BUSINESS PLAN

Next $500M Car Safety Business

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Inspired by the Ford's Shrinking Car?

Why stop there? Take it to the next level— innovate Next $500M car safety product, patent it, and turn it into a thriving business! Below, you'll find innovative improvements to make it even better. Plus, a full business plan to guide you on your exciting entrepreneurial journey.

Potential Patentable Improvements

Here are some exemplary product ideas for the Next $500M car safety business. This should help you to structure your thoughts.

1. Magnet-Repel Safety Frame

- Uses ultra-fast electromagnetic force to push away from surrounding metal structures milliseconds before impact, reducing collision energy transfer.

2. Roof-Mounted Drone Beacon

- Deploys a ruggedized autonomous drone on crash detection in remote areas (e.g., ravines, deserts, snowy highways), hovers, and signals GPS + SOS to first responders.

Now it's your turn.

Step 1 - Brainstorm to come up with unique improvements – add new features or modify features listed above.

Step 2 - Claim your free patent strategy call with Patent Yogi Team. Book via this link

https://calendly.com/patentyogi

Business Plan:

Executive Summary

CrashGuard Systems, Inc. is a next-gen automotive safety company on a mission to **save lives in the seconds when nothing else can**. As vehicles become smarter, we're designing systems that activate in the most **uncontrollable, edge-case scenarios**—where human error and unpredictable terrain leave no time to think.

Our first two hero innovations:

1. **Magnet-Repel Safety Frame** – Uses ultra-fast electromagnetic force to push away from surrounding metal structures milliseconds before impact, reducing collision energy transfer.
2. **Roof-Mounted Drone Beacon** – Deploys a ruggedized autonomous drone on crash detection in remote areas (e.g., ravines, deserts, snowy highways), hovers, and signals GPS + SOS to first responders.

We're targeting OEMs, safety system suppliers, insurance companies, and governments focused on connected and autonomous vehicles. These systems are not just futuristic—they are survivable.

Company Overview

- **Name**: CrashGuard Systems, Inc.
- **Founded**: 2025
- **Headquarters**: Detroit, Michigan
- **Entity Type**: Delaware C-Corporation
- **Mission**: To protect vehicle occupants when traditional safety systems can't
- **Vision**: Become the industry leader in next-gen passive and post-impact automotive safety systems

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Market Analysis

🎯 Target Segments:

- OEMs (Ford, GM, Rivian, Tesla, Hyundai)
- Tier 1 suppliers (Bosch, Continental, ZF)
- Autonomous vehicle manufacturers (Cruise, Waymo, Zoox)
- Insurance firms interested in safety-score tech
- Governments / DOT grants for next-gen vehicle safety

Market Size:

- **Global vehicle safety systems market**: $120B+ by 2030
- **Connected car safety and V2X**: $15.2B by 2027
- **Drone-based first response market**: Emerging but growing 18% CAGR
- Target U.S. vehicle installs: 1M in Year 5

Market Trends

- Growing concern for **off-road accidents and remote crashes**
- Emergence of **non-contact crash mitigation systems**
- Push for **AI + physical response combo safety tech**
- Use of **UAVs for emergency location tracking**
- Government mandates moving toward post-crash event tech (beyond airbags)

Product Description

1. Magnet-Repel Safety Frame

- **High-speed detection** using onboard radar/lidar fusion
- Electromagnets in car frame fire a **short-range, high-force magnetic pulse**
- Repels against metal barriers, poles, or other vehicle frames
- Reduces **point-of-contact pressure**, deflects energy sideways
- Fires within 20ms of predicted collision using AI decision tree
- Designed to reduce G-force transmission to cabin occupants

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2. Roof-Mounted Drone Beacon

- **Autonomous drone dock** embedded in roof (rugged and heat-protected)
- Upon high-severity crash or off-road event, launches automatically
- LED beacon + SOS audio + GPS transmission to cloud/emergency services
- Drone hovers over site for **60–90 minutes**, visible from air and ground
- Designed for ravines, winter whiteouts, or areas without signal
- Optional AI voice recorder for environmental situational logging

Marketing & Sales Strategy

🛠 Go-to-Market Plan:

- Pilot programs with 1–2 EV manufacturers (Rivian, Lucid, Ford Pro)
- Strategic partnership with Tier 1s for retrofitting tests
- Work with NHTSA and US DOT on federal crash research funding
- Media-ready crash test videos + drone deployment simulations
- Industry showcase: CES, AutoSens, SEMA, and NAIAS

🚘 Sales Channels:

- Direct B2B OEM and fleet licensing
- Defense + emergency vehicle integration
- Long-term: aftermarket installation kits (via certified installers)
- Government contracts and first responder grant programs

Management and Organization

- **CEO** – [Your Name], automotive safety veteran and ex-GM innovation lead
- **CTO** – Aerospace systems expert with drone deployment background
- **Head of Vehicle AI** – Former Tesla autopilot or Mobileye engineer
- **VP of Government Affairs** – Ex-DOT policy advisor
- **Advisory Board** – Trauma surgeon, NTSB crash analyst, auto VC investor

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Financial Plan

Year 1 Estimated Expenses:

Category	Cost (USD)
R&D + Prototyping	$600,000
Vehicle Testing + Safety Certs	$450,000
Team Salaries (5–7 key hires)	$850,000
IP, Legal, Compliance	$200,000
Marketing & OEM Outreach	$250,000
Infrastructure & Office/Tools	$150,000
Total	**$2.5M**

Funding Requirements

- **Seed Round Ask**: **$3 million**
- **Use of Funds**:
  - Final prototype for both systems
  - File international patent families
  - Secure test fleets for crash simulation
  - Hire embedded software + drone control team
  - Build pilot with 1 OEM and 1 city fleet

Revenue Streams

1. **OEM Licensing Agreements** (per vehicle fees)
2. **Fleet Upgrades + Retrofits**
3. **Drone System SaaS Monitoring Platform**
4. **Insurance Data Licensing** (injury/response metrics)
5. **Government or military integrations**

Revenue Projections

Year	Units Installed	Avg Revenue/Unit	Total Revenue
Y1	2,000 (pilot only)	$500	$1.0M
Y2	20,000	$750	$15.0M
Y3	75,000	$850	$63.75M
Y4	200,000	$900	$180.0M

Intellectual Property

- **Utility Patents Filed**:
  - Electromagnetic repulsion crash mitigation system
  - Autonomous drone beacon with crash trigger logic
- **Design Patents**:
  - Roof drone pod with aerodynamic shell
  - Vehicle frame-integrated coil mount system
- **Trademarks**:
  - Magnet-Repel, DroneBeacon, CrashGuard

Milestones (Year 1)

Month	Milestone
M1	Finalize prototype concepts and file provisional patents
M2	Begin in-lab testing of electromagnetic pulse system
M3	Drone pod integration & software MVP
M5	Initiate low-speed crash field trials
M6	Present live crash + drone demo at CES
M8	Secure 1 OEM pilot + 1 government fleet partner
M10	Finalize V1 safety certification docs
M12	Raise Series A ($8–10M target) and scale production plans