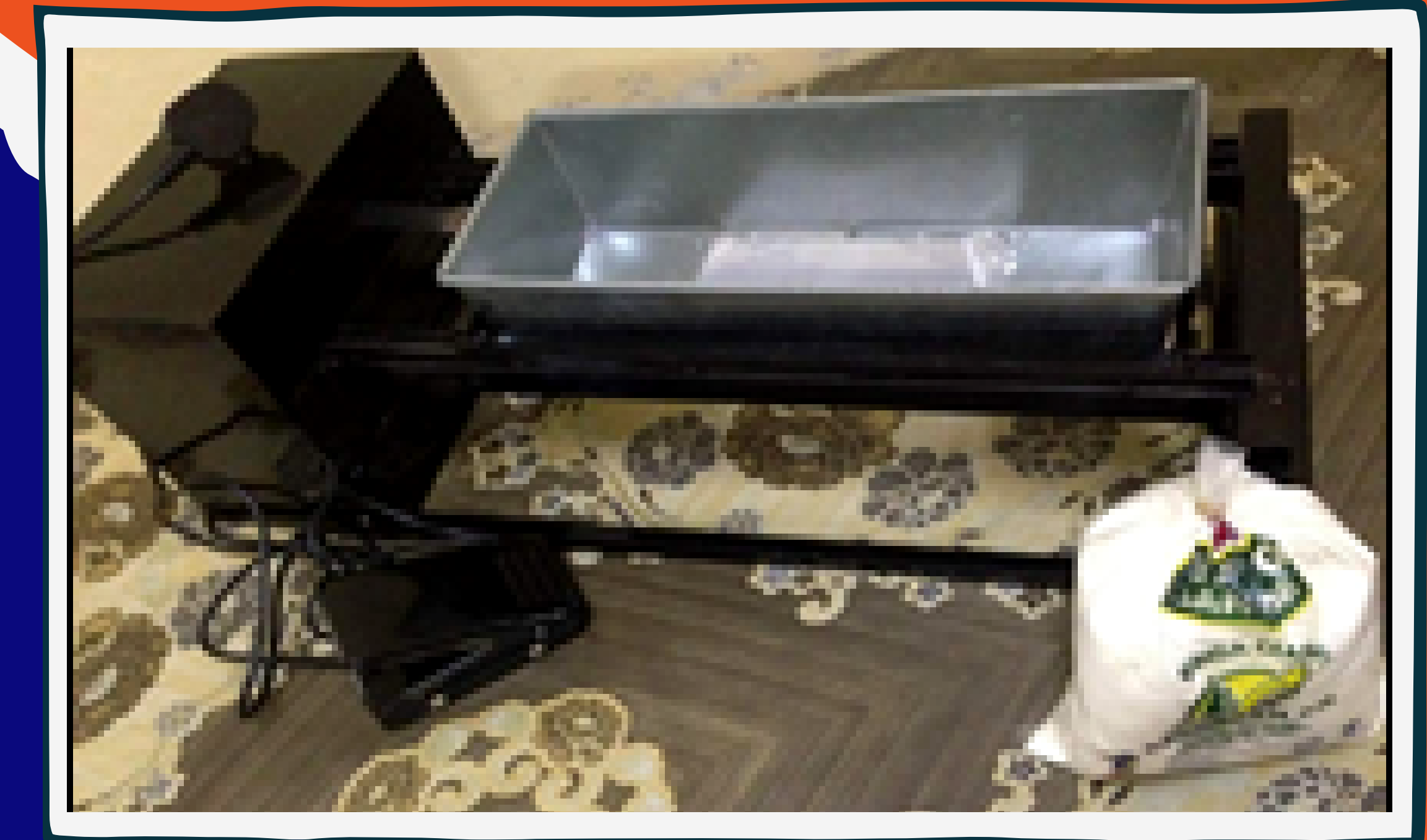


DESIGN AND ANALYSIS OF FLOUR SIEVING MACHINE PROTOTYPE USING AUTODESK INVENTOR SIMULATION



NAME OF LEADER & PROJECT MEMBERS :

