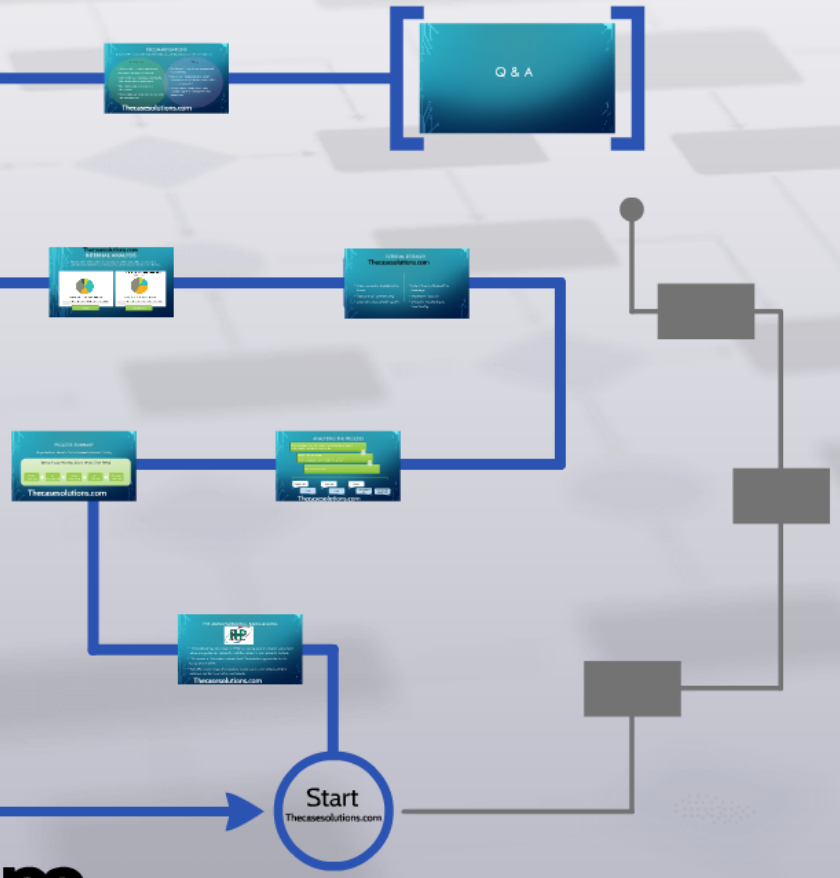
Modularity in Design and Manufacturing: Application to Commercial Aircraft



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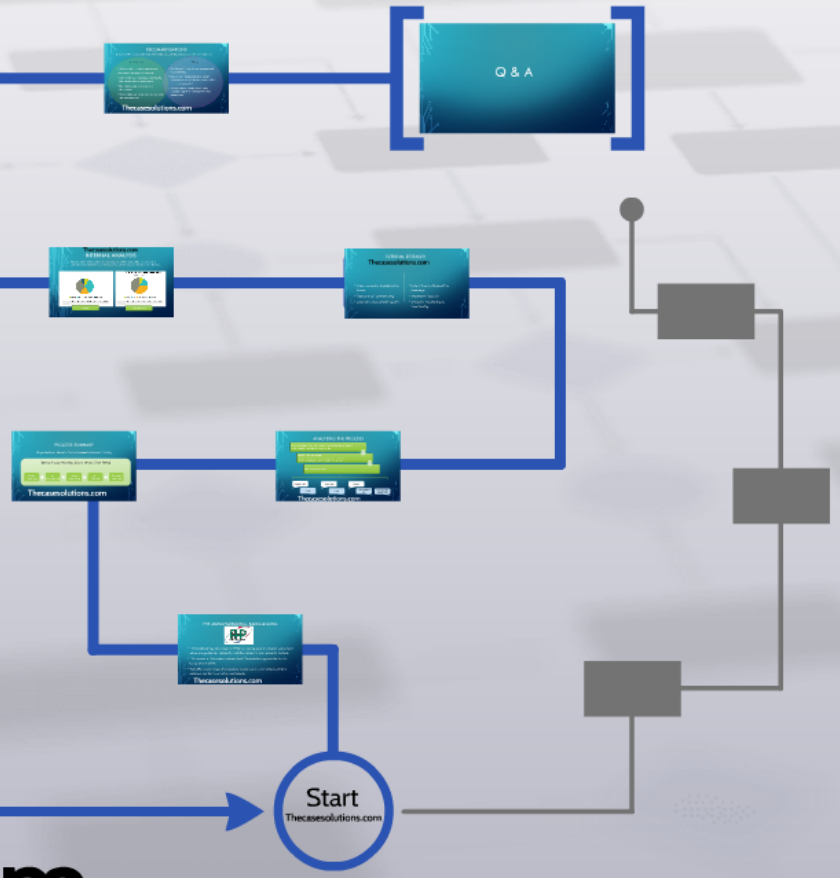

