Section 5 Team 11 Fall 2023

**Business Plan** 

Business Name: CarryAll Keychain

Business Idea: A compact travel organization tool that combines necessary shower products and personal essentials for effortless packing, as well as providing accessibility in cramped bathrooms with an added suction cup. The ring opens and closes, allowing for personalization, and everything is sized properly for approval by the Transportation Security Administration.

Team Members:

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# **Executive Summary**

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#### Management:

Titles: President, Bookkeeper, IT Engineer, Marketing Manager, Production Manager **Industry**: Organizational Tools

#### Number of Employees: 9

Amount of Financing Sought: \$1,650,000 Investment Sources: Equity: \$700,000 (42.4%), Debt: \$250,000 (15.2%), Angel investors \$700,000(42.4%).

**Use of Funds**: Funds will be used for machines, warehouse space, raw materials, outsourced components, marketing, and distribution.

**Product selling price**: \$33.99 in Year One, increases in Year 3 to \$34.99, final increase to \$36.99 in Year 5. Wholesale price is \$23.99 starting in Year 4.

**Markets**: We are prioritizing adults who have a higher income level with an inclination towards travel. The growth for this market is 12% and the number of households for this segment is

2,396,113. Combining survey results that indicate purchase frequency and market share, our revenue for Year One is \$980,177.

**Business Description**: CarryAll Keychain offers a durable, eco-friendly travel product operating out of Frisco, Texas. We aim to relieve the stress of traveling and maximize convenience for our users.

**Competitive Advantage**: Our product is distinct from what's currently being offered due to the combination of necessities presented in a unique way. The GPS ring is different from any other makeup bag or organizational tool being offered to consumers. Bags require additional purchases of beauty and health products to place into the bags while our tools come with essentials and allow for consumers to add what they already own. **Product**: The CarryAll Keychain combines multiple products into one cohesive tool for consumers to utilize while traveling. The ring is manufactured inhouse using machines and is integrated with the outsourced items (bottles, GPS, jewelry holder, pill bottles, bag, suction cup, toothbrush) and others from the United States. This is made available for consumers to buy online or in store, after Year Three. Our predicted annual unit sales are 28,837 in Year One and grow to 225,029 in Year Five. The variable cost per unit is \$12.76 each year, and the price per unit increases from \$33.99 to \$36.99 over the five years.

**Distribution Channels**: Our distributions will occur through Amazon and our own website throughout all 5 years. We will start selling through retail channels in Year 4.

**Competition**: The competition this product faces is makeup bags and pouches. These products have been around for a very long time and have not seen any major updates, so our product will be a new, emerging solution. These bags are relatively low cost so we must emphasize the value of our product to justify the price point compared to other alternatives. The GPS component of our product creates a significant distinction between the CarryAll Keychain and its alternatives, as it allows the user to track their luggage and travel items with ease.

#### Financial Projections (Unaudited):

	2024	2025	2026	2027	2028
Revenue (\$)	980,177	2,743,173	4,261,392	7,088,794	9,943,392
EBIT (\$)	(692,336)	171,963	879,611	2,670,253	4,241,041

#### Narrative

**Elevator Pitch:** When it comes to traveling, everyone has the thought: *I definitely forgot something:* But with CarryAll Keychain combining all your necessary products into just one accessory, leaving behind essentials is no longer a problem. Not only are all components waterproof and come with strong suction cup technology that allows users to stick this product on showers, mirrors, and bathrooms but we've gone one step further, adding a specially integrated GPS chip for consumers to track their luggage, medication, and jewelry, putting an end to consumers' travel anxiety. The Carryall Keychain is the eco-friendly all in-one-solution to simplifying your travel forgetfulness.

**Product Description:** CarryAll Keychain features a polycarbonate, circular ring embedded with a tracking device. Attached to the ring are three silicone 3.3-ounce liquid bottles, a compact toothbrush, plastic jewelry container, plastic medication organizer, suction cup, and clear, quart sized bag. Each item is compliant with TSA regulations (Transportation Security Administration, 2006). The suction cup and overall waterproof qualities allow the consumer to avoid inconvenient hotel showers with minimal shelf space and fasten the Keychain to the wall.

**Competitive Advantage:** Consumers in this market rarely have loyalty to their chosen brand and use a variety of companies' goods, opening the door for consumers to switch to us. Unlike other products available, the CarryAll Keychain is comprised of unique features to the travel organization market, including the suction cup, GPS tracking capabilities, and its convenience of use. The attached suction cup provides the consumer with previously unattainable space to store their toiletries as it is able to stick to any flat surface and hold the weight of the keychain. Our product is hard to imitate because it requires a large number of different parts and the implementation of GPS and tracking software.

**Value Proposition:** This is a quality investment because our unique product is changing the game of travel organization, and our profits reflect that. Although we outsource multiple products and risk supply chain issues, our production processes and machines have more than enough leeway to combat any backups, and we account for manufacturing errors and extra demand. Our liquidity issues better with time, and we see positive net income following Year Two.

**Business Strategy:** We're using differentiation as our business strategy; our product is dissimilar to what's currently on the market, and we embrace that. **Business Location:** We are locating our business in Frisco, Texas. This is a prime location for the CarryAll Keychain due to its proximity to the supplier of polycarbonate beads for our main production output. The supplier is located in Austin, Texas, reducing transportation and tariff costs. Frisco provides affordable rent on our production facility, utilities, and generally a low cost of living. The rental rate for our warehouse is \$55,900 for 4,300 SF, and we are able to sign a 5-year term. There are two airports within 30 miles of our facility, which will be convenient once we put our products in retail stores, since we are targeting people who travel.

**Outsourced Functions:** We are outsourcing the Jewelry Holder, Pill Organizer, Clear Bag, Bottles, Suction Cup, GPS, Toothbrush, and polycarbonate beads to make the ring itself. Outsourcing these items will reduce processing time, production cost, salary expense of facility employees, and sunk costs of purchasing machinery. The time it takes to fully make and assemble 95 rings is 4.5 hours, and this time would increase if we had more parts produced in-house.

**Financial Performance:** After our first two years, we experience a positive net income of 401,298 dollars. From Year Three to Year Four, our net income grows by 3.7 times. Although our first two years are negative due to start-up costs combined with less demand for our product, this is an overall financially strong business opportunity.