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01. INTRODUCTION

- An innovation is accepted as the axis to output and productivity growth
- An important strategy in the transformation of advancing the SMEs
- Budget: RM 400 per unit

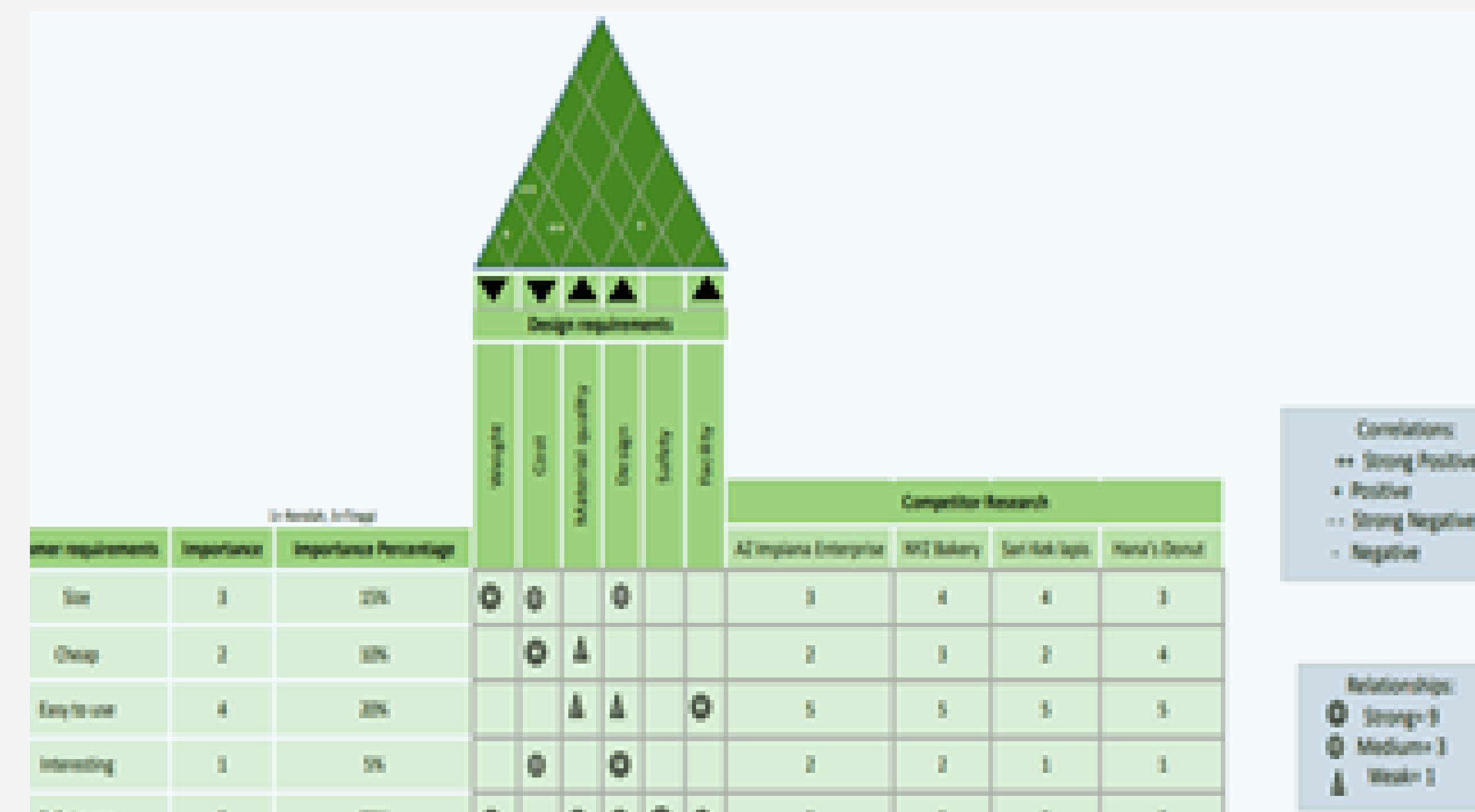
02. OBJECTIVE

- Reducing the use of energy and labor
- Innovating the machine to the ideal or suitable size
- Improving the safety aspects of machine operation

