EXECUTIVE SUMMARY

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Product Description

Change a Child's Life, One Shoe at a Time….

Social Media and Social Awareness…
Through the pattern selection made in-store or online, you will be able to connect to the local villages your shoe supports. You can learn about the culture of the region, the cultural significance of the pattern you purchased, and see the children of that region grow in their new shoes made possible by your purchase.

What does your slipper actually buy?

1. **A shoe that will last a child 3 or more sizes.** *Many children in developing countries cannot afford new shoes, or any in many cases.*

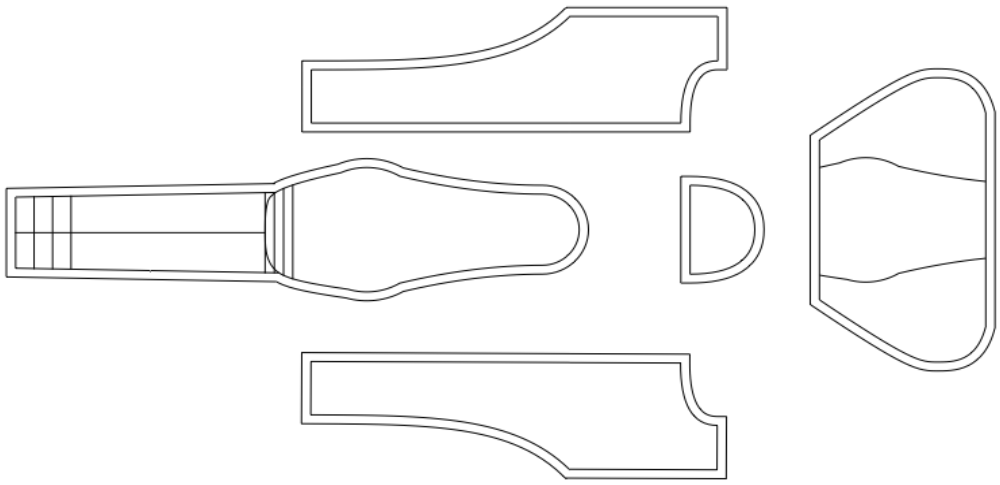
2. **Growing partnership with the Barefoot Foundation.** *The Barefoot Foundation works towards ensuring children receive the right to education, and receives generous donations of shoes from celebrities like Shakira.*

3. **A comfortable slipper.** *Everyone likes to be comfy in the comfort of their dorm. This slipper offers comfort and support, one size fits all!*

Prototype drawings and models

Original Concept Prototype

Refined Design



Shoe Pattern Design

Final Shoe Prototypes

Size Adjustable Children's Shoes Patentability Assessment

Background on Invention
This invention is a shoe that fits a range of sizes applying both width and length adjustment. The flexible rubber sole with grooves removed to increase flexibility rolls forward to shorten the shoe while laces, bungee, elastic and/or Velcro secure the width. The Velcro and fasteners secure the shoe at the suitable size for the user but still allow adjustment when it is necessary.

This design is distinct from prior patents and would be a good candidate for a patent because of the value in providing a range of sizes for growing children and better access to sizing options for users in remote locations.

Claim 1: Size adjustable shoe comprising of a recycled rubber sole, an attached fabric tongue, and side fabric pieces with a fastening element including but not limited to a lace, a bungee, a fastener, a Velcro strip and/or an elastic. Said sole has wedges removed at the toe to increase flexibility. Said fabric tongue pulls towards the ankle to control the length of said sole. Said side fabric controls width adjustment and is secured with one or a combination of the said fastening elements.

Claim 2: The shoe of Claim 1 further comprise of a Velcro strap. Said fabric tongue for length adjustment is secured by said Velcro at a user-determined length within the size range of the shoe.

Claim 3: The shoe also comprises of a thick foam insole to provide support to the user's foot, shaped by the pressure of the user's foot regardless of the determined shoe length.