## **Exhibit 1: Organizational Chart**



Year 3 – Acquire 1 more line technician Year 5 – Acquire 2 more line technicians

### Exhibit 2: Payroll, Deductions, Benefits, Knowledge, Skills, and Motivation

Compensat	e: Carry tion	уАП Кеус	nain	5	andator	y Payro	oll Ded	uction	S	Bene	n 11 efits					
Position (Salary/Wage - W) (Full-time Assumed, Part- time - PT %)	Salary or Wage for position)	Bonus or Commission	# for position	Projected End of Year 2 Salary or Wage including bonus/comm. Each	Projected End of Year 2 Salary or Wage including bonus/com m. all positions	FICA	FUTA*	SUTA	wc	Mandatory Deduction s - Total	Benefit s - Health Cost	Benefits - Retirement Cost	Any other Benefit Cost	Benefits - Total	Total Cost per Employee	Total Cost for All Employees
President	\$85,009	\$6,560	1	\$91,569	\$91,569	\$7,005	\$420	\$243	\$916	\$8,584	\$4,575	\$3,663	\$21	\$8,259	\$108,412	\$108,412
Marketing Manager	\$62,202	\$3,000	1	\$65,202	\$65,202	\$4,988	\$420	\$243	\$652	\$6,303	\$4,575	\$2,608	\$21	\$7,204	\$78,709	\$78,709
Production Manager	\$62,202	\$3,000	1	\$65,202	\$65,202	\$4,988	\$420	\$243	\$652	\$6,303	\$4,575	\$2,608	\$21	\$7,204	\$78,709	\$78,709
Bookkeeper	\$48,725	\$1,410	1	\$50,135	\$50,135	\$3,835	\$420	\$243	\$501	_\$5,000	\$4,575	\$2,005	\$21	<u>\$6,601</u>	\$61,736	\$61,736
Line Technician	\$46,652	\$1,350	3	\$48,002	\$144,005	\$11,016	\$420	\$243	\$1,440	\$39,358	\$4,575	\$1,920	\$21	\$19,548	\$106,908	\$320,724
Sales Representative	\$43,541	\$1,260	1	\$44,801	\$44,801	\$3,427	\$420	\$243	\$448	\$4,538	\$4,575	\$1,792	\$21	\$6,388	\$55,728	\$55,728
IT Engineer	\$48,725	\$1,410	1	\$50,135	\$50,135	\$3,835	\$420	\$243	\$501	\$5,000	\$4,575	\$2,005	\$21	\$6,601	\$61,736	\$61,736
Totals	\$397,056	\$17,990	9	\$415,046	\$511,049	\$39,095	\$2,940	\$1,701	\$5,110	\$75,086	\$32,02 8	\$16,602	\$144	\$61,806	\$551,938	\$765,753

#### **Benefits:**

• Holidays: All Federal Holidays (January 1, January 15, February 19, May 27, June 19, July 4, September 2, October 14, November 11, November 28, December 25) and November 29 and December 24

- 10 weeks of Maternity/Paternity Leave
- Life Insurance (\$2,216.16 additional cost)
- Bonuses: Yearly bonuses of 8% President Salary, 5% Manager Salary, 3% Line Technician, IT Engineer, Sales/Customer Service Representative, Bookkeeper Salaries

#### Knowledge, Skills, and Abilities

Position	Key Knowledge, Skills, and Abilities	Requirement Verifications
Line Technicians	The Line Technician position requires the individual to work with complicated machinery, multitask, and assemble Keychains by hand with strong hand eye coordination. Line Technicians must be able to lift 60 pounds, stand for long durations, and willing to assist with facility cleanliness. Strong critical thinking and interpersonal relations skills preferred.	Line Technicians candidates will participate in an initial screening interview, and upon a successful interview will be invited back for a final interview. Resumes, background checks, and provided references will be thoroughly vetted. Line Technicians will participate in mandatory drug tests and yearly performance reviews. Line Technicians are also required to complete yearly instructional and safety training.
IT Engineer	The IT Engineer must have experience with developing software, software maintenance, and coding expertise. Individuals with knowledge concentrated in GPS tracking and app development preferred.	IT Engineer candidates will participate in three interview processes before hiring. Resumes, background checks, and provided references will be thoroughly vetted. The IT Engineer will also go through mandatory drug tests, yearly performance reviews, and company educational orientation.

#### Motivation

Employees of CarryAll Keychain receive competitive base salaries, annual bonuses, and benefits including parental leave, time off, and excellent insurance coverage. At the end of each quarter, one employee from the company will be chosen due to quality work, exceptional efficiency, participative teamwork, or upholding company values. Said individual will be rewarded with one extra day of paid time off for their accomplishments and their name and job title on a plaque in the main office.

# Exhibit 3: Market Segmentation

Segment Name	Size (# of People or Households in Segment)	Growth Projection	Description	Priority level	Justification for Targeting
Fast Track Families	US Household: 2,396,113	Air travel demand was up 12% July '23 from July '22, (Travel Security Administration, 2023).	Older than 35, varying up to 54 years of age. Average median household income rounding to 121K, with high level income producing assets. Family mix varies from without kids to, with - most being homeowners. All employment levels are management and professional or above, with a college degree. Lifestyle pattern of traveling, and outdoor activities (ie; ski vacations, hunting) (U.S. Census Bureau, 2016).	1	This segment is families always on the go with a high-income level, which shows an inclination towards travel. The organization of our product would help parents relieve stress about travel and bathroom disorganization. This is the largest segment by number of households, showing a large possible population.
White Pickett Fences	US Households: 2,086,091	From World Bank, annual urban pop. growth rate 1.5524% in '22	A stereotypical American household of upper-middle couples, some with children - some without. An even mix of first-time parents, and first-time empty nesters. Mixed amounts of homeowner status, and on the lower end of incoming producing assets. An average income of 72K, all being college level graduates. Enjoy eating at Qdoba, and Zaxby's, going to Major League Soccer events, and shopping at stores like Academy Sports + Outdoors. Chrysler vehicle owners.	2	This is a large market of over 2 million people with an above average income. These individuals would easily be able to afford our product, and likely have disposable income to spend on traveling. Since some have children, the GPS feature would appeal to them as they can track their children when they travel for their safety.
Township Travelers	U S Households: 1,458,129	Air travel demand was up 12% July '23 from July '22 according to TSA	These individuals primarily live in towns, have an above average income of \$88,883, and have a family mix. They typically are homeowners, younger than 55, and are college educated. They enjoy activities like eating out at restaurants, shopping at sports stores, watching football, and resort vacations	3	These individuals have an above average income and would likely have the money to buy our products. They also plan large resort vacations and would benefit from buying our product to help with organization. This segment is also tech savvy, and thus would enjoy the tracking capabilities of our product to know where their luggage is at all times. Finally, this segment shops frequently at stores like Academy Sports + Outdoors. We plan to eventually expand the business into retail spaces like outdoor equipment stores, and so they would likely see our product there and buy it.

### **Exhibit 4: Market Quantification**

Year	Total Market Potential (No. of Customers) *	Market Share**	Annual purchase frequency ***	Annual Unit Sales	Wholesale Price†	Retail Price†	Annual \$ Revenue
2024	2,396,113	4.15%	0.29	28,837.22	N/A	\$33.99	\$980,177.11
2025	2,683,647	5.71%	0.29	80,705.30	N/A	\$33.99	\$2,743,173.25
2026	5,788,582	7.26%	0.29	121,788.86	N/A	\$34.99	\$4,261,392.37
2027	6,580,613	8.81%	0.29	168,032.66	\$23.99	\$34.99	\$7,088,793.84
2028	7,482,785	10.37%	0.29	225,029.80	\$23.99	\$36.99	\$9,943,391.60

\* Indicate source and/or assumptions used to identify the Total Market Potential We collected a combination of demographic, geographic, and consumer behavior data from Claritas' Proprietary technology segmentations, while incorporating our own knowledge, and/or assumptions of who best to aim our product toward, to receive the highest usage value. Our No. Of Customers is taken from the Fast Track Families segment.

