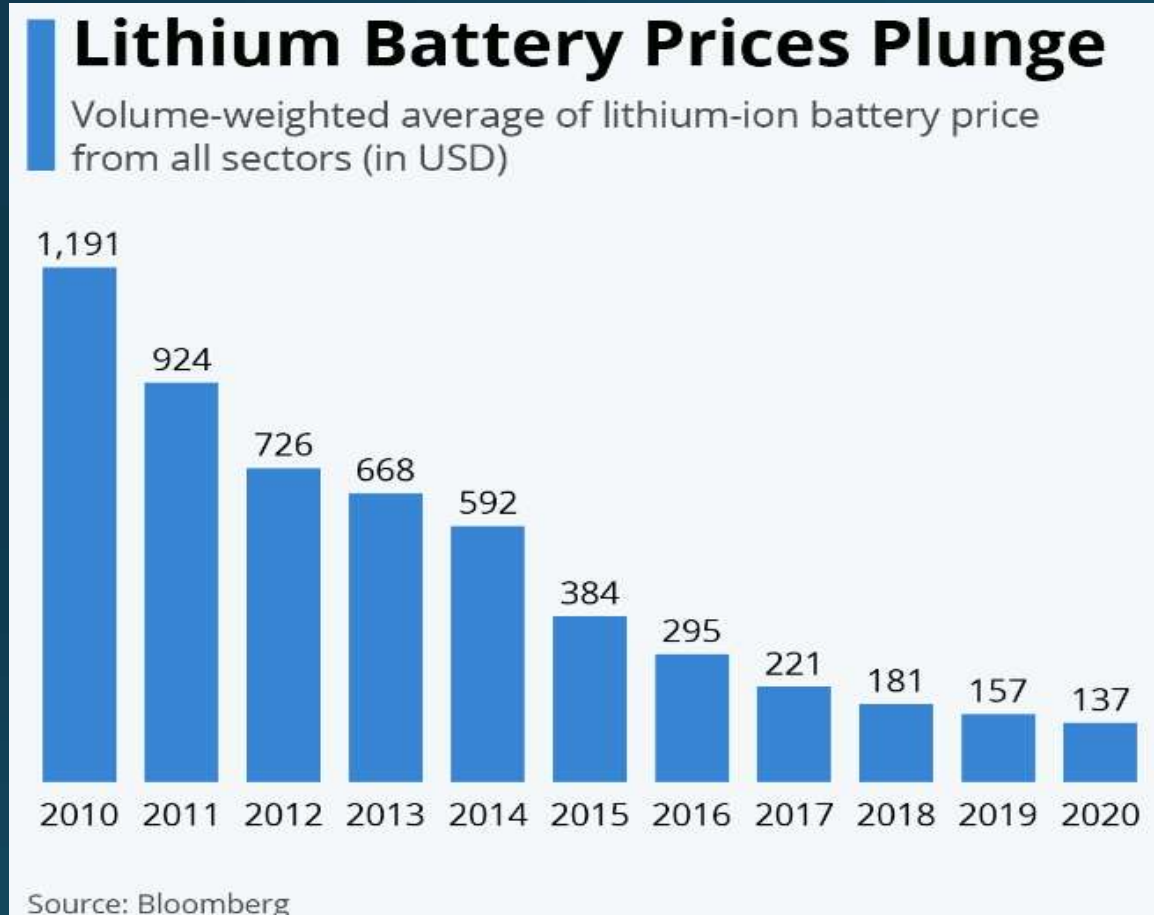
Wrote a rule based expert system for intelligent buildings system design in 1995