Related Patents: This patent application is distinct from previous adjustable shoe patents. US Patent #4,969,277 is only adjustable on the top fabric in the toe, heel, and midfoot but offers no change in sole length. US Patent #5,659,980 adjusts at the heel rather than at the toe. It has only set sizes limited by snap location, contrasting to our patent application which offers a continuous rather than discrete range of length choices through the Velcro fastener. US Patent #5,682,687 adjusts by a sliding mechanism in the heel that is locked in place by a screw. None of these patents apply the tongue and toe adjustment to address the size adjustment.

Argument for Pursuing Patent: To our knowledge this is the first shoe size adjustment of this kind. It is an important and useful product that includes several advantages over previous patents. This simple system for size adjustment would make this product accessible to regions that have limited access to similar products and need long lasting shoes. The shoes will meet the needs of growing children allowing a single pair to fit properly for a longer period of time. Both length and width adjustment can tailor fit to any sizing need. The continuous rather than discrete sizing adjustments can meet the exact fit without being limited to predefined numerical sizes.

Design for the Environment

Material:
A large part of the sustainability of our product comes from the materials we have chosen to use. By picking durable and sustainable fabrics, such as hemp fabric, we can extend the overall life of the shoe. The durability that would be gained and the ability of the shoe to be customized to any foot size reduces the overall waste. Also, by reusing and recycling materials such as the rubber for the shoes soles less petroleum based materials are being produced and put back into the environment.

Production:
There are certain measures that can be taken through production to limit the environmental impact of our produce. For instance, creating low waste patterns for the fabric used on the shoes limits the amount of cutoff and scrap material. Another possible measure that could be taken would be to use different materials for the different markets. This would allow us to locally source materials, reducing shipping which is one of the worst strains on the environment.

Distribution:
A large portion of the impact that a product has on the environment has to do with the environmental costs associated with shipping. To reduce this we can locally source and assemble as large of a portion of shoes as possible. Another way to reduce shipping is to use the shipping space as efficiently as possible. Utilizing bags for the shoes rather than boxes would allow for more compact shipping of the product.

Use:
The design of the product itself inherently makes it more sustainable. By encompassing multiple sizes, the shoe is able to replace three or more shoes of differing sizes, reducing waste overall. Children outgrow shoes so quickly that the pairs being disposed of may not even have been used to the extent of its life. If a child outgrows the "We Grow" shoes and they are not yet worn out, it is even possible to pass them on to a younger sibling. The shoes then have to potential to replace up to 8 pairs of traditional shoes.

Recovery:
In the College Markets, it would be possible to put in place an end of life recovery policy. The original packaging could come with a preaddressed bag in which to return the shoes. The materials on these shoes could then be recycled or reused in new products.

Product Cost Summary

The retail price for the US market was set at $60. This price fits well with the typical costs found for shoes and allows for the developing world costs to be completely covered while maintaining profitability for the WeGrow company. The costing analysis is based on a production cost of $11.86 for each pair of shoes.

Taking into account a profit of 20% for the retailer, 33% for the developing world distributor and the production costs of the subsidized developing world shoe, the remaining profit to the company is $8.44 for each pair purchase and subsequent donation.

To make all of this possible, WeGrow needs an initial investment of $300,000. By the end of year four (including R&D and ramp up time), the project net present value will be nearly $4 million based on an estimated 60,000 units sold per year.

Target Costing

Retail Price	$60
Desired Gross Profit (m)	30%
Desired Profit Distributor to Developing World	33%
Desired Gross Profit to Retailer	20%
Target Cost for Both Shoes $C=P(1-M_m)(1-M_d)(1-M_r)$	**$23**

Cost Estimator

Catalog Components (used exactly as purchased)			Retail Price $/unit	Unit	Component Cost	
Velcro			0.050	2	0.033	
Grommets			0.099	12	0.390	
Fasteners			0.250	2	0.165	
Total catalog component costs						0.588
Custom Components	Material	Mass (kg)	Material Cost ($/kg)		Raw Material Cost	
Foam	Foam	0.0688	3.00	2	0.413	
Fabric	Canvas	0.0336	8.00	2	0.537	
Rubber	Rubber	0.1890	10.00	2	3.780	
Thread	Nylon	0.0018	4.50	2	0.017	
Bungee Cord	Strapping/Rope	0.0030	8.00	2	0.048	
Total raw material costs for custom components						4.794
Processing costs for custom components (e.g., injection molding)						5.753
Num of units (in box or package) that will fit in a shipping container (8 ft x 8 ft x 40 ft)					23347	
freight cost						0.343
Total number of parts		26				
number of unique custom components		5				
number of unique catalog components		3				
Labor costs (driven by number of parts)						0.130
Overhead Costs						
Custom parts						0.250
Catalog parts						0.030

