
Project Presentation

Final

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Value Proposition

Current State: The Craftsman Weedwacker reduces the time and effort needed for yard maintenance. It has the ability to cut through weeds and grass while maintaining a simple user interface. It is an affordable, lightweight product that gets the job done. It offers the same basic functionality as its competitors at a fraction of the cost. Why buy more than you need?



Future State: The Craftsman Weedwacker will adapt to users of varied height, body size, strength, and landscaping experience. It will continue to cut through weeds and grass with its upgraded user interface. The improvements will result in a product with increased ergonomic worth, while remaining in the market's lower cost bracket. The user compatibility and the modular aspect of our product will set us further ahead of the competition.

Key Stakeholder Benefits

Suppliers

- Simple Material with High Profit Margin [\$]

Retail Stores

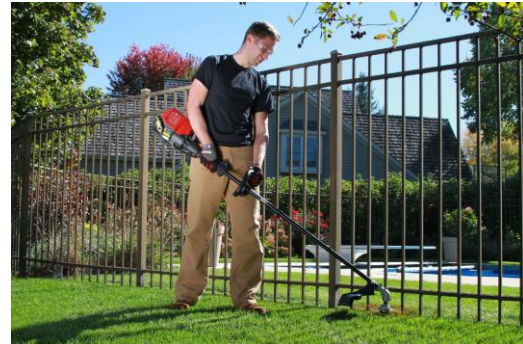
- Easy to Sell [\$]
- Increased Customer Satisfaction ["Stars"]

Manufacturer

- Maintained Low-Cost Bracket [\$]

End Users

- A Safe Product
- Ergonomic
- Easy-to-Use



Competitive System Solutions

Solution	Strengths	Weaknesses
Electric Power	Eco-Friendly	Less Powerful, Requires Cord or Battery
Lightweight	Easy to Maneuver	Less Stability & Durability
Anti-vibration	More Stability & Decreased MSD	\$\$
Attachment Capable	More Functionality	↑ Manufacturer & Consumer Cost
Telescoping Shaft	Satisfies Users of Various Stature	Increased Weight & \$\$
Push Button Start	Easy to Start	Additional power source, Weight, & \$\$
Adjustable Handle	Accommodates More Users	\$\$

Differentiation of Our System

“Make the Weed Wacking Experience Comfortable”

- Gas-Powered with Telescopic Shaft
 - Only Electric Weed Wackers have Telescopic Shafts
 - Accomodate Wide Range of User Dimensions
- Handle Adjustability vs. Non-Adjustability
 - Accomodate Wide Range of User Dimensions
- Shaft Ruler System for Stature
 - Increases User-Product Interaction
 - Putting Information into the World



System Success Requirements

A Safe Product - Harmless Under Standard Operating Conditions

- Grass Guard Coverage [$\geq 25\%$]

Ergonomic - Minimal Physical Strain on the Body

- Total Weight [< 10 lbs]
- Length of Shaft [40 - 65 in]
- Cutting Swath Diameter [18 in]
- Vibration Levels at Handles [4 m/s^2]
- Noise Emissions [100 dB]

Easy to Use - Straightforward User Interface

- Time to Change String [< 1 min]
- Time to Adjust Handle [10 s]
- Time to Adjust Shaft Length [10 s]
- Time to Start [< 1 min]
- Time to Fill Up [< 30 sec]



Current Solutions

Perspective	Strengths	Weaknesses
Value Delivery	Gets the Job Done at a Cheap Cost	Does Not Accommodate All Users
Cost	Low-Cost Market Bracket	Limited Job Capability and Shorter Life-Span
Reliability	Has a 10 year warranty on drive shaft	Has an average life-span of ~ 6 yrs
Serviceability	Can take to local repairman or Sears Service Center	Requires some mechanical background to repair
Environmental Impact	Relatively Low Toxic Emissions	Toxic Emissions & String Litter

Key Opportunities

Affinity Diagram

- Collapsible Weed Wacker

Hierarchical Needs

- Long-lasting String
- Large Gas Tank

Product Breakdown

- Adjustable Handle
- Easy to Load Cutting Head

Benchmarking Competitive Solutions

- Push Button Start
- Anti-Vibration
- Attachment Capable
- Adjustable Cutting Head

DFMA

- Reduced Part Count

QFD

- Telescopic Shaft
- Lightweight
- Noise Emissions
- Grass Guard Coverage

FMEA

- Decrease RPN of Potential Causes of Failure for Air Intake Subsystem



**“TO SUCCEED, JUMP AS QUICKLY AT
OPPORTUNITIES AS YOU DO AT CONCLUSIONS.”**

BENJAMIN FRANKLIN

Key Focus

Telescopic Shaft

- ✓ Accommodates Wider Range of Users
- ✓ Will Maintain Low-Cost Bracket
- ✓ Increased User Safety
- ✓ Increased Customer Desire



Questions