Shashank Tomar

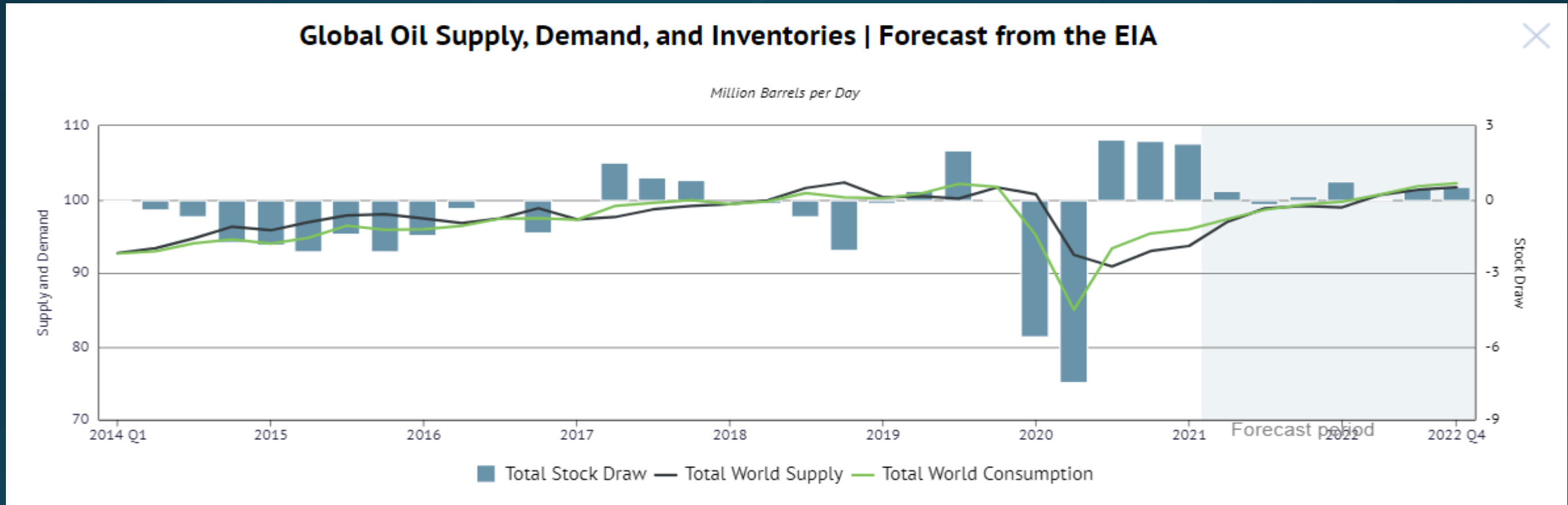
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Hydrocarbon industry is being disrupted...



...but is it all gloom and doom?

Covid gave us preview of the future...



Pace of change is accelerating...

Transition of Traditional Energy Sector is inevitable...