04. METHODE

This method include:

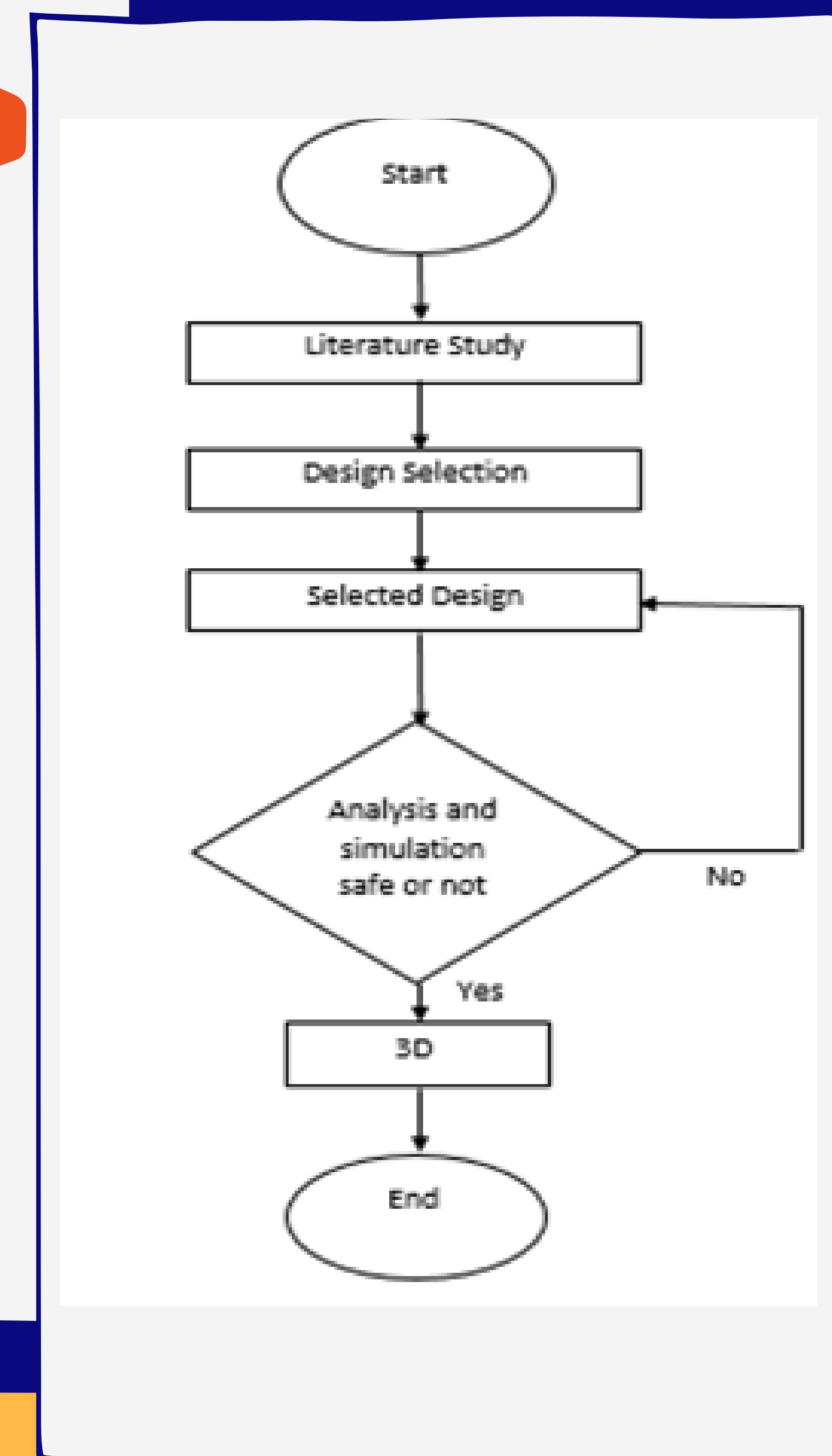
- Product Base
- House Of Quality (HOQ)
- Design and innovate using Autodesk Inventor 2020 software



