

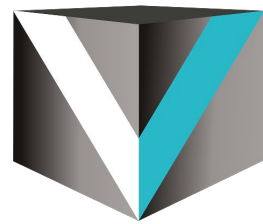
VELION TECH

DFMA Approach to Cost-Focused Design

Existing Product



After DFMA



VELION TECH

THE DEVELOPMENT ITINERARY

Overview

INNOVATION



Intended Flowchart of Activity

PHASE 1

TRIAL PROJECT

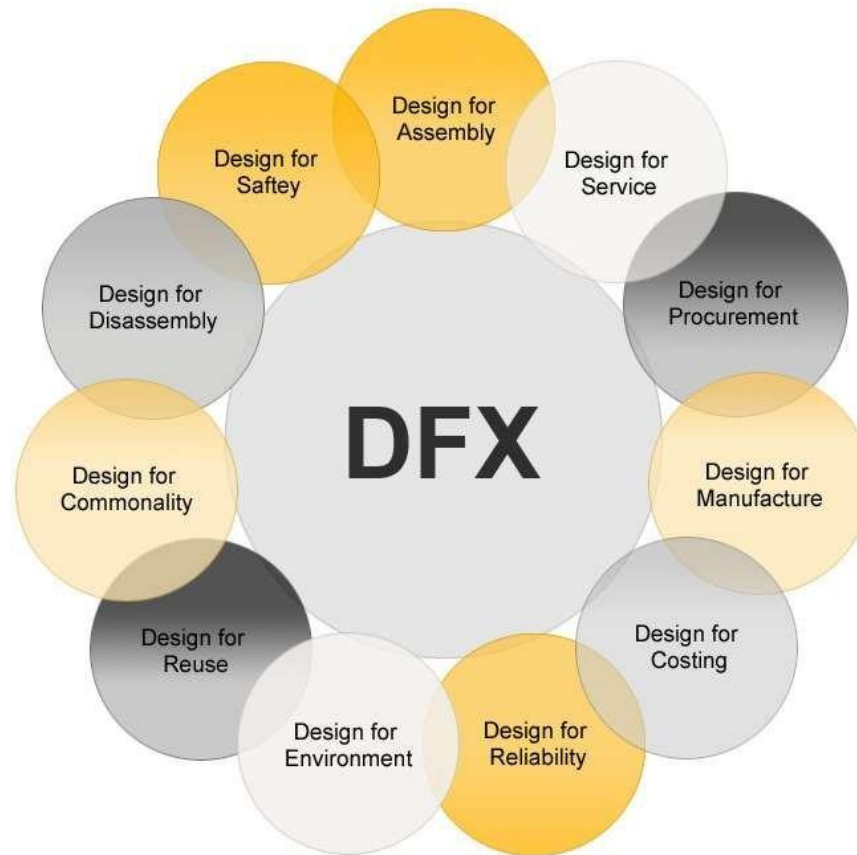
PHASE 2

Implementation of Phase 1
Analysis to Product



VELION TECH

THE DFMA APPROACH



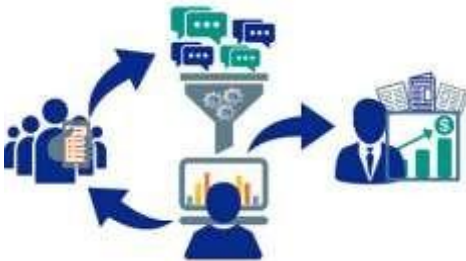
Description of Work

PHASE 1

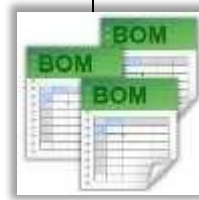
(1) Identification of one Product /Assembly subassembly for project



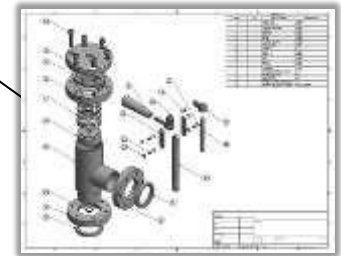
(2) Data collection for the project



Specifications



Bill Of Materials



Drawings

Description of Work

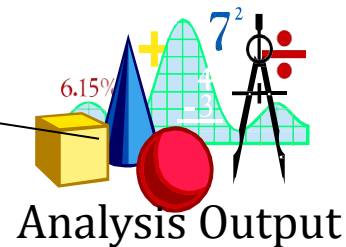
PHASE 1

(3) Data Input to the DFMA software. CLIENT Members can also be involved in the



activity

(4) Analysis and Interpretation of the DFMA Results



Spreadsheets

PHASE 1

Description of Work

- (5) Redesign Options Leaner Design Suggestions
Reduce part count, Simplify assembly time and cost, Suggestions for alternate materials, fastening methods, etc.



- (6) Summary and Reporting





VELION TECH

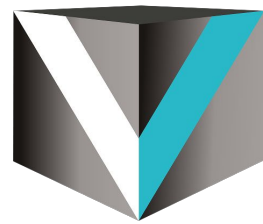
Duration

PHASE 1

Assembly size	Duration	
	Data Collection Analysis	
15 - 30Parts	@ 4- 6 Days	@10-12
30 - 50Parts	@ 4- 8 Days	Days
50 -100Parts	@ 4-10 Days	@10-18



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4-24
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VELION TECH

RESPONSIBILITY

PHASE 1

D-ESPAT (DEPL) will Provide
Provide

- DFMA consultant(s)

•DFMA software

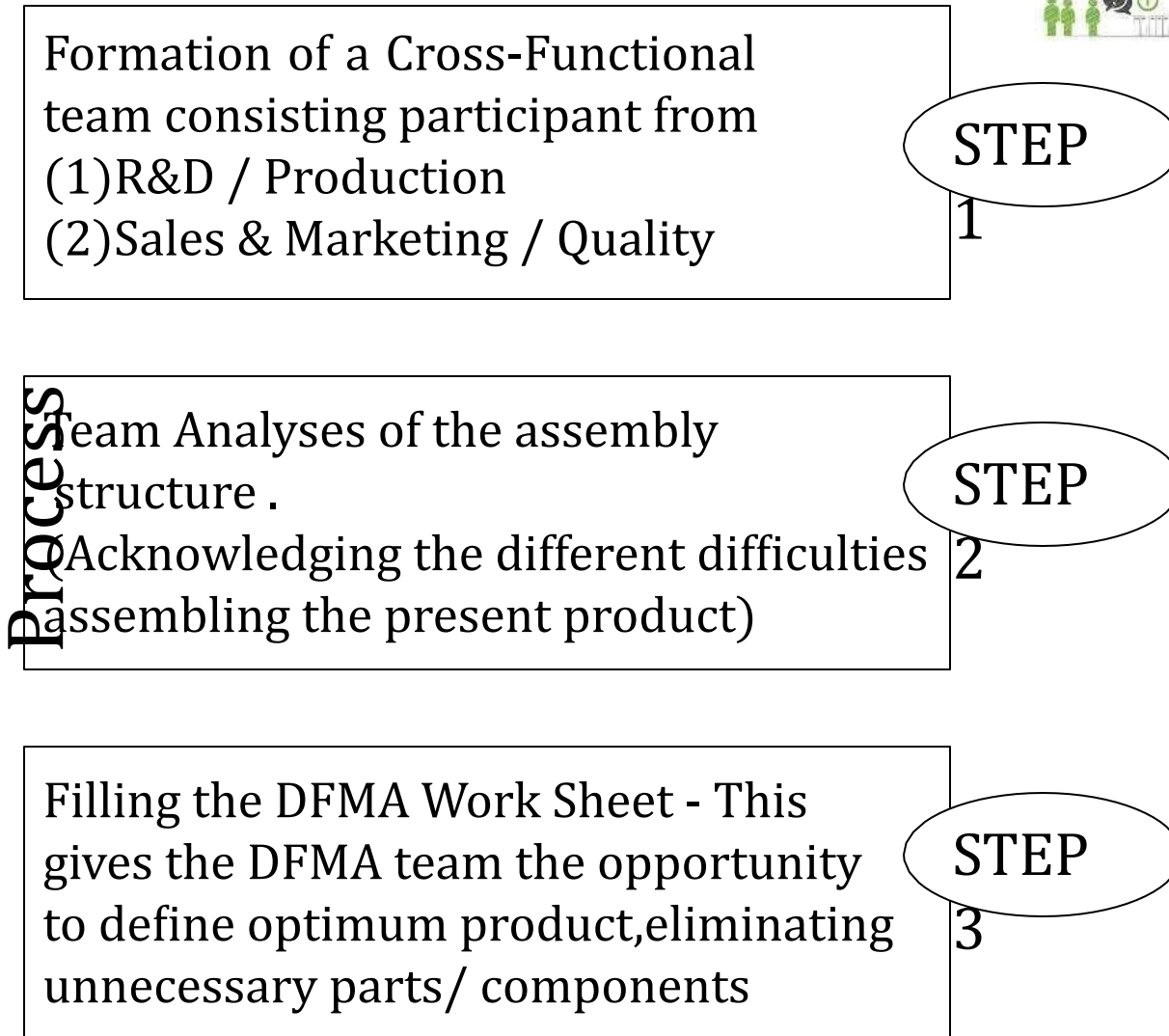
CLIENT To Provide

- Consultant Charges
- Interaction member(s) who will assist in collecting the required data for the process
- Participating team from CLIENT . It would be a HANDS-ON training for the participants





Phases of the Innovation



Phases of the Innovation Process



Arriving to realistic cost estimation of the analyzed product

STEP 4

Defining the problems arising while assembling the product

STEP 5

PHASE 2

Redesign Activity

(1) Pursue the Phase 1 Assembly for Development and Implementation

(2) Exchange Information with other disciplines /teams at CLIENT for determining

- A. Redesign Options
- B. Redesign Cost and Time
- C. Cost Of Implementation



PHASE 2

Redesign Activity



(3) Discussion and Selection

- A. Material And Processes
- B. Further Part Count Reduction
- C. New Design integration in Product Assembly
- D. Tooling costs
- D. Return on Investment



Probable Achievement

PHASE 2

Assembly size	@ Reductions In Part Count	@COST Savings for CLIENT
15 - 30Parts	@ 15% - 60%	@30% - 50%
30 - 50Parts	@ 30%- 70%	@ 40% - 65%
50 -100Parts	@ 25%- 75%	@ 50% - 75%



PHASE 2



Duration

Assembly size	@ Redesign Duration
15 - 30Parts	@12-18 Days
31 - 50Parts	@20-30 Days
51 -100Parts	@25-45 Days
101 - 200Parts	@30- 60 Days



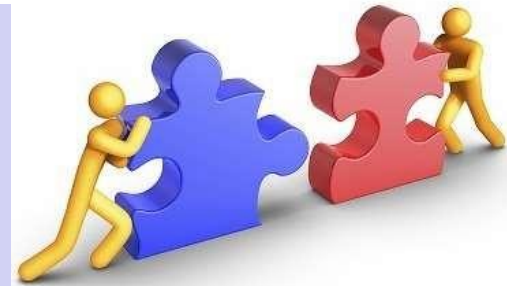
PHASE 2

COLLABORATION



DEPL will facilitate

- DFMA consultation to explore possible solution to design problems and suggest the same .
- Seek expert advice from our DFMA principles and business partners to achieve feasible and cost effective solutions.
 - Assist in validating feasibility of solution obtained
- Interact with CLIENT's Team members , participants & partners (vendors and suppliers) , if CLIENT so wishes
,to derive optimal solution.



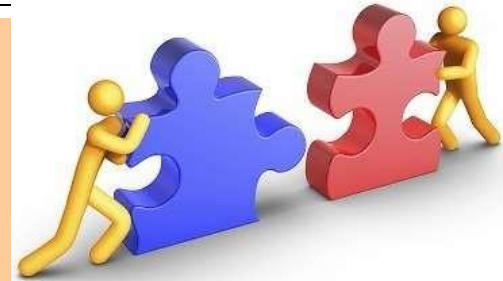
PHASE 2

COLLABORATION



CLIENT will facilitate

- Involving department members concerned to validate solutions reached
- Provide their expert advice , comments, suggestions to assist in developing the new design or modifications to the existing component(s).
- Probable suggestions to identify further part count reductions and product simplification.
- Involve members concerned to calculate costing, returns on investment and other aspects involved with implementing the design.





Phases of the Innovation

The team will work proposals on how to improve the product design

STEP 6

Getting creative ...to reduce parts
And redesign remaining parts.

STEP 7

Rework proposals to ensure product design is able to fulfill your requirements

STEP 8

Summary

The aim is to assist the CLIENT to improve their product competitiveness in terms of

- Faster Production
- Leaner with Simpler Assembly procedures
- Robust Products which are cheaper to manufacture
- Simplicity in service and maintenance
- Reduced time /cost of New product to market