**\*\* Indicate source and/or assumptions used to identify the market share** For the market share, we multiplied the number of people likely to try and switch to our product (from survey respondents) with the amount of people we expected to reach on social media advertisements. For awareness, we gathered our data from the survey results. We calculated Year One by using =66.7%\*100%\*26.7%\*23.3%, 66.7% coming from the people who responded they would shop through our channels, 100% coming from the reach we can accomplish, and the last two numbers indicated a strong switch or try from our survey results.

**\*\*\* Indicate source and/or assumptions used to identify the annual purchase frequency** We are using the results from the survey to assume that consumers will repurchase this product once every 3.5 years. We had a majority of respondents say once every 2 years, but also a high percentage say once every 5 years. Our product is made to be durable so that repurchases happen infrequently.

† Justify your price point and indicate your assumptions as to what % of your revenues come from wholesale and what % come from retail sales We believe that the durability, convenience, and sustainability of the CarryAll keychain, make it a high-quality product worth the initial \$30 price point. Additionally, a large number of those surveyed (37%) responded that they would pay between \$20-40.

#### **Breakeven Analysis**

Year	Average Price	Total Fixed Costs	Unit Variable Cost	BEP in Units
2024	\$33.99	\$826,604.14	\$11.96	\$37,516.64
2025	\$33.99	\$1,488,630.47	\$11.96	\$67,563.68
2026	\$34.99	\$2,166,445.23	\$11.96	\$94,058.32
2027	\$34.99	\$2,636,489.61	\$11.96	\$114,465.75
2028	\$36.99	\$3,202,308.02	\$11.96	\$127,923.46

Explain any assumptions used in your breakeven analysis: We used an inflation rate of 3.67 percent to adjust the calculations for salaries, rent, and utilities over the 5 years. We also added 1 line technician in Year 3 and 2 more in Year 5 and increased their salaries as well. Further, we used an overall rate of 30% of the corresponding year's revenue for each year's operational expenses, and a rate of 10% of the corresponding year's revenue for each year.

### Exhibit 5: Positioning/Competitive Analysis

**Positioning Statement:** The CarryAll keychain is the ideal travel companion. Designed for your ultimate convenience, this compact travel device provides organization for all your toiletry needs.

### **Perceptual Maps**



### Switch, Try, Channel, and Demographic Analysis

Count of Respondent # by Age



TrierL%, SwitchL% and Low%

TrierL%

SwitchL%

Low%

100%

23.3%

Count of Respondent # by Gender

Count of Respondent # by Sustainable

Count of Respondent # by Channel



### Exhibit 6: Marketing Mix

#### **Product/Service Branding**

We plan to create value through our brand by emphasizing the sustainability and quality of life improvements that the Carry-All Keychain provides. Our goal is to get above the competitors by using a polycarbonate material that is highly durable, and by providing a more efficient alternative to many standard traveling products.

#### Pricing

	2024	2025	2026	2027	2028
Unit Variable	\$11.96	\$11.96	\$11.96	\$11.96	\$11.96
Cost:					
Wholesale	N/A	N/A	N/A	\$23.99	\$23.99
Price:					
Retail Price:	\$33.99	\$33.99	\$34.99	\$34.99	\$36.99

After analyzing our survey results, we decided to set our price point for the first two years at \$33.99, which is supported by the percentage of people that stated they would buy our product between \$20-\$40. Due to our high fixed costs for the first couple of years, we had to make the price high enough to break even. After the second year we are predicted to be profitable, and we will continue to raise the price gradually until it reaches \$36.99.

#### **Distribution/Location Strategy**

Our distribution strategy is an indirect distribution approach. Years 1-5 we plan to use Amazon FBA; they will house our product in their inventory, and they will process, package, and distribute it to the customer. Years 4 and 5 we plan to begin wholesaling through Walmart and Target. In this case, they will also handle high customer contact. To get our product to the Amazon warehouse and to Walmart/ Target's distribution centers; we will partner with C.H. Robinson trucking company to distribute our product to said warehouses.

#### **Promotional Strategy**

	2024	2025	2026	2027	2028	
Total IMC	#27.2F7.74	¢20,782,20	#E7.042.62	#62.007.6E	¢71 019 70	
Pudgotu	\$27,237.74	\$29,782.29	\$57,043.62	\$03,997.05	\$/1,910.72	
Eacobook	¢10 202 20	¢11 520 69	¢24 800 00	¢28 206 64	¢22 175 09	
Compoign	\$10,303.29	\$11,339.00	\$24,890.90	\$20,290.04	\$32,173.90	
Instagram	¢10 725 50	¢12 022 74	¢25 022 85	¢20.491.15	422 522 99	
Campaign	\$10,735.59	\$12,022.74	\$23,932.03	\$29,481.15	\$33,322.00	
Coogle Display	¢1 003 55	¢1 003 55	¢1 003 55	¢1 003 55	¢1 003 55	
	\$1,995.55	\$1,993.33	\$1,995.55	\$1,995.55	\$1,993.33	
Wo will utilizo Eaco	book Instagram and G	oglo Display ads to cat	or to our primary target	market of East Track Ear	l milios Thoso	
individuals are prin	35-54 years of ag	which corresponds we	with the average age	of Instagram and Eacobo	ok usors The Google	
Display Ada will be	indifiy 33-34 years of age	e, which corresponds we	participates with the geo		ok users. The Google	
Display Aus will be		are on any website that	participates with the goo	gie display hetwork, hei	ing to reach more	
potential CarryAll	Keychain customers.	· .			1.	
No. of	1	1	1	1	1	
Salespeople:	+ 12, 222					
Compensation	\$42,000 salary, bonus	of 3% (\$1,260)				
Method:						
For the first three years, the CarryAll keychain will be sold exclusively on Amazon. Beginning in the fourth year, we project that about						
30% of our sales will come from retail. We have a customer service representative that will work with Amazon for the first three years						
and take on salesp	erson responsibilities be	ginning in the fourth ye	ar. This individual will wo	ork closely with retailers	Walmart and Target to	
determine distribution, product placement, shelf space, and other operational issues.						

### **Exhibit 7: Process Map**



### r quality stop

	ajor quality ste	P.			
Quality Step	What is measured?	How often?	How will you ensure quality?		
Q1	Weigh in of the ring, defects inspection post- cure time	Repeated every completed ejection cycle.	equilibrium, inspection will be looking for blistering bubbles, and cold slug imperfections, as it in cure phase. Weight will be taken once approved, prior GPS chip insertion.		
Q2	Number of defective items – incoming shipments	After completed daily quota of ring production, Q2 initiates, all individual rings and accessories	Upon every new shipment arrival accessories, thorough inspections quality are conducted for acceptat	of outsourced of expected product ble use.	
Q3	Product Aesthetics and Functionality checklist	After daily quota of assembled rings are reached	All finished rings in WIP queue, ar using a Standards of Approval che appropriate products are present, activation of functioning GPS chip intended.	e visually inspected, cklist, ensuring all as well as is functioning as	
For each critica	I resource:				
Critical Resource	Brief Descript	ion	Unit Cost (in appropriate unit)	How many?	
CR1	Plastic Injection	Molding Machine	\$7,193.23/ machine	1	
CR2 GPS Tracking Chip		\$6.56 / per device 1 per unit			

Briefly describe your main facility: Industrial warehouse of 4,300 square feet, there are 2 Drive ins OH doors, and 1 half height (semi) loading dock. Alongside 1,400 square feet of additional office space: reception, 5 offices, restroom, and breakroom.

