

# 1 Executive Summary

AutoLoad will produce an autonomous robot that will load airplanes with packages. This robot is intended to be used by an overnight delivery company. AutoLoad's robot will be easily configured on the fly by a wireless controller.

The robot will take the place of manual labor used to load the packages. The lack of personnel is not the greatest savings. The most significant savings will be the airplanes' decreased turnaround time. A robot will be able to load all the packages for a single robot faster than a human, thus allowing the airplanes to be fully utilized. Also when humans perform a task then there is an inherent error and the error will be less when a robot performs the task.

At the moment there is not a company that is making robots that are used to load airplanes with packages. So the only competition is a manual process. With the lack of equal competition then AutoLoad will only have to convince companies that its product is far superior to the manual process because of the decreased turnaround time and the low error rate.

AutoLoad is an engineering company with intellectual property as its main product. Most of the fabrication of the robots themselves is going to be produced by a third party (Caterpillar). This allows AutoLoad's main responsibilities to be sales and development.

The full scale prototype has been purchased by FedEx and will take three years to design and construct. The next three years will be used to produce duplicate copies of the robot and to design the second version. Since each robot takes three years to design and create then AutoLoad's books are drawn on a three year timetable. AutoLoad will operate at a loss for the first four years and will break even during the fifth year or the second year of selling actual product. Figure 1.0.a shows the growth rate of the company and the projected profits until 2015. This figure shows AutoLoad's large growth potential with in the airplane loading market.

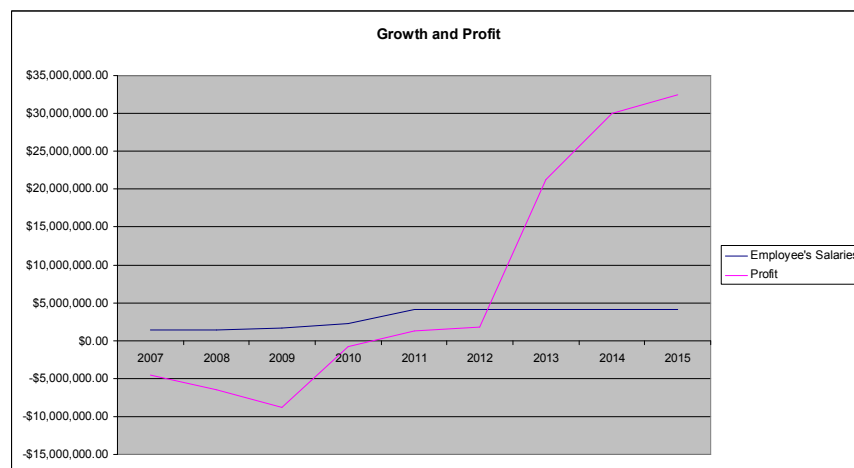


Figure 1.0.a: Growth Rate and Projected Profits

## 5 Strategy and Implementation

### 5.1 Market Strategy

AutoLoad's main strategy for being successful is repeat business. The airplane loading market does not have many customers in it and therefore a company that is trying to sell products to them must rely on repeat business. In order to assure repeat business AutoLoad has made came up with the motto that it will have "No Unsatisfied Customers." This strategy can be broken into three distinct regions of our company. Figure 5.1.a shows how AutoLoