



BUSINESS PLAN

**Next \$100 Million Car Safety
Feature**

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Inspired by the Google's Sticky Car?

Why stop there? Take it to the next level—innovate next \$100M car safety feature, patent it, own 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 \$100M care safety feature. This should help you to structure your thoughts.

1. Pre-Crash Foam Cannon

A vehicle-integrated system that detects imminent impact and fires expanding foam to cushion surrounding objects, reducing injury and vehicle damage.

2. 360° Air Wall

A revolutionary external airbag system that deploys around the vehicle during collisions to absorb impact from all directions — acting like a protective bubble.

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>

Executive Summary

ImpactShield Technologies Inc. is a U.S.-based automotive safety innovation company introducing the **next generation of crash mitigation systems**. Our flagship offerings are:

1. **Pre-Crash Foam Cannon:** A vehicle-integrated system that detects imminent impact and **fires expanding foam** to cushion surrounding objects, reducing injury and vehicle damage.
2. **360° Air Wall:** A revolutionary **external airbag** system that deploys around the vehicle during collisions to **absorb impact from all directions** — acting like a protective bubble.

With fatalities and high-severity injuries still rising despite ADAS, **ImpactShield's goal is simple: Mitigate what tech can't avoid.** When braking and steering fail, **impact protection must succeed.**

Company Overview

- **Business Name:** ImpactShield Technologies Inc.
- **Founded:** 2025
- **Headquarters:** Detroit, Michigan
- **Structure:** Delaware C-Corp
- **Mission:** To prevent injury and damage in unavoidable collisions through rapid-deploy protection systems
- **Vision:** Become the **industry standard for exterior crash mitigation** in autonomous and semi-autonomous vehicles

Market Analysis

🎯 Target Market:

- Automotive OEMs (especially electric and luxury brands)
- Tier 1 automotive suppliers (Bosch, ZF, Continental)
- Self-driving vehicle manufacturers (Waymo, Tesla, Cruise)
- Government safety research agencies (NHTSA, DOT)
- Fleets (delivery, ride-hailing, emergency services)

📊 Market Size:

- Global automotive safety systems market: **\$124B by 2030**
- External airbag technologies projected CAGR: **12.6%+**
- AV (autonomous vehicle) protection system integration: **early-stage and unsaturated**
- Key early adoption opportunity in **Level 4–5 autonomy and fleet vehicles**

Market Trends

- ↻ Increasing shift from crash **avoidance** to **crash energy absorption**
 - 🚗 Autonomous vehicle market needs **last-layer safety systems**
 - ☐ Rise of **AI-powered pre-impact sensors** improves deploy accuracy
 - 🏛️ Growing government incentives for active and passive safety upgrades
 - 📺 Traditional airbag tech peaking; **external crash tech emerging**
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Product Description

1. Pre-Crash Foam Cannon™

- Uses **ultra-fast expanding polyurethane foam**
- Integrated with radar, lidar, or camera systems (ADAS inputs)
- Targets frontal or lateral impact zones
- Fills 2–3 feet of buffer space around vehicle in under 100 ms
- Biodegradable foam formulation dissolves within 30 minutes post-use
- Foam cartridge reloadable (similar to fire extinguishers)

2. 360° Air Wall™

- Inflatable barrier made of **multi-layer polymer + Kevlar**
 - Deploys around all four sides of the car like a curtain
 - Reduces cabin crush, side-impact injury, and rollover damage
 - Also protects adjacent vehicles, cyclists, and pedestrians
 - Fully re-inflatable demo units for fleet/off-road vehicles
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Marketing & Sales Strategy

☐ Entry Strategy:

- Pilot program with 1–2 mid-size automakers (e.g., Rivian, Lucid)
- Co-development agreement with Tier 1 supplier for integration
- Safety innovation demos at CES, NAIAS, and SEMA
- Government-sponsored AV safety trials (in partnership with DOT or DARPA)
- Partner with insurance companies for data validation

Sales Channels:

- Direct licensing to OEMs
- B2B sales to Tier 1 automotive component suppliers
- Custom installations for AV fleets and high-end vehicles
- Future: Aftermarket retrofitting for premium consumer vehicles

Management and Organization

- **CEO** – [Your Name], former autonomous vehicle product manager
- **CTO** – Expert in collision dynamics and foam materials engineering
- **Head of Safety Integration** – 10+ years at a Tier 1 automotive supplier
- **VP of OEM Partnerships** – Former account lead at Continental or Aptiv
- **Advisory Board** –
 - NHTSA crash test expert
 - University professor in materials science
 - Defense contractor with airbag deployment background

Intellectual Property

- **Utility Patent Filed:**
 - Pre-collision foam deployment system with rapid dispersal nozzle tech
 - Multi-directional external airbag with anti-rollover and crowd protection
- **Materials IP:** Proprietary foam formula designed for safety, dissipation, and clean biodegradability
- **Design Patent:** Exterior deployment system aesthetics and panel integration
- **Trademarks:**
 - ImpactShield, Foam Cannon, Air Wall

Financial Plan (Year 1)

Category	Estimated Cost
R&D and Prototyping	\$750,000
Crash Simulation & Testing	\$400,000
Legal/IP and Safety Compliance	\$250,000
Engineering Salaries (5 core team)	\$750,000
Marketing and Pilot Deployment	\$350,000
Facilities & Equipment	\$200,000
Total	\$2.7M

□ Milestones (Year 1)

Month	Milestone
M1–2	Finalize foam and airbag deployment tech specs
M3	File provisional patents & begin safety testing
M4	Secure first OEM partnership / pilot
M5–6	Develop and test full-scale demo vehicles
M7	Present at CES / NAIAS with crash footage
M8	Finalize compliance paperwork + UL/DOT approval
M9	Begin Tier 1 partnership discussions
M12	Complete \$3.5M raise and close 2 pilot contracts

Revenue Streams

1. **Licensing to OEMs & Tier 1 Suppliers**
 2. **Unit Sales for Fleet Installations**
 3. **Government & Defense Vehicle Partnerships**
 4. **Aftermarket Premium Kit Sales (via installers)**
 5. **Data Licensing from Impact Performance Analytics**
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Revenue Estimates

□ Year 2:

- Foam Cannon (OEM): $10,000 \times \$180 = \mathbf{\$1.8M}$
- Air Wall (OEM): $10,000 \times \$350 = \mathbf{\$3.5M}$
- Foam Cannon (Fleet): $2,000 \times \$250 = \mathbf{\$500K}$
- Air Wall (Fleet): $2,000 \times \$500 = \mathbf{\$1M}$

→ **Total Year 2 Revenue: \$6.8M**

□ Year 3:

- Foam Cannon (OEM): $40,000 \times \$180 = \mathbf{\$7.2M}$
- Air Wall (OEM): $40,000 \times \$350 = \mathbf{\$14M}$
- Foam Cannon (Fleet): $10,000 \times \$250 = \mathbf{\$2.5M}$
- Air Wall (Fleet): $10,000 \times \$500 = \mathbf{\$5M}$

→ **Total Year 3 Revenue: \$28.7M**

□ **Year 4:**

- Foam Cannon (OEM): $100,000 \times \$180 = \18M
- Air Wall (OEM): $100,000 \times \$350 = \35M
- Foam Cannon (Fleet): $25,000 \times \$250 = \6.25M
- Air Wall (Fleet): $25,000 \times \$500 = \12.5M

→ **Total Year 4 Revenue: \$71.75M**

Interested in taking your idea further?

[Book a free consultation with our experts](#)