### **Exhibit 8: Quality Assurance**

Indicate the Dimensions of Quality on which you will focus.	Why is this dimension important, given your industry & target market?	Identify the Quality Step(s) on the Process Flowchart / Service Blueprint to which this corresponds.
Conformance	To ensure the CarryAll Keychain must be accurate to the design specifications. For GPS to serve its purpose, the ring's essential components within process of molding must be met prior. To achieve consumer reliance on accuracy of luggage tracking, and physical sturdiness of the polycarbonate material, with ease.	Machine injection molder WIP rings GPS insertion in ring
Special Features	Special features are the crucial secondary set of elements in appliance to the basic functions. The extra components: toothbrush, pill container, jewelry holder, refillable bottles, suction cup, and attachable bag, must be durable and attractive to the consumer.	GPS insertion in ring Assembly of ring with accessories (all Q2 points)
Reliability	The CarryAll Keychain needs to have consistent performance, which is especially important because of the multitude of features it contains. Consumers need the Keychain to function consistently well so that their luggage remains trackable, and their travel items stay secure and leakproof.	GPS insertion in Ring WIP Finished Goods

#### Use the space below to describe any additional Proactive Quality Assurance Plans that are not connected to a specific activity on your Process Flowchart / Service Blueprint.

Carry All Keychain is inscribed with an individual serial code that functions as each customer's personal pin number for locating luggage at any point in time on our website. The website is in 24/7 operation, closely managed by our thoroughly trained and qualified IT staff. All production line employees, and (head of operations) manager will be extensively trained to ensure the highest quality at each step of assembly. In addition, all elements are environmentally friendly, from reputable suppliers, with routine inspections of defective and/or low-quality units.

#### Describe any reactive quality assurance plans. Include a recovery plan should a customer receive poor quality goods and/or services.

If a customer receives a defective or low-grade product, CarryAll Keychain will instill an immediate replacement or refund of the product, easy to follow survey for quality assurance in lowering our error rate, quick customer complaint response time by our IT staff (all through our website). Adjusted corrective training will also be instilled in any area, based on responses submitted through surveys.

#### If you will utilize a quality/process improvement methodology, indicate which: ⊠ ISO

 $\Box$  NA □ Six Sigma

 $\Box$  Other (specify what):

Note: You will not use all of them; only those with highest relevance.

Provide a specific explanation of how your chosen quality methodology relates to your business and how it will be applied:

□ Benchmarking

In relation to our business, specifically being in its beginning years, applying ISO 9001 as our chosen quality management system is the most promising approach for continuous improvement. The strong customer focus, and implication of qualified management standards ensures our business is transparently confident of our product, building a well-respected reputation and goodwill from the start. Our manufacturing employees will undergo skill growth and skill development training in areas of needed improvement, based on routine evaluations from upper management. Customers are given a direct line of communication through our website for all issues/questions/concerns regarding the product and its quality.

## **Exhibit 9: Inventory Suppliers & Distributions**

**RAW MATERIAL INVENTORY & SUPPLIER SELECTION If** your organization does not have raw material inventory, please check this box:  $\Box$ NA

Item(s)	Supplier Name & Location (City, State, Country)	Reason for selecting this supplier	Supplier lead time (in days)	Frequency of replenishment (in days)	System of Management	Mode(s) of Transportation
Polycarbonate PC Plastic Granules	Trade 405 Ltd Austin, Texas United States	This supplier is located in Austin, Texas, which is only 232 miles away from our facility in Frisco, Texas. This will help us reduce shipping costs. This company also has a short lead time and accepts small and custom orders.	3-7 days	365 days	Fixed Quantity System	⊠ Highway □Rail □ Waterway □Air

#### FINISHED GOODS INVENTORY

goods inventory, please check this box: □NA

If your organization does not have finished

	Finished goods produced (per hour)	Frequency of shipping finished goods	Average level of Finished goods inventory on site	Amount of safety stock on site per year (total production * 5% rate of defects)
At the end of Year 1	10.27 + (10.27 *.10) = 11.3	Daily	11.3* 8 hours= <b>90.4 per day</b>	31,821 - (31821) * .05) - 28,837 = <b>1,393</b> (31,821 is 90.4 per day times 352 working days)
At the end of Year 2	31.6	Daily	31.6 * 8 hours = <b>252.8 per</b> day	88,985.5 - (8898.5*.05) - 80,705.30 = <b>3,830.9</b>
At the end of Year 3	47.7	Daily	47.7 * 8 hours = <b>381.6 per</b> <b>day</b>	134,323.20 - (134,323.20 * .05) -121,788.86 = <b>5,818.18</b>
At the end of Year 4	65.8	Daily	65.8* 8 hours = <b>526.6 per day</b>	185,292.8 - (185,292.8 * .05) - 168,032.66 = <b>7,995.5</b>
At the end of Year 5	88.2	Daily	88.2 * 8 hours = <b>705.6 per</b> day	248,371.2 - (248,371.2*.05) - 225,029.8 = <b>10,922.8</b>

What is the lifespan of your finished goods inventory?	$\boxtimes$	Three to five years based on the lifespan of the GPS. All other accessories exceed the GPS lifespan.
How will you manage the perishability of Finished Goods Inventory?	⊠NA	

#### DISTRIBUTION

distribution, please check this box:  $\Box$ NA

If your organization does not require

Name of transportation provider/carrier	Reason(s) for selecting this provider/carrier	Frequency of Pick Up / Drop off
USPS First Class Mail	Our finished product weighs approximately 13oz making this the most economical carrier when considering FOB Origin pricing. Delivery is fast with 2-5 days on-ground delivery.	Daily
C.H. Robinson	They're located in Plano, Texas. Making proximity to our facility the key deciding factor for choosing this trucking company.	Twice a week

### Exhibit 10: Capacity

		Demand (per hour)	Capacity (per hour)	Utilization (%)	Hours of Operation	Bottleneck name and description	How will you manage /adjust the bottleneck to ensure you can appropriately serve or supply your customers?
A 1	t the end of Year	10.27 units	60	17.12% *	9am - 5pm	Ring Assembly- Install components onto ring	Multiple layers of employees ensure 7 day a week production on top of two employees working at once, doubling the production rate.
А 2	t the end of Year	28.74 units	60	47.90%	9am – 5pm	Ring Assembly- Install components onto ring	Due to our efficient processes and capacity that far exceeds our demand, we do not need to adjust the bottleneck to ensure the supply.
А З	t the end of Year	43.37 units	60	72.28%	9am - 5pm	Ring Assembly- Install components onto ring	Due to our efficient processes and capacity that far exceeds our demand, we do not need to adjust the bottleneck to ensure the supply.
А <sup>1</sup> 4	t the end of Year	59.84 units	90	66.49%	9am- 5pm	Ring Assembly- Install components onto ring	Before the start of Year 4, one additional worker will be hired for product assembly in case demand rises as our demand for year 4 is predicted to be almost the same as our capacity.
А 5	t the end of Year	80.14 units	90	89.04%	9am - 5pm	Ring Assembly- Install components onto ring	Due to the hiring of the new employee at the beginning of Year 4, our capacity is still higher than predicted demand, no adjustments need to be made.

