

Motorized Pediatric Stander

MS Management Capstone Project

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Problem

Evaluate the viability and market opportunity of the product, designed by engineering and ID students at RIT, by developing a detailed business plan and a commercialization strategy.

Project Milestones



Market Analysis

Product Analysis

Manufacturing & Supply Chain

Sales & Go to Market Strategy

Financial Model

Company Management

Client

CP Rochester RIT Engineering Department
Linda Brown Dr. Day

Value Proposition

The MPS kit is a therapeutic device for professional and home use that provides mobility to non-ambulatory children, makes their lives much easier and gives them a degree of independence and interaction in their surrounding environments at an accessible cost. The MPS kit is adaptable with different standing frames, and it has adjustable touch pads and joysticks, and a remote control that increases children's safety.

FDA Regulations

Methodology

Find equivalences in FDA medical devices descriptions

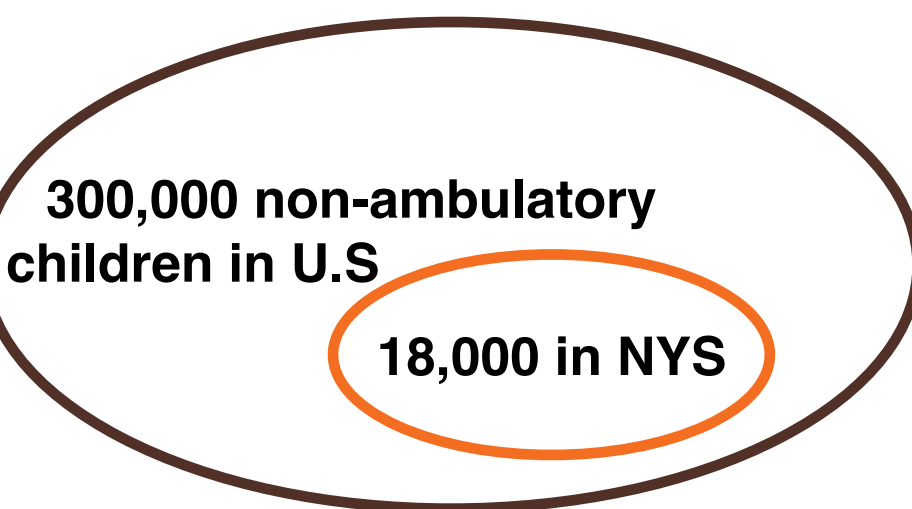
Motorized three-wheeled vehicles (21 CFR 890.3800)

Standup wheelchairs (21 CFR 890.3900)

Class II General Controls and Special Controls, without exemptions

Recommendation

Submission of a Premarket Notification 510(k)



Risk Management

Liabilities	Risks	Actions to implement
Design defects	Defective components and malfunctions	- Invest in product modification and safe components - Test the product periodically
	Kit not adaptable	- Test the kit with 4-6 top stander sellers
Manufacturing defects	Improper assembly by user	- Proper warnings about inspecting the device periodically- transfer all responsibilities to the user
Marketing defects	Improper labeling, instructions and safety warnings	- Careful documentation and instructions - FDA approval

Financials

(Work-in-process)

Income Statement 2017-2019			
	2017	2018	2019
Volume	5400	9000	12600
Total Sales	\$2,700,000	\$4,500,000	\$6,300,000
Total Costs	\$1,350,000	\$22,500,000	\$3,150,000
Gross Profits	\$1,350,000	\$22,500,000	\$3,150,000
Operating Expenses	\$199,728	\$382,500	\$441,000
Net Income	\$1,150,272	\$1,867,500	\$2,709,000

Competitors Analysis

Factor	MPS Kit	Competitors	
Average Price	\$500	\$1881	\$11,998
Mobility	Powered	Manual	Powered
Features	Joystick Touch pads Remote control Adaptability Easy assemble Rechargeable battery	Body support Removal wheels Adjustable center bar and seat pad	Joystick Power lift Remote control
Distribution	TBD	Online & Medical device stores	Online

Next Steps

- Product implications analysis
- IP Strategy
- Meet manufacturers in the Rochester area
- Pricing Strategy
- Sales and Distribution channels
- Communication Strategy
- Refine Income Statement

