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Integrated car fingerprint system

- Background:
    - High number of carjackings
    - Extra security layer
    - Prevent accessing vehicle by stealing or using counterfeit key
    - Make the car more attractive to customers
- Current Conditions:
    - Current systems are made by third-party companies, thus only supporting limit features
    - Only car prototypes exist with integrated fingerprint system
    - Most of these systems are not resistant to water, humidity, heat, etc
    - Can easily lose accuracy if it gets dirty or wet
    - Generic systems are easily breachable
- Target(s)/Goal(s):
    - Provide a secure and accurate fingerprint scanner system as a means to increase general car theft protection
    - Success will be measured on how well the system can prevent a thief from accessing and hotwiring a car.
- Analysis:
    - Root cause(s) of the Problem:
        i. Most cars only provide one security system, which is the worldwide used lock system. This system can be bypassed in various ways including but not limited to Cybersecurity attacks and Force of Entry attacks.
- Proposed Countermeasure(s):
    - Alternatives:
        i. Face Recognition?
        ii. Voice Recognition
        iii. Better or more efficient Recognition Algorithm
- Implementation Plan:
    - Brainstorm design ideas
    - Report estimate cost of materials and work
    - Design software for security system
    - Tests
- Follow Up:

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A3

Title

Name(s)   **Date**

Background:

Why you are talking about it.

What is the business reason for choosing this issue?

Current Conditions:

Where things stand today.
- What's the problem with that, with where we stand?
- What is the actual symptom that the business feels that requires action?

Show visually – pareto charts, graphs, drawings, maps, etc.

Target(s)/Goal(s)

The specific outcome required for the business.
- What is the specific change you want to accomplish now.?
- How will you measure success?

Analysis

The root cause(s) of the problem.
- Why are we experiencing the symptom?
- What constraints prevent us from the goal?
Choose the simplest problem-solving tool for this issue:
- 5 Whys
- Fishbone
- QC Tools
- LSS Tools

Proposed Countermeasure(s):

Your proposal to reach the future state, the target condition.
- What alternatives could be considered?
- How will you choose among the options? What decision criteria?

How your recommended countermeasures will impact the root cause to change the current situation and achieve the target.

Implementation Plan:

A chart or table that shows actions/outcomes, timeline and responsibilities.

May include details on the specific means of implementation.
- Who will do what, when and how?

Indicators of performance, of progress.
- How will we know if the actions have the impact needed?
- What are the critical few, visual, most natural measures?

Follow Up:

Remaining issues that can be anticipated.
- Any failure modes to watch out for? Any unintended consequences?

Ensure ongoing P-D-C-A.