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Start
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FHP MANUFACTURING- BACKGROUND

- FHP Manufacturing, established in 1970, is a leading supplier of water source heat pumps and geothermal systems for both the commercial and residential markets.
- FHP became a joint venture between Bosch Thermotechnology and the Carrier Corporation in 2014.
- They offer a wide range of products, to include special order units, to satisfy all customers and their application requirements.

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PROCESS SUMMARY

Organizational Behavior Topics: Communication and Training

Business Process Analyzed: Special Orders (Heat Pumps)

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ANALYZING THE PROCESS

Overview high- level line process flow of how departments work together to make a special order

Identify the bottlenecks

- Lag in communication from one department to the next
- Lack of knowledge on how to complete certain tasks

Interview employees

Current lead time?

3 weeks

Goal lead time?

2 weeks

Setbacks?

No departmental SOPs

Lack of centralized retrieval system

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EXTERNAL RESEARCH

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- 5 Step Leadership Communication Process
- "Boundaryless" Communicating
- Leadership Development Program

- Porter's Theory of Competitive Advantage
- Investment in Research
- 4 Rules for Implementing & Experimenting

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INTERNAL ANALYSIS

Through a survey given to employees and managers at FHP Manufacturing, we were able to collect important quantitative data, that suggested some key processes that need to be improved.

Q5. I receive the training I need to do my job well.

Answered: 12 Skipped: 0

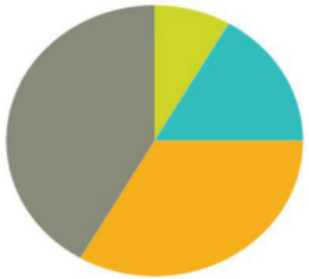
Highly Agree Agree Neutral Disagree Highly Disagree

	Highly Agree	Agree	Neutral	Disagree	Highly Disagree	Total	Weighted Average
Employees Responses	8.33% 1	33.33% 4	16.67% 2	33.33% 4	8.33% 1	12	3.00

Training

Q8. Information and knowledge is shared openly by employees.

Answered: 12 Skipped: 0



Highly Agree Agree Neutral Disagree Highly Disagree

	Highly Agree	Agree	Neutral	Disagree	Highly Disagree	Total	Weighted Average
Employees Responses	8.33% 1	16.67% 2	33.33% 4	41.67% 5	0.00% 0	12	2.92

Communication

RECOMMENDATIONS

In order for FHP to focus on improving their training and communication processes, they are required to:

Communication

- Hold bi-weekly brainstorming session.
- Implement 360 degree feedback.
- Confirm that everyone knows what his/her contribution to the organization is.
- Share knowledge across multiple departments.
- Utilize technology to increase collaboration and communication.

Training

- Use Toyota's 4 rules for implementing and experimenting.
- Incorporate training and development programs as part of the core values at FHP.
  - Socratic Method
- Create a detail standard operating procedure guide for management and engineering.

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