\*Our utilization is low in Year One because the machine we purchased is inexpensive and extremely fast, but we need it for the demand in later years. This was the best possible option for our business, even if the utilization is lower than desired.

Hours of operation/month	Demand/month	Demand/hour	Capacity/month	Capacity/hour	Utilization
(352 Working days * 8 hours a day) / 12 months = <b>234 Hours</b>	28,837 projected sales for year 1 / 12 months = <b>2,403 Demand /</b>	2,403 projected sales per month / 234 Hours of	352 working days / 12 months = 29.33 working day * 8 hours	Capacity per hour is 60 units, each unit takes 2 minutes to be	10.27 units demanded divided by 60 units of capacity is
of operation / month	Month	operation = 10.27 Demand / hour	* 60 units per hour = 14,078.40 units/month	made and we have 2 workers in Year One.	17.12% utilization.

Additional resources (beyond your bottleneck) must be allocated appropriately to support operations. Identify which resources have a significant impact on capacity at start up and describe why these are appropriate amounts of resources at start up.

The most efficient process of our operations begins at the startup with our plastic injection molding machine which produces 1,603 rings per hour. This grants us plenty of raw material inventory, allowing us to focus on the slower part of our operations such as GPS insertion and ring packaging. For the projected future, we must hire 1 assembly worker at the beginning of year 3 to keep up with the demand. If demand were to unexpectedly rise again, we would allocate our resources to hiring 1 more worker in GPS insertion and packaging.

Describe adjustments you will make as resource requirements vary with time. Be specific regarding which key resources (beyond your bottleneck) will be adjusted, when and how. If you make multiple adjustments, explain each.

Due to the efficiency of our plastic injection molding machine, no additional machines will be needed to purchase in the far future. This allows us to focus mainly on the physical labor aspect of the operations. There are three line-staff positions that will need to be adjusted in the future if demand were to unexpectedly rise. When demand rises to 50 units per hour, an additional assembly worker will be allocated. If demand were to exceed 67 units per hour, an additional worker would be employed in the packaging and GPS installation stations, ensuring capacity requirements that can keep up with the rising demand.

**How will you manage seasonality?** If your organization does not have seasonal demand, please check this box:  $\Box$ NA Throughout the year we plan to produce units at a steady rate allowing us to have excess inventory. Therefore, if demand rises during travel intensive times of year such as Christmas or Thanksgiving, we will have enough supply to match the demand.

## **Exhibit 11: Income Statement**

	Date Ending		Date Ending		Date Ending		Date Ending		Date Ending	
	2024	%	2025	%	2026	%	2027	%	2028	%
Sales Revenue	\$980,177	100.00%	\$2,743,172	100.00%	\$4,261,392	100.00%	\$7,088,794	100.00%	\$9,943,392	100.00%
Materials Cost	\$344,891	35.19%	\$965,232	35.19%	\$1,456,596	34.18%	\$2,009,675	28.35%	\$2,691,359	27.07%
Direct Labor Cost	\$50,400	5.14%	\$52,250	1.90%	\$106,555	2.50%	\$148,901	2.10%	\$304,268	3.06%
Goods Sold	\$395,291	40.33%	\$1,017,481	37.09%	\$1,563,152	36.68%	\$2,158,576	30.45%	\$2,995,627	30.13%
Gross Profit	\$584,887	59.67%	\$1,725,691	62.91%	\$2,698,241	63.32%	\$4,930,218	69.55%	\$6,947,765	69.87%
0										
Expenses										
Indirect Labor Cost Advertising and Promotion	\$246,000	25.10%	\$255,028	9.30%	\$264,388	6.20%	\$274,091	3.87%	\$284,150	2.86%
Expense	\$27,258	2.78%	\$29,782	1.09%	\$57,044	1.34%	\$63,998	0.90%	\$71,919	0.72%
Rent Expense	\$55,900	5.70%	\$55,900	2.04%	\$55,900	1.31%	\$55,900	0.79%	\$55,900	0.56%
Salaries Mandatory Deductions and	\$383,000	39.07%	\$397,056	14.47%	\$456,628	10.72%	\$475,098	6.70%	\$582,535	5.86%
Benefits Travel Meals and	\$401,880	41.00%	\$387,824	14.14%	\$328,252	7.70%	\$309,782	4.37%	\$202,345	2.03%
Entertainment	\$500	0.05%	\$500	0.02%	\$500	0.01%	\$500	0.01%	\$500	0.01%
Amazon Platform	\$147,506	15.05%	\$411,956	15.02%	\$639,689	15.01%	\$1,063,799	15.01%	\$1,491,989	15.00%
Utilities	\$14,400	1.47%	\$14,928	0.54%	\$15,476	0.36%	\$16,044	0.23%	\$16,633	0.17%
Expense	\$3,754	0.38%	\$3,754	0.14%	\$3,754	0.09%	\$15,854	0.22%	\$15,854	0.16%
App Software Expense	\$124	0.01%	\$99	0.00%	<b>\$</b> 99	0.00%	\$99	0.00%	\$99	0.00%
Total Operating Expenses	\$1,280,322	130.62%	\$1,556,828	56.75%	\$1,821,729	42.75%	\$2,275,165	32.10%	\$2,721,923	27.37%
Earnings Before										
Interest and Taxes	\$(695,436)	-70.95%	\$168,863	6.16%	\$876,511	20.57%	\$2,655,053	37.45%	\$4,225,841	42.50%
laterest Francisco	¢00 500	2 200/	¢10.740	0.699/	¢14 640	0.249/	¢10.176	0 1 49/	¢5 207	0.05%
interest Expense	φ22,500	2.30%	φ10,740	0.00%	φ14,042	0.34%	<b>φ</b> 10,170	0.14%	φ0,307	0.05%
Earnings Before	\$(717.026)	-72 25%	\$150 122	5 47%	\$961 960	20.22%	\$2 644 977	37 31%	\$4 220 534	12 15%
Taxes	\$(111,930)	-13.23 /0	\$150,125	J.47 /0	\$001,009	20.23 /0	φ <b>2,044,</b> 077	57.5170	<b>\$4,220,334</b>	42.43 /0
Income Tax	¢		¢400.404	0.040/	¢ 400 074	40.000/	¢4 474 400	40 500/	¢4 750 700	47 700/
Expense	φ <del>-</del>		<b>ΦΙΟΖ, ΙΟ</b> 4	0.04%	ə403,07 I	10.00%	<b>ΦΙ,Ι/Ι,400</b>	10.32%	φ1,759,700	17.70%
Net Income (Loss)	\$(717,936)	-73.25%	\$(32,061)	-1.17%	\$398,198	9.34%	\$1,473,477	20.79%	\$2,460,768	24.75%
. ,										
Operating Cash Flow	\$(493,105)	-50.31%	\$120,546	4.39%	\$622,977.	14.62%	\$1,885,741.	26.60%	\$3,001,001	
Free Cash Flow	\$(322,844)	-32.94%	\$641,381	23.38%	\$935,571	21.95%	\$917,092	12.94%	\$2,790,136	

# Exhibit 12: Balance Sheet

	As of Inception		Date Ending		Date Ending		Date Ending		Date Ending		Date Ending	
	Date	%	2024	%	2025	%	2026	%	2027	%	2028	%
Cash and Cash						·						
Equivalents	\$1,627,307	98.62%	\$1,244,914	97.22%	\$1,825,958	96.77%	\$2,700,332	97.09%	\$3,465,288	72.03%	\$6,192,266	77.72%
Receivable	-	0.00%	-	0.00%	-	0.00%	-	0.00%	\$1,209,331	25.14%	\$1,619,539	20.33%
Inventory	-,	0.00%	\$16,660	1.30%	\$45,817	2.43%	\$69,585	2.50%	\$95,626	1.99%	\$130,636	1.64%
Total Current Assets	\$1,627,307	98.62%	\$1,261,574	98.52%	\$1,871,775	99.20%	\$2,769,917	99.59%	\$4,770,245	99.16%	\$7,942,442	99.69%
Fixed (Long- Term) Assets												
Machinery and												
Equipment	\$22,693	1.38%	\$22,693	1.77%	\$22,693	1.20%	\$22,693	0.82%	\$67,693	1.41%	\$67,693	0.85%
Fixed Assets	\$22,693	1.38%	\$22,693	1.77%	\$22,693	1.20%	\$22,693	0.82%	\$67,693	1.41%	\$67,693	0.85%
Accumulated Depreciation	\$-	0.00%	\$3,754	0.29%	\$7,508	0.40%	\$11,262	0.40%	\$27,116	0.56%	\$42,970	0.54%
Net Fixed Assets	\$22,693	1.38%	\$18,939	1.48%	\$15,185	0.80%	\$11,431	0.41%	\$40,577	0.84%	\$24,723	0.31%
Total Assets	\$1,650,000	100.00%	\$1,280,513	100.00%	\$1,886,961	100.00%	\$2,781,348	100.00%	\$4,810,823	100.00%	\$7,967,165	100.00%
LIABILITIES AN EQUITY	ID STOCKHOL	LDERS'										
Liabilities Current												
Liabilities												
Accounts Payable	-	0.00%	\$380,579	29.72%	\$1,064,267	56.40%	\$1,606,505	57.76%	\$2,216,102	46.06%	\$2,970,520	37.28%
Accrued Labor Costs	-	0.00%	\$9,643	0.75%	\$9,997	0.53%	\$13,578	0.49%	\$14,076	0.29%	\$14,199	0.18%
of LT Debt	\$41,773	2.53%	\$45,533	3.56%	\$49,631	2.63%	\$54,097	1.95%	\$58,966	1.23%		0.00%
Total Current Liabilities	\$41,773	2.53%	\$435,755	34.03%	\$1,123,894	59.56%	\$1,674,181	60.19%	\$2,289,144	47.58%	\$2,984,718	37.46%
Long-Term Liabilities												
LT Debt Less												
Maturities	\$208,227	12.62%	\$162,694	12.71%	\$113,064	5.99%	\$58,966	2.12%	\$	0.00%	\$- <u></u>	0.00%
Total Liabilities	\$250,000	15.15%	\$598,449	46.74%	\$1,236,958	65.55%	\$1,733,147	62.31%	\$2,289,144	47.58%	\$2,984,718	
SEQUITY												
Owner's Equity	\$1,400,000	84.85%	\$1,400,000	109.33%	\$1,400,000	74.19%	\$1,400,000	50.34%	\$1,400,000	29.10%	\$1,400,000	17.57%
Retained Earnings	\$-	0.00%_	\$(717,936 <u>)</u>	-56.07%	\$(749,997)	-39.75%_	\$(351,799 <u>)</u>	-12.65%_	\$1,121,678	23.32%	\$3,582,447	44.97%
Total Stockholders												
Equity	\$1,400,000	84.85% <u></u>	\$682,064	53.26%	\$650,003	34.45%	\$1,048,201	37.69%	\$2,521,678	52.42%	\$4,982,447	62.54%
Total Liabilities												
and Stockholders'												
Equity	\$1,650,000	100.00%	\$1,280,513	100.00%	\$1,886,961	100.00%	\$2,781,348	100.00%	\$4,810,823	100.00%	\$7,967,165	100.00%

	As of Inception	Date Ending	Date Ending	Date Ending	Date Ending	Date Ending		
	Date	2024	2025	2026	2027	2028		
Cash Flows From (For) Operations								
Net Income	\$-	\$(717,936)	\$(32,061)	\$398,198	\$1,473,477	\$2,460,768		
Depreciation	\$-	\$3,754	\$3,754	\$3,754	\$15,854	\$15,854		
Changes in Current Assets								
Increase in Accounts Receivable	\$-	\$-	\$-	\$-	\$ (1,209,331)	\$ (410,208)		
Increase in Inventories	\$-	\$ (16,660)	\$ (29,157)	\$ (23,768)	\$ (26,041)	\$ (35,010)		
Changes in Current Liabilities								
Increase in Accounts Payable	\$-	\$380,579	\$683,687	\$542,239	\$609,596	\$754,418		
Costs	\$-	\$9,643	\$354	\$3,581	\$498	\$122		
Net Cash Flow From (For) Operating		\$(340,620)	\$626,577	\$924,004	\$864,054	\$2,785,944		
Cash Flow (For) From								
Fixed Asset								
Purchases/Sales	\$ (22,693)	\$-	\$-	\$-	\$ (45,000)	\$-		
Not Coch Flow (For) From								
Net Cash Flow (For) From Investing	\$(22,693)	\$-	\$-	\$-	\$(45,000)	\$-		
Net Cash Flow (For) From Investing	\$(22,693)	\$-	\$-	\$-	\$(45,000)	\$-		
Net Cash Flow (For) From Investing	\$(22,693)	\$-	<b>\$-</b>	\$-	\$(45,000)	\$-		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities	\$(22,693)	\$-	Ş-	<b>\$-</b>	\$(45,000)	\$-		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity	<b>\$(22,693)</b> \$700,000	\$- \$-	\$- \$-	\$- \$-	\$(45,000) \$-	\$- \$-		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity	<b>\$(22,693)</b> \$700,000 \$700,000	\$- \$-	\$- \$-	\$- \$-	\$(45,000) \$-	\$- \$-		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt	<b>\$(22,693)</b> \$700,000 \$700,000	\$- \$-	\$- \$-	\$- \$-	\$(45,000) \$-	\$- \$-		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to	<b>\$(22,693)</b> \$700,000 \$700,000 \$250,000	<b>\$-</b> <b>\$(</b> 41,773)	<b>\$-</b> <b>\$-</b> \$(45,533)	<b>\$-</b> <b>\$-</b> \$(49,631)	<b>\$(45,000)</b> <b>\$-</b> \$(54,097)	<b>\$-</b> <b>\$-</b> \$(58,966)		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to Stockholders	<b>\$(22,693)</b> \$700,000 \$700,000 \$250,000	<b>\$-</b> \$(41,773)	<b>\$-</b> <b>\$-</b> \$(45,533) -	<b>\$-</b> <b>\$-</b> \$(49,631)	<b>\$(45,000)</b> <b>\$-</b> \$(54,097)	<b>\$-</b> <b>\$-</b> \$(58,966)		
Net Cash Flow (For) From Investing	\$(22,693) \$700,000 \$700,000 \$250,000 - \$1,650,000	<b>\$-</b> \$(41,773) <b>\$(41,773)</b>	<b>\$-</b> <b>\$-</b> \$(45,533) - <b>\$(45,533)</b>	\$- \$- \$(49,631) - \$(49,631)	\$(45,000) \$- \$(54,097) - \$(54,097)	\$- \$- \$(58,966)  \$(58,966)		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to Stockholders Net Cash Flows From (For) Financing	\$(22,693) \$700,000 \$700,000 \$250,000 - \$1,650,000	<b>\$-</b> \$(41,773) <b>\$(41,773)</b>	<b>\$-</b> <b>\$(</b> 45,533) - <b>\$(</b> 45,533)	\$- \$- \$(49,631) - \$(49,631)	\$(45,000) \$- \$(54,097) - \$(54,097)	\$- \$- \$(58,966) - - - - - -		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to Stockholders Net Cash Flows From (For) Financing	\$(22,693) \$700,000 \$700,000 \$250,000 \$1,650,000 \$1,627,307	\$- \$(41,773) \$(41,773) \$(382,393)	\$- \$- \$(45,533) - \$(45,533) \$581,044	\$- \$- \$(49,631) - \$(49,631) \$874,373	\$(45,000) \$- \$(54,097) - \$(54,097) \$(54,097) \$764,957	\$- \$- \$(58,966) - - \$(58,966) \$2,726,978		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to Stockholders Net Cash Flows From (For) Financing	\$(22,693) \$700,000 \$700,000 \$250,000 <u>\$1,650,000</u> \$1,627,307	\$- \$(41,773) \$(41,773) \$(382,393)	\$- \$- \$(45,533) - \$(45,533) \$581,044	\$- \$- \$(49,631) - \$(49,631) \$874,373	\$(45,000) \$- \$(54,097) - \$(54,097) \$764,957	\$- \$- \$(58,966) - \$(58,966) \$2,726,978		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to Stockholders Net Cash Flows From (For) Financing Net Change in Cash	\$(22,693) \$700,000 \$700,000 \$250,000 - \$1,650,000 \$1,627,307	\$- \$(41,773) \$(41,773) \$(382,393)	\$- \$(45,533) - \$(45,533) \$(45,533) \$(45,533)	\$- \$- \$(49,631) - \$(49,631) \$874,373	\$(45,000) \$- \$(54,097) - \$(54,097) \$(54,097) \$(54,097) \$(54,097)	\$- \$- \$(58,966) - - \$(58,966) \$2,726,978		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to Stockholders Net Cash Flows From (For) Financing Net Change in Cash Beginning Cash Balance	\$(22,693) \$700,000 \$700,000 \$250,000 <u>\$1,650,000</u> \$1,627,307 \$-	\$- \$(41,773) \$(41,773) \$(382,393) \$1,627,307	\$- \$- \$(45,533) - \$(45,533) \$581,044 \$1,244,914	\$- \$- \$(49,631) - \$(49,631) \$874,373 \$1.825.958	\$(45,000) \$- \$(54,097) - \$(54,097) \$764,957 \$2,700,332	\$- \$(58,966) - \$(58,966) \$2,726,978 \$3,465,288		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to Stockholders Net Cash Flows From (For) Financing Net Change in Cash Beginning Cash Balance	\$(22,693) \$700,000 \$700,000 \$250,000 \$1,650,000 \$1,627,307 \$-	\$- \$(41,773) \$(41,773) \$(382,393) \$1,627,307	\$- \$(45,533) - \$(45,533) \$581,044 \$1,244,914	\$- \$(49,631) - \$(49,631) \$874,373 \$1,825,958	\$(45,000) \$- \$(54,097) - \$(54,097) \$(54	\$- \$- \$(58,966) - \$(58,966) \$2,726,978 \$3,465,288		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to Stockholders Net Change in Cash Beginning Cash Balance	\$(22,693) \$700,000 \$700,000 \$250,000 <u>\$1,650,000</u> \$1,627,307 \$- \$1 627 307	\$- \$(41,773) \$(41,773) \$(382,393) \$1,627,307 \$(382,393)	\$- \$- \$(45,533) - \$(45,533) \$581,044 \$581,044 \$581,044	\$- \$(49,631) - \$(49,631) \$874,373 \$874,373 \$874,373	\$(45,000) \$- \$(54,097) - \$(54,097) \$764,957 \$2,700,332 \$764,957	\$- \$(58,966) \$(58,966) \$2,726,978 \$3,465,288 \$2,726,978		
Net Cash Flow (For) From Investing Cash Flow From (For) Financing Activities Founder's Equity Investor's Equity Long Term Debt Borrowings/Repayments Dividends Paid to Stockholders Net Cash Flows From (For) Financing Net Change in Cash Beginning Cash Balance Net Change in Cash	\$(22,693) \$700,000 \$700,000 \$250,000 \$1,650,000 \$1,627,307 \$1,627,307	\$- \$- \$(41,773) \$(41,773) \$(382,393) \$(382,393) \$(382,393)	\$- \$(45,533) - \$(45,533) \$(45	\$- \$(49,631) - \$(4	\$(45,000) \$- \$(54,097) - \$(54,097) \$(54	\$- \$(58,966) - \$(58,966) \$2,726,978 \$3,465,288 \$2,726,978		

# Exhibit 13: Cash Flow Statement

### **Exhibit 14: Financial Statement Notes**

#### **Note 1: Assumptions**

The following assumptions are made in developing the pro forma statements:

- Depreciation of our fixed asset was based on 11 years of useful life for the Manufacture of Finished Plastic Products, obtained from the MACRS Asset Life Table.
- Accrued wages are assumed to be two-weeks' of the annual salaries and wages for all employees.
- The accounts payable are assumed to be terms of net 30.
- Employee benefits are calculated by total cost for all employees minus wages.

#### Note 2: Investment capital

The initial start-up costs are funded with a \$250,000 secured bank loan that requires 9% interest per year, and this loan is paid off over five years. Other start-up costs are assumed to be funded with \$700,000 of capital from owners' personal funds (\$100,000 per founder) and \$450,000 of convertible debt and investment equity at 5 percent and \$100,000 of capital from owners' personal funds.

#### Note 3: Capital investment

Our initial capital investment of \$7,193 is used to purchase an injection mold machine that will be able to meet our demand for all 5 years. It is depreciated using a single-line depreciation method. We rented our facility for where we will manufacture our products for \$55,900 over all 5 years.

#### Note 4: Risks

There are many risks and uncertainties associated with the operations of this company. Risks include:

- *Risk regarding receiving the patent*. Our product likely could not be patented due to some of the components existing prior to the inception of the CarryAll Keychain.
- *Risk related to the economy*. COVID-19 and changing global political climates have caused issues with supply-chain backup. If COVID-19 resurges again or drastic supply chain shifts occur, especially since we outsource a variety of components internationally, we could be without supplies to make our product.
- *Risk related to input and product quality*. CarryAll Keychain has various quality control programs in place to ensure that our inputs and final products are free from imperfections. However, the variability of quality given our outsourcing and transportation methods lead to a higher level of risk of defects and scrap rates.
- *Risk related to many different suppliers.* We outsource many product components from multiple international and American suppliers. Losing a contract with a supplier or having to find an alternative supplier would change our profit margin and our ultimate net income. This would also lead to a waste of the scrap inputs and quality inputs from other manufacturers.
- Risk related to product price. We priced the CarryAll Keychain to remain under \$40 to generate enough revenue to be profitable and about 50.1% of our survey respondents stated that they would pay at least \$20 for our product. However, there is still risk as some consumers would be unwilling to part with their traditional methods of toiletry organization and pay for a new one.

	Data Fadian	Dete Fedine	Dete Fadiae	Dete Fadian	Data Fadian	Industry
	Date Ending	Date Ending	Date Ending		Date Ending	Average
-	2024	2025	2020		2028	Rallos
Liquidity Dation						
Liquidity Ratios						
Current Ratio	2.90	1.67	1.65	2.08	2.66	1.75x
Quick Ratio	2.86	1.62	1.61	2.04	2.62	0.75x
Cycle	6.20	6.10	5.96	67.19	64.25	30
Leverage Ratios						
Debt/Equity	0.239	0.174	0.06	0.00	0.00	0.98
Times Interest Earned	-30.91	9.01	59.86	260.92	796.28	5.28x
Asset Management						
Ratios						
Inventory Turpover	58.83	59.87	61 24	74 13	76 12	10 19x
Receivables	-	55.07	01.24	74.15	70.12	10.192
Turnover		-	-	5.86	6.14	19.64x
Turnover	43.19	180.65	372.79	174.70	402.19	15.51x
Profitability Ratios						
Gross Profit	50.070/	<b>22 2</b> 4 2 4	<b>20 20 1</b>		00.070/	22.222
Margin Operating	59.67%	62.91%	63.32%	69.55%	69.87%	33.69%
Profit Margin	-70.95%	6.16%	20.57%	37.45%	42.50%	8.30%
Assets	-0.56	-0.02	0.14	0.31	0.31	0.19
DuPont Analysis						
Net Profit	70.05%	4.470/	0.24%	20 70%	04 75%	0.700/
Total Asset	-73.25%	-1.17%	9.34%	20.79%	24.75%	6.70%
Turnover	0.77	1.45	1.53	1.47	1.25	1.5x
Equity Multiplier	1.88	2.90	2.65	1.91	1.60	1.5x
Return on Equity	-105.26%	-4.93%	37.99%	58.43%	49.39%	26%

# **Exhibit 15: Financial Ratios**

### **Exhibit 16: Financial Analysis**

#### Liquidity

CarryAll Keychain has a current ratio that is above the industry average of 1.75 for the first year, below the average between Years 2 and 3, and above for the last two years. This is expected given the loan in the beginning of Year 1 and gradual profitability of our business. The quick ratio is above the industry average for the entirety of Years 1-5, demonstrating the high liquidity of our assets and strong ability to repay our debt. The operating cycle is lower than average for the first three years because we do not wholesale until Year 4, and thus do not have a Days Sales Outstandings figure to contribute to the operating cycle. However, in Years 4 and 5, the operating cycle is higher than the industry average, indicating that we can improve our efficiency and rely less on liquid assets like cash.

#### **Financial leverage**

CarryAll Keychain has minimal debt in the form of a \$250,000 loan taken out in Year 1 and high Equity with \$1,400,000 in founders' equity. As this loan is paid off, the debt-to-equity ratio decreases as a result. Our lower-than-average debt to equity ratio also signifies that the company also has minimal risk associated with debt. The Times Earned Interest Ratio increases from being negative in Year 1 to extremely high in Year 5. This aligns with our financial performance as we are not profitable until Year 3.

#### Asset management

The inventory turnover remains higher than industry averages, suggesting that we sell out frequently. While this helps us avoid having too much inventory sitting in our warehouse, it suggests that we may have to reup inventory frequently. Since we begin wholesaling around a third of our demand in Year 4, the company's Accounts Receivable turnover remains below average for all 5 years. The Fixed Asset Turnover is above the industry average for all 5 years, suggesting the highest point of efficiency is the utilization of our fixed asset: plastic injecting machine.

#### Profitability

CarryAll Keychain's gross profit margin is approximately double that of the industry average for all five years. The operating profit margin is negative in the first year and gradually increases above the industry average in Year 3. This aligns with our financial behavior as we are not profitable until Year 3. The company's return on assets is below the industry average for the first three years and increases to above industry average by the fourth year, indicating an efficient usage of our assets and ability to be profitable with smaller investments. **DuPont Analysis** 

#### The net profit margin begins as negative and increases over the five years to be above the industry average by Year 3. The asset turnover fluctuates around the industry average for all five years, suggesting that, generally, we are utilizing our assets to generate sales well. The equity multiplier stays just above industry average for all five years, indicating that the company relies heavily on stockholder equity for financing. Overall, the company relies less on debt and loans and more on stockholder equity, allowing us to avoid interest and principal repayments and focus on the operations of our business.

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# Meet the Team - Section 5, Team 11

Emma Baldwin I am from Blacksburg, Virginia, with a major in Marketing and minor in Music Industry. I'm an Editorial Intern for Spotify's Dance & Electronic Music Department. I enjoy video editing, road trips, and music.
Abby Burden I am from Loudoun Country, Virginia, with a major in Marketing and minor in Educational Technology. I am a member of Beta Gamma Sigman, Delta Mu Sigma (Digital Marketing Honor Society) and Greek life. I enjoy traveling and going to thrift stores.
Caroline Crandall I am from Vienna, Virginia, with a major in Accounting and minors in Data Analytics and Honors Interdisciplinary Studies. I am a member of the Club Tennis Team, Give Volunteers, and the Honors College Ambassadors cohort. In my free time, I enjoy hiking, cooking, and thrifting.
Matt Karl I am a Management major from Randolph, NJ, that has been running my own DJ business for the last five years. I am also an independent insurance agent with Aflac. In my free time I enjoy being with my loved ones and value relationships above everything.
Cade Kuehler I am from Charlottesville, Virginia, with a major in Finance. I am in the JMU fly fishing club with the goal of becoming treasurer in the spring. I enjoy playing and watching all sports, listening to music, and exercising.
Adam Wagner I am from Fredericksburg, Virginia, with a major in Accounting. I am part of the audit committee for fitness club and planning to join the professional financial club. I enjoy lifting, running, pickleball, video games, and fishing.
Mason Wyatt I am from Staunton, Virginia, with a major in Finance and a minor in Economics. I am the Treasurer of JMU's Kappa Sigma chapter and a member of the Club Golf team. I enjoy running, cooking, and listening to music.