

FMEA: Failure Mode and Effect Analysis



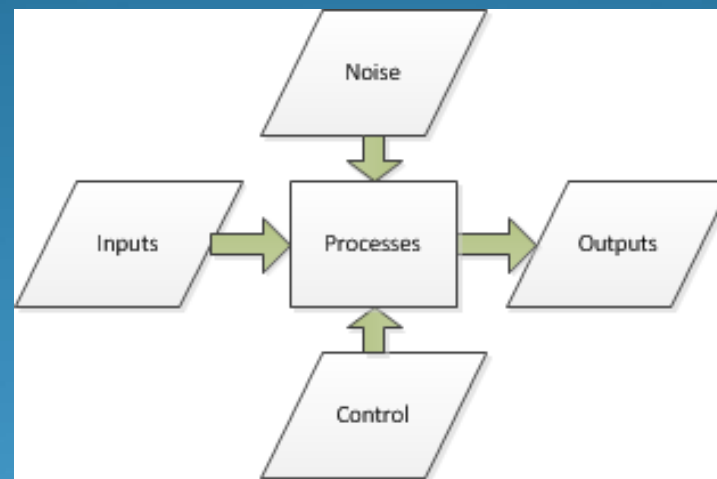
LIFT-TEK ELECAR S.p.A.

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What it is:

FMEA analysis is an analysis methodology which allows to systematically identify the risk factors, through process, product or system composition in elementary subsystems.



The objective

This method is a powerful tool initially developed in a military and aeronautical context and later applied to industrial processes to improve the quality of products and processes. This allows to increasingly approach, by means of a rational and objective analysis, the objective of having

Item and Function	Failure Mode and Effect	Severity	Occurrence	Detection	RPN	Recommended Action
Cable car cabin	Failure of the cabin door to close properly	High	Medium	Low	12	Implement a safety interlock system to prevent the cabin from moving if the door is not fully closed.
	Failure of the cabin door to open properly	Medium	Low	Medium	6	Implement a manual override system for emergency situations.
	Failure of the cabin door to lock properly	High	Medium	Low	12	Implement a safety interlock system to prevent the cabin from moving if the door is not fully locked.
	Failure of the cabin door to unlock properly	Medium	Low	Medium	6	Implement a manual override system for emergency situations.
Cable car system	Failure of the cable car to stop at the designated station	High	Medium	Low	12	Implement a safety interlock system to prevent the cable car from moving if it is not at the designated station.
	Failure of the cable car to start at the designated station	Medium	Low	Medium	6	Implement a manual override system for emergency situations.
	Failure of the cable car to move at the designated speed	Medium	Medium	Low	12	Implement a speed control system to ensure the cable car moves at the designated speed.
	Failure of the cable car to move in the designated direction	High	Medium	Low	12	Implement a safety interlock system to prevent the cable car from moving in the wrong direction.

“ZERO DEFECTS, ZERO FAILURES”

Preventive analysis on our products

Lift-Tek Elecar has always aimed to grow and improve its products in a vision of development and co-design.

By listing and examining all the possible failure modes, the possible causes, the effects, occurrences and acting controls which allow to detect or prevent failure, a wide variety of possibilities opens up, which allows to reach a level of **stability of the project which is indispensable for products destined to be distributed worldwide on a large scale.**



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This methodology allows to focus on all the system's input parameters, the desired output parameters, the control signals and factors and the noise factors.



Preventive analysis on our products

Frequency, occurrence and incidence of the various failure modes are analyzed for each and every component and function of the system.



By assigning them a score and applying corrective measures, it is possible to proceed towards a constant output, unaffected by any possible noise factor.