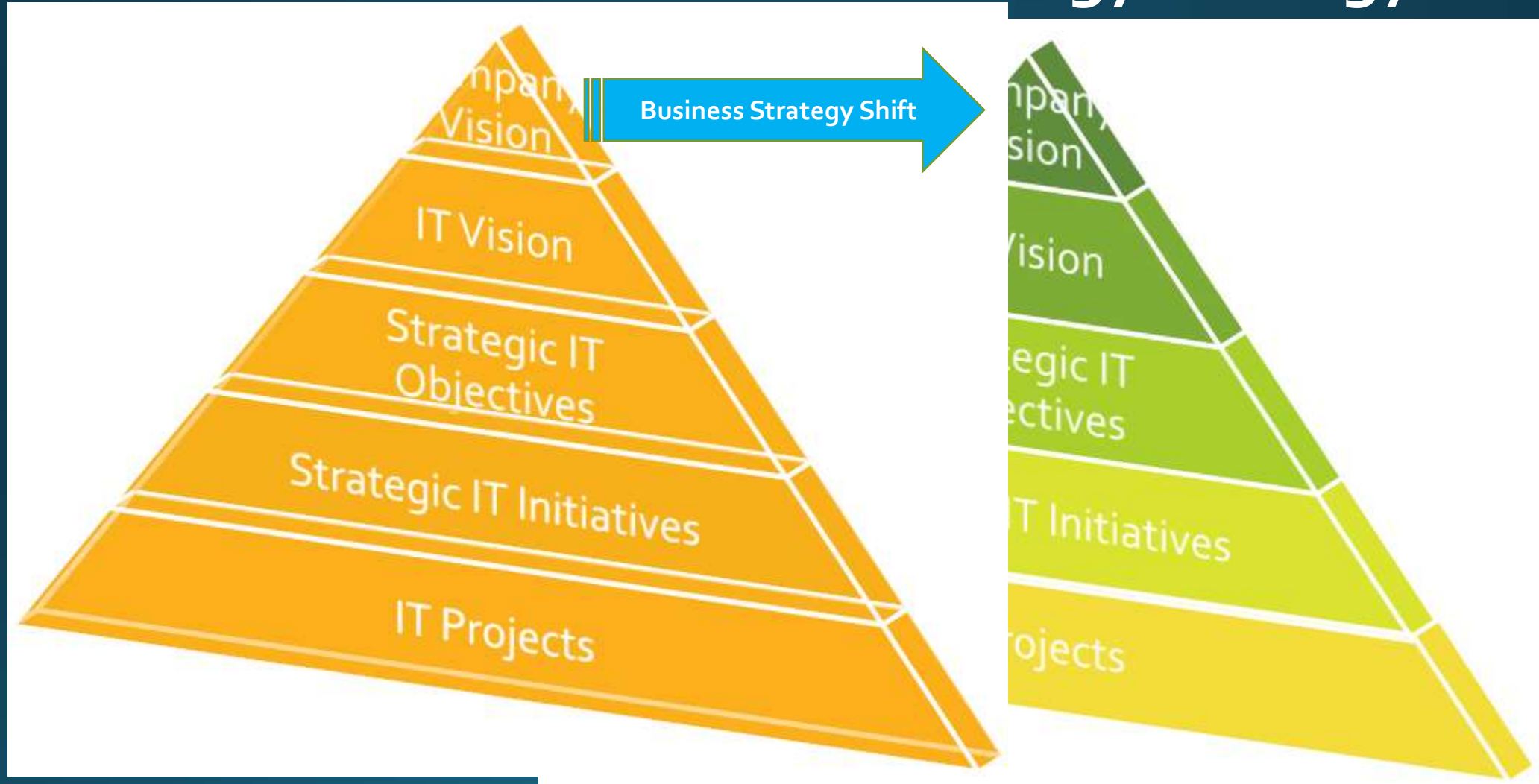
- Reshaping the asset portfolio to move from fossil fuels to renewables
 - Buying/shedding assets
- Infusing new technologies to gain efficiencies (current as well as new business)
- Adding new digital products to portfolio of services /products

So, how easy is this change...

Change is not easy...



Transition drives shift in technology strategy...

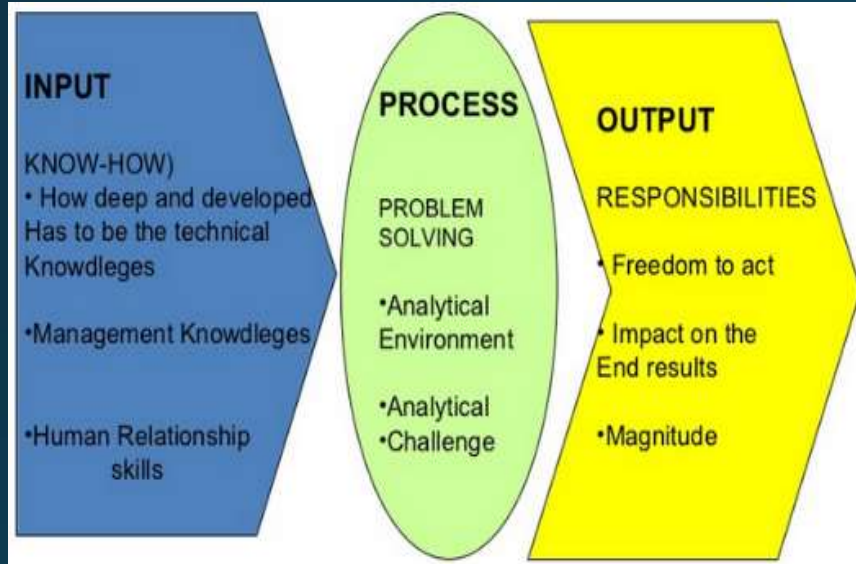


In this fluid environment, taking half-measures and hesitation can weaken the organization's ability to maintain the competitive position.