TOTAL COST	**11.86**
RETAIL PRICE	**60.00**
UNIT REVENUE	**32.16**
UNIT PROFIT	**20.30**
PROFIT AFTER SUBSIDIZING	**8.44**

Cost Drivers (DON'T CHANGE THESE)		
Ratio of cost to single-unit retail price	0.33	
Ratio of processing cost to raw material cost for custor	1.20	
Labor cost per part	0.005	$/part
Overhead costs - custom parts	0.05	$/custom part #
Overhead costs - catalog parts	0.01	$/catalog part #
Cost of shipping container	8000	$/container

Base Case Costing

Product Financial Summary		
Development cost	$200,000	
Ramp-up cost	$60,000	
Marketing and support cost	$200,000	**/year**
Unit production cost	$11.86	**/unit**
Sales and production volume	60,000	**units/year**
Unit price	$60	**/unit**

Annual Breakdown:

	Year 1			
	Q1	**Q2**	**Q3**	**Q4**
Development Cost	($50,000)	($50,000)	($50,000)	($50,000)
Ramp-Up Cost				($30,000)
Marketing & Support Cost				
Production Cost				
Production Volume				
Unit Production Cost				
Sales Revenue				
Sales Volume				
Unit Price				
Period Cash Flow	($50,000)	($50,000)	($50,000)	($80,000)
PV Year 1, r = 10%	($50,000)	($48,780)	($47,591)	($74,288)

	Year 2			
	Q1	**Q2**	**Q3**	**Q4**
Development Cost				
Ramp-Up Cost	($30,000)			
Marketing & Support Cost	($50,000)	($50,000)	($50,000)	($50,000)
Production Cost		($355,800)	($355,800)	($355,800)
Production Volume		15,000	15,000	15,000
Unit Production Cost		($23.72)	($23.72)	($23.72)
Sales Revenue		$900,000	$900,000	$900,000
Sales Volume		15,000	15,000	15,000
Unit Price		$60	$60	$60
Period Cash Flow	($80,000)	$494,200	$494,200	$494,200
PV Year 1, r = 10%	($72,476)	$436,801	$426,147	$415,753

	Year 3			
	Q1	**Q2**	**Q3**	**Q4**
Development Cost				
Ramp-Up Cost				
Marketing & Support Cost	($50,000)	($50,000)	($50,000)	($50,000)
Production Cost	($355,800)	($355,800)	($355,800)	($355,800)
Production Volume	15,000	15,000	15,000	15,000
Unit Production Cost	($23.72)	($23.72)	($23.72)	($23.72)
Sales Revenue	$900,000	$900,000	$900,000	$900,000
Sales Volume	15,000	15,000	15,000	15,000
Unit Price	$60	$60	$60	$60
Period Cash Flow	$494,200	$494,200	$494,200	$494,200
PV Year 1, r = 10%	$405,613	$395,720	$386,068	$376,652

	Year 4			
	Q1	**Q2**	**Q3**	**Q4**
Development Cost				
Ramp-Up Cost				
Marketing & Support Cost	($50,000)	($50,000)	($50,000)	($50,000)
Production Cost	($355,800)	($355,800)	($355,800)	($355,800)
Production Volume	15,000	15,000	15,000	15,000
Unit Production Cost	($23.72)	($23.72)	($23.72)	($23.72)
Sales Revenue	$900,000	$900,000	$900,000	$900,000
Sales Volume	15,000	15,000	15,000	15,000
Unit Price	$60	$60	$60	$60
Period Cash Flow	$494,200	$494,200	$494,200	$494,200
PV Year 1, r = 10%	$367,465	$358,503	$349,759	$341,228

Bottom Line:

Project NPV	**$3,966,574**