HOUSE OF QUALITY (HOQ)

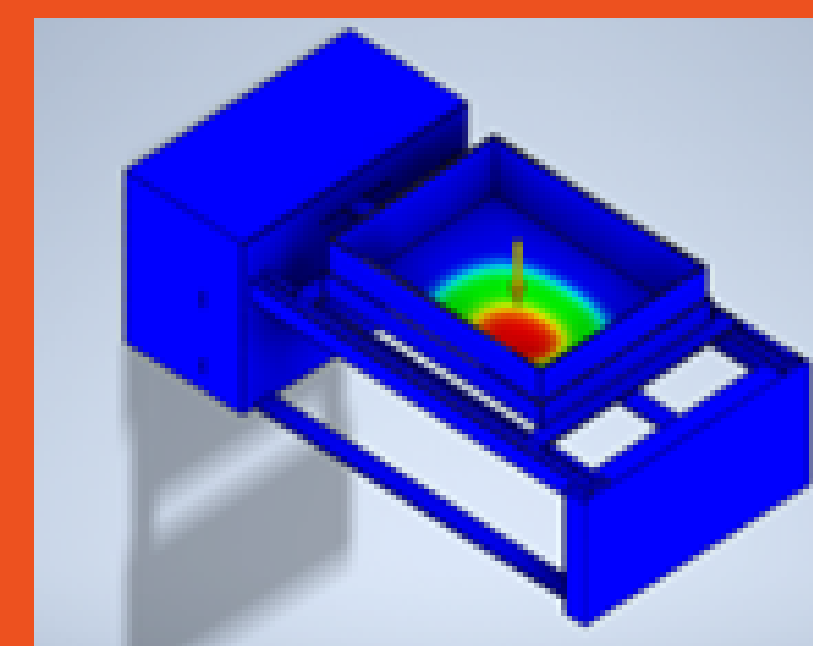
03. PROBLEM STATEMENT

- Currently, the original flour sieve machine consume more energy and it operated semi-auto controlling by the operator.
- The small size of the original flour sieve machine cannot accommodate a large amount of flour in one sifting process
- Low in safety aspects during operating the original flour sieve machine