Remember Kodak, Polaroid, Swiss Watch industry (1980s)

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Technology is usually the least of the challenge in digital transformations...



People



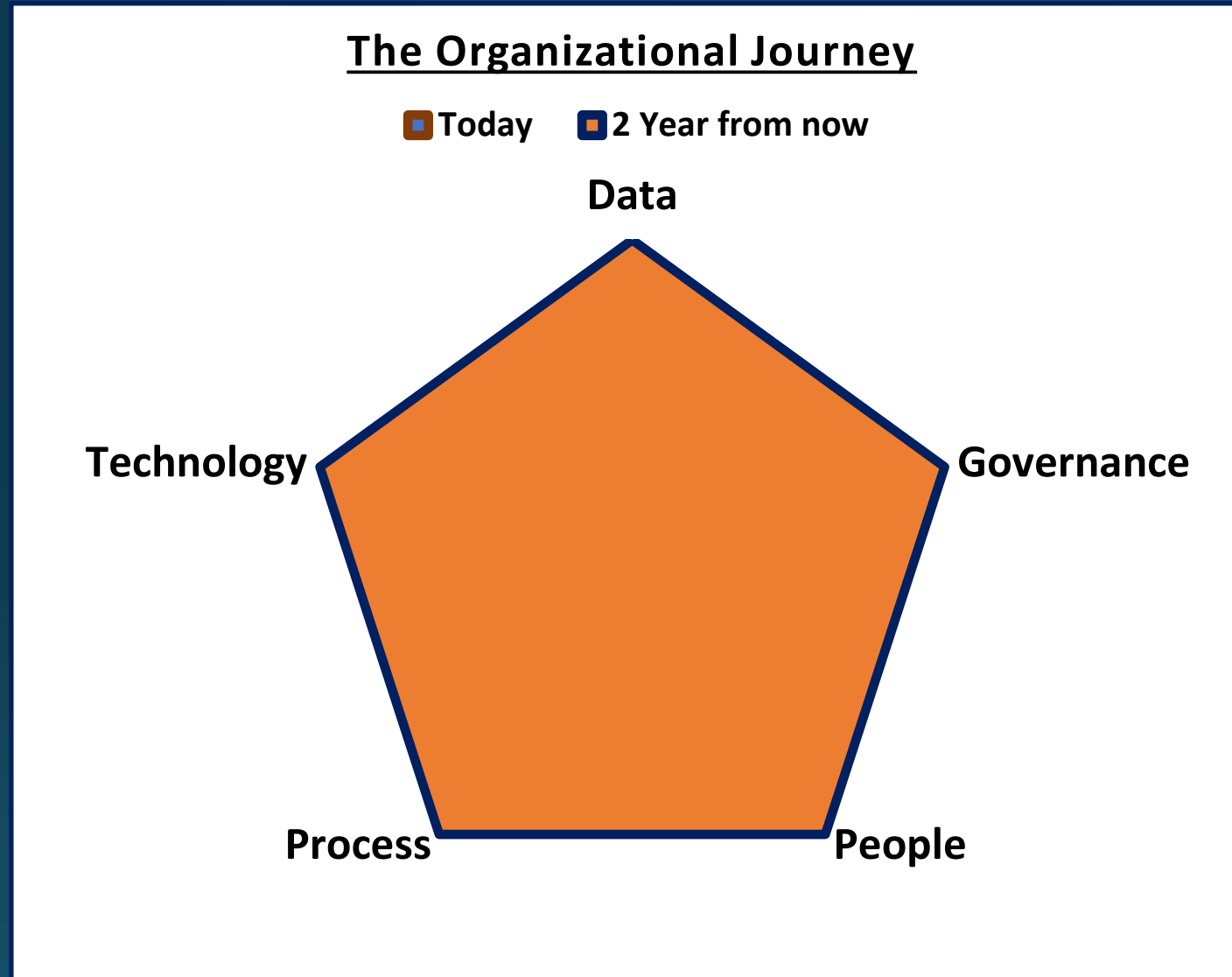
Culture



Data/Process

Managing quarterly profitability while innovating & adjusting to new strategy is much bigger challenge

What are the real cost of change...



