

Title: Revamp MokTruk car assembly plant

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BACKGROUND

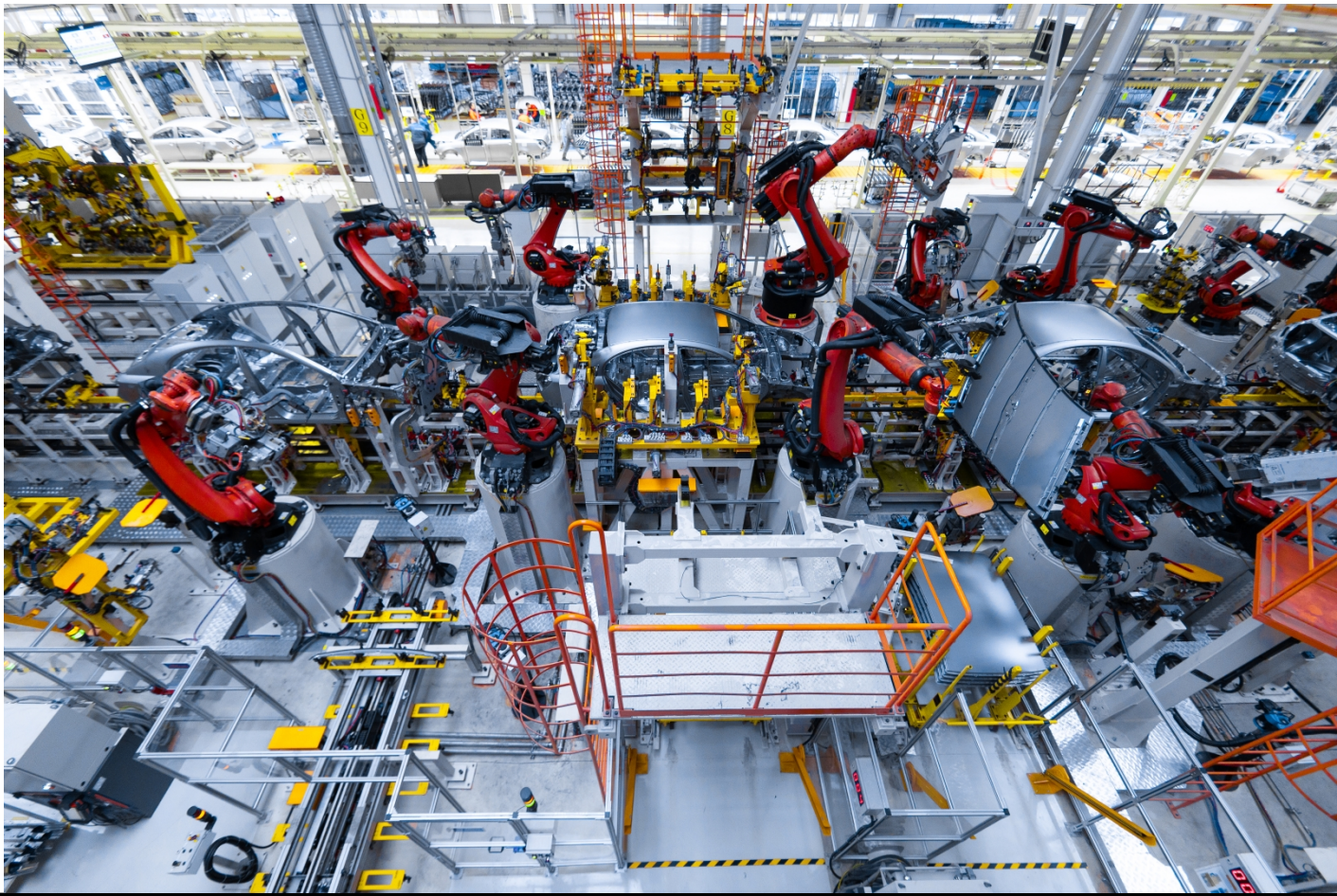
- MokTruk, a fast growing electric car manufacturing company with an assembly plant of 10000 unit capacity has experienced a significant reduction in production which results in decreased revenue and overall growth. This is due largely to the problem of machine over-work culture. A lot of these machines become faulty and require a lot of time to repair. Since there is very little interaction between the robots and humans, a lot of productions are delayed leading to a reduction in the production capacity of the assembly plant. The return of investment of MokTruk as a company has plummeted since the beginning of Q1, and worsened since the last six months. Investors are complaining and customer demand is increasing. MotTruk is unable to meet up.