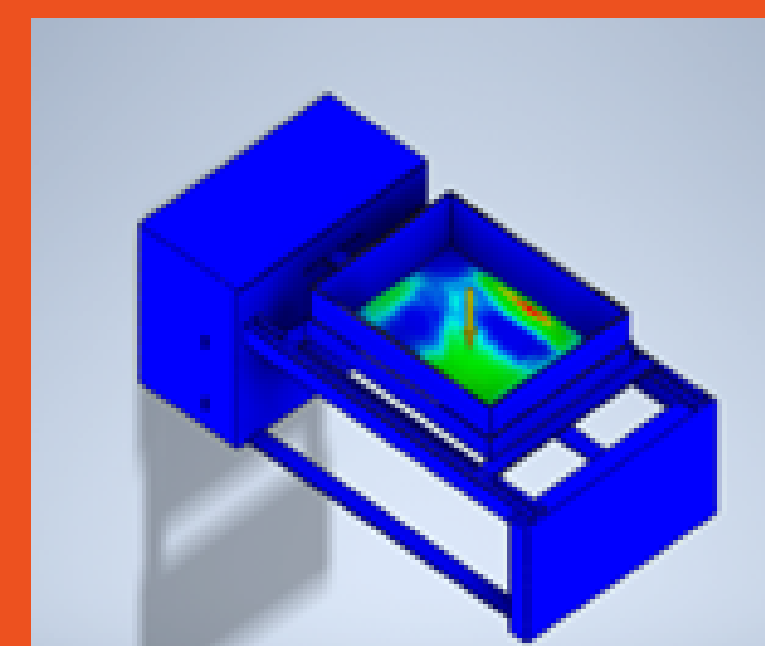


05. ANALYSIS & RESULT

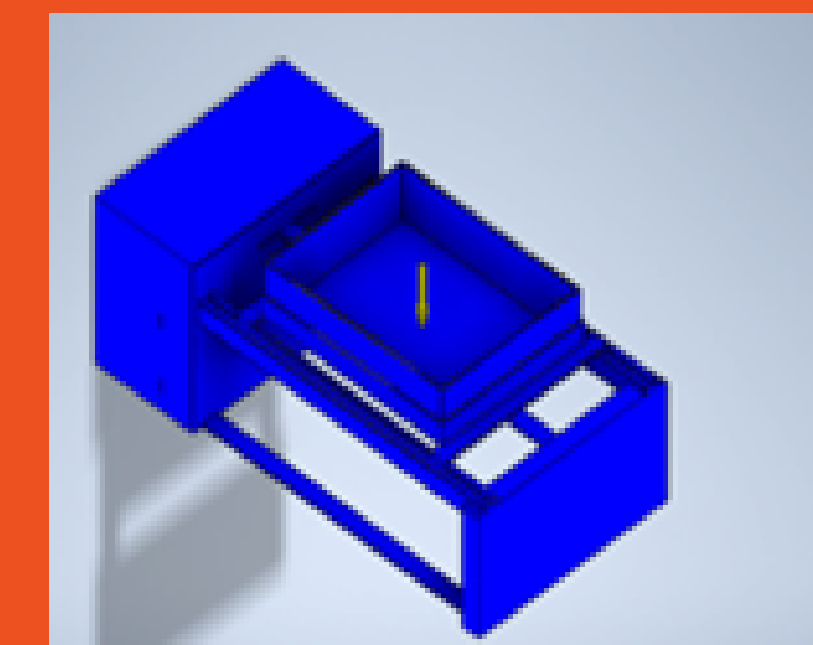
- STRESS = 0.3688 KSI, -0.0436 KSI
- STRAIN = 0.002196, 0 IN
- SAFETY FACTOR = 15 UL, 0 UL



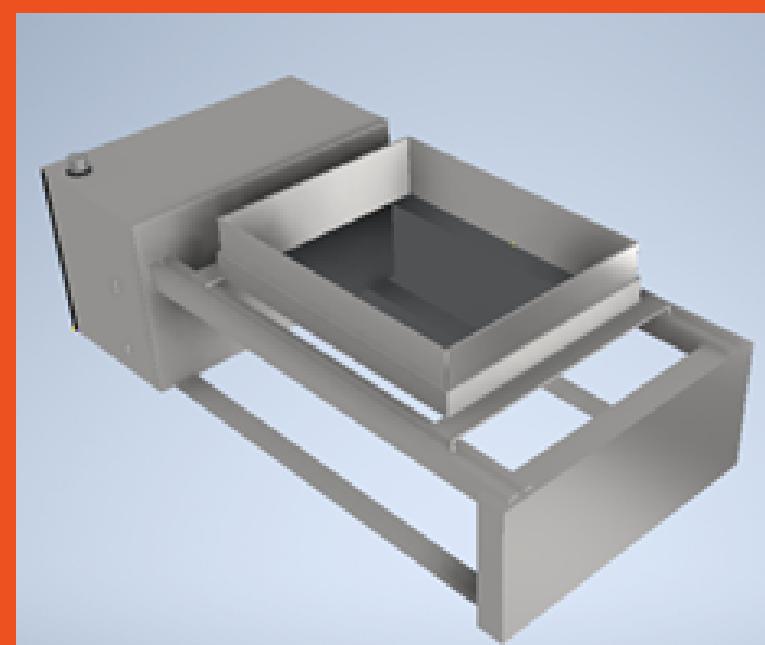
STRAIN



STRESS



SAFETY FACTOR



PROTOTYPE

06. DISCUSSION

- Improvement was made by converting a semi-automatic system into an automatic system and the used pedal was replaced with an adjuster
- The improvement was implemented by adding a measurement of the width of the flour sieve container and the frame of the flour sieve machine.
- The provided lid of the sieve container is also an improvement of the design which is to prevent the entry of impurities onto the sifted flour

07. CONCLUSION

- The success of analysis and simulation was able to solve the problem of high labor consumption, small product size as well as problem from the safety aspect.