Project #1 Real Costs

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Project #2 Real Costs

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Project #3 Real Costs

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Translating the Strategy into Projects...

Efficiency - Increase the first pass yield (Reduce rework)

- AI Based Automated Thread Defect detection

Efficiency - Increase efficiency of existing systems

- Predictive Maintenance (IOT) & Energy Consumption Trends
- Use AI to predict the collapse strength of pipes

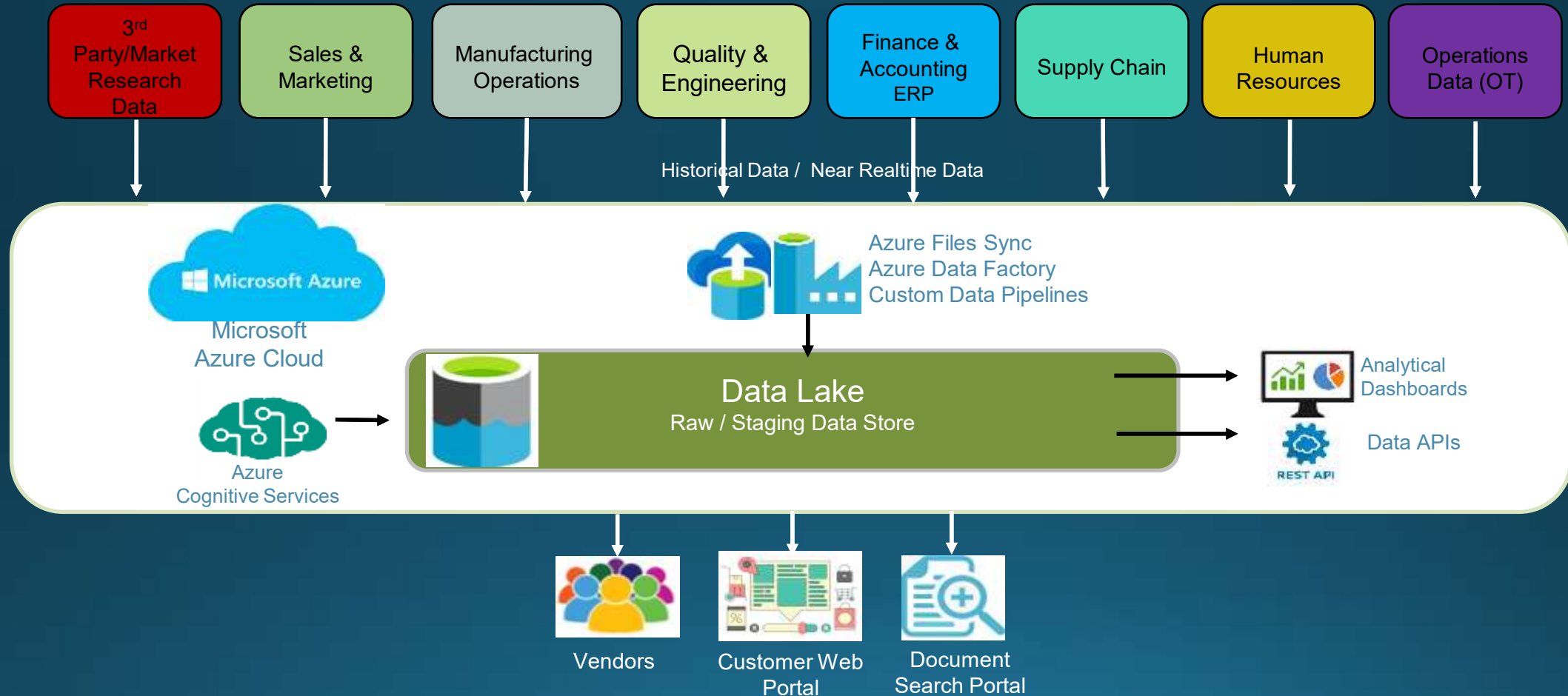
Efficiency - Make the supply chain more efficient