CURRENT CONDITIONS

Currently, there are 1000 robot electric car assemblers in MokTruk assembly plant. The robots are efficient and are expected to produce at least 190 cars per week each. The activities are monitored by humans in the control room for quality assurance. These robots require a lot of servicing and maintenance which end up becoming over-worked because they are expected to work for 24 hours in 7 days.

The robots become faulty and require a lot of technical attention which eats up into the expected production hours and unit produced weekly.



GOAL

PROPOSAL

MokTruk should focus on developing a resting and maintenance plan for the robots working in her factories. This implies employing more man power to supervise and manage these process to reduce the rate of machine breakdown in the assembly plants.

PLAN

MokTruk would achieve this by:

- Developing a communication plan to engage and include all stakeholders of the company, especially investors on the organizational change
- Designing a machine maintenance plan
- Designing a human resource development plan

FOLLOW UP

Even though MokTruk will be faced with risks of safety of human power during the supervision and maintenance process. Automation safety solutions that support CIP Safety over EtherNet/ip protocol boosts access to diagnostic data, upturn productivity and reduces wiring to basics (Sheilla, 2021). It is recommended that MokTruk should capitalize her assembly plant maintenance on using automation safety solutions that support CIP Safety

Human power will be required to maintain an adaptable mindset about Covid-19 protocols (Emily, 2021). MokTruk will achieve this by scheduling trainings and implementing control checks at the assembly plants.

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- To enhance the production capacity of the robots in the MokTruk assembly plant
- To improve her return of investment and overall growth



ANALYSIS

ROOT CAUSE ANALYSIS

Problem: The current situation in the assembly plant is caused by Machine Over-work

Why is there machine over-work?

- Less hours of machine rest and maintenance check

Why is there less hours of machine rest and maintenance check?

- Lack of machine maintenance plan

Why is there no machine maintenance plan?

- Over-reliance on robotic production

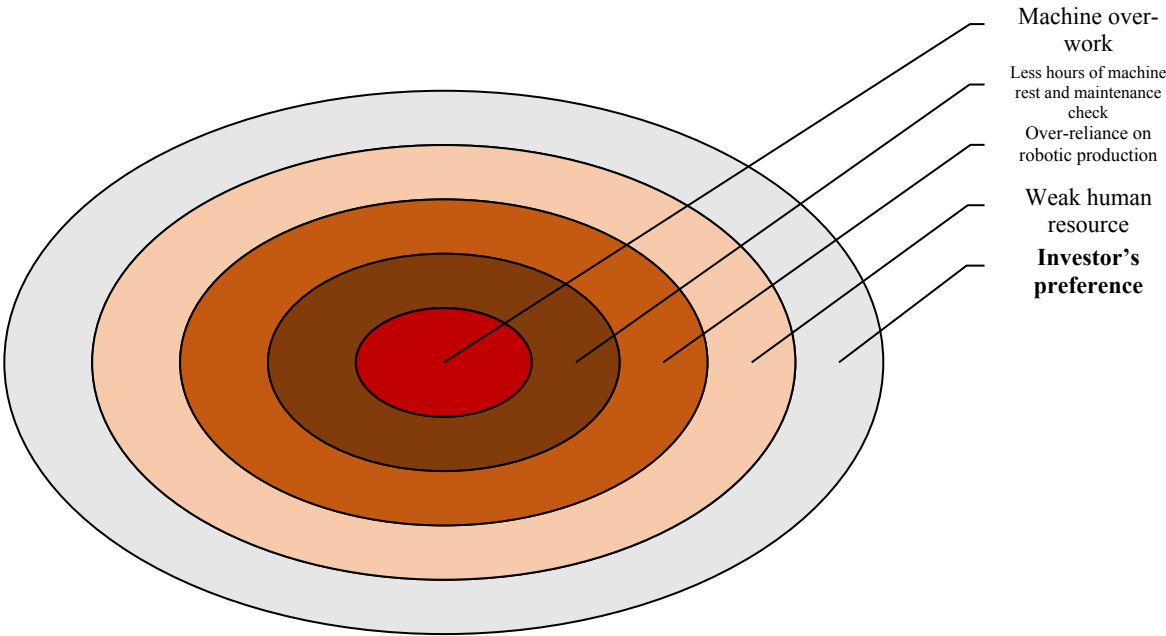
Why is there over-reliance on robotic production?

- Weak human resource development plan

Why is there weak human resource development plan?

- **Investors preference for robotic production over human production – Root cause**

This root cause analysis is represented below:



REFERENCES

Title: Revamp MokTruk car assembly plant

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