- Integrate Customers and Suppliers on a single platform

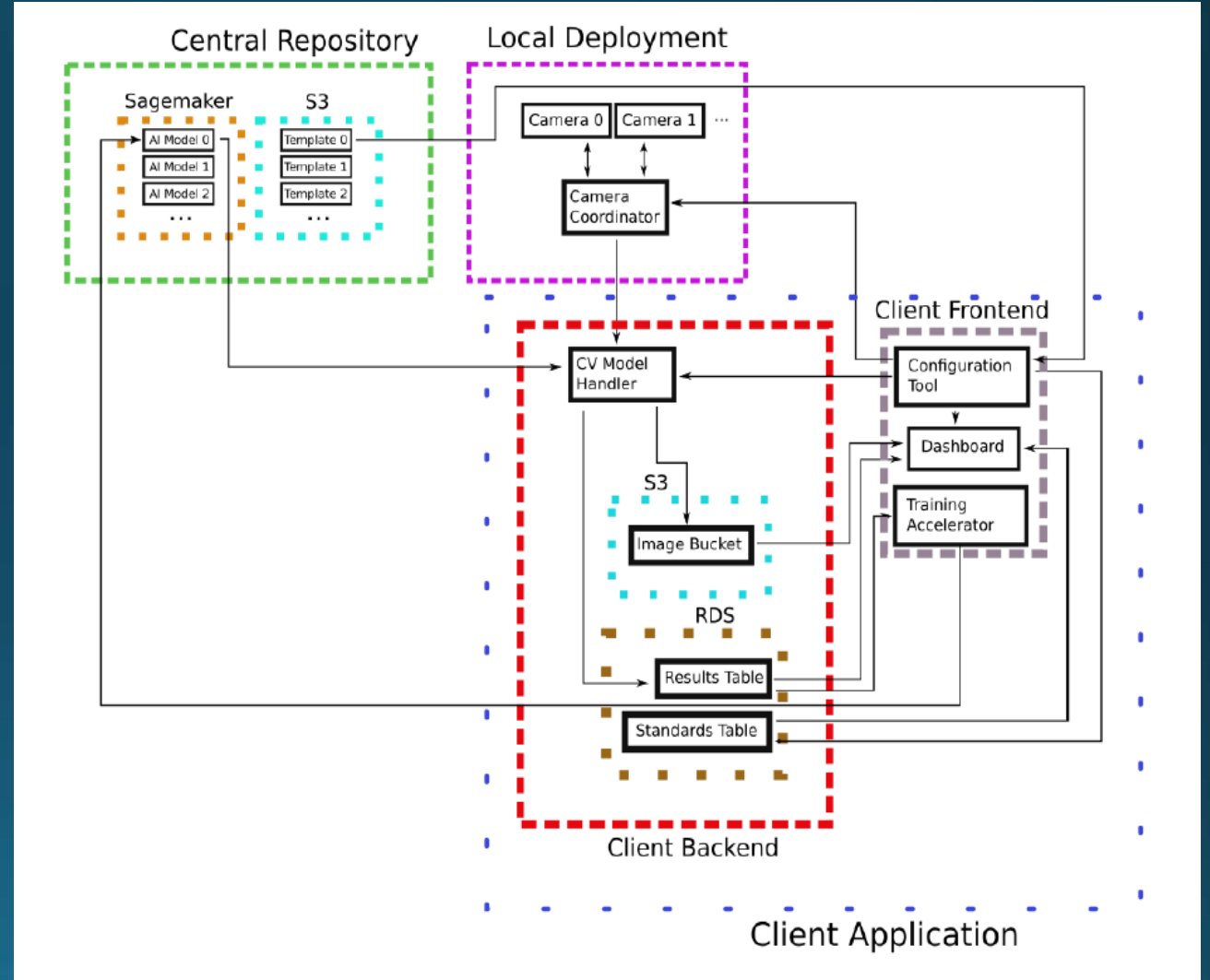
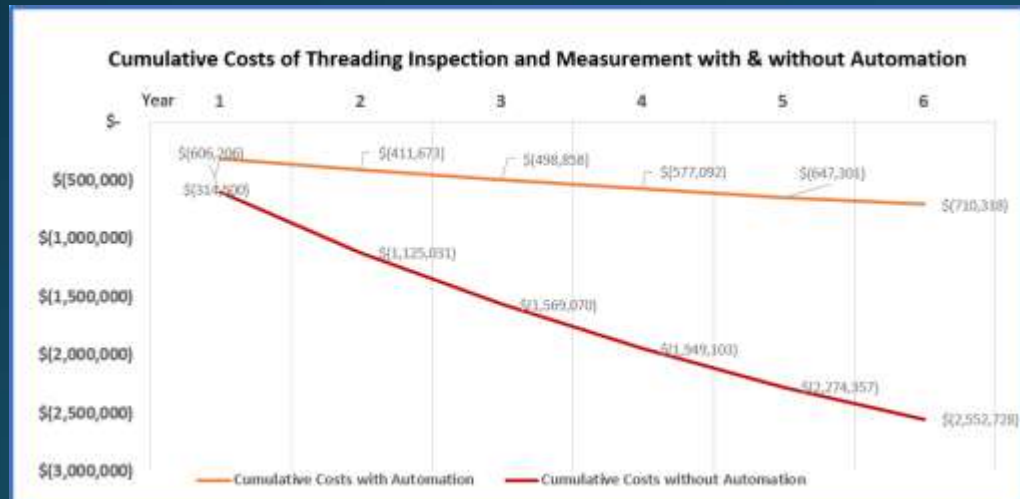
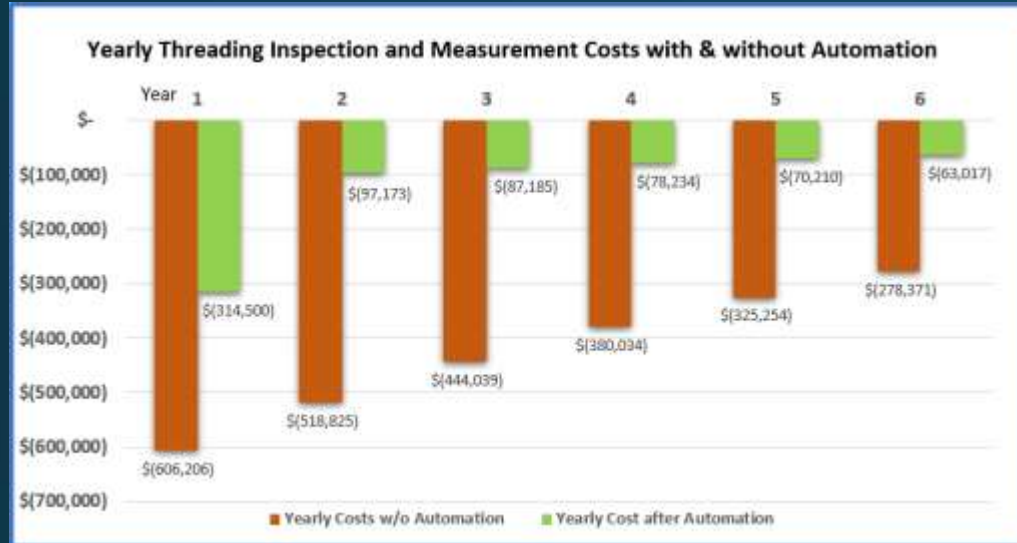
Growth- Improve customer intimacy and support business growth through vertical integration

- Build a portfolio of digital products
- Build steel mill

Data Hub/Lake - System Architecture



AI Based Visual Defect Detection



Q&A

If you want to bounce-off ideas/opportunities, connect with me on LinkedIn: <https://www.linkedin.com/in/shashank-tomar-rice/>

References

<https://peoplecentre.wordpress.com/2016/07/05/hay-job-evaluation-methodology-an-overview/>

<https://www.ocai-online.com/blog/beware-of-culture-in-mergers-and-acquisitions>

<https://www.hitechnectar.com/blogs/data-governance-maturity-models-explained/>

https://www.mindtools.com/pages/article/newSTR_95.htm

<https://www.shell.com/investors/investor-presentations/2021-investor-presentations/strategy-day-2021.html>

<https://towardsdatascience.com/ultimate-ai-strategy-guide-9bfb5e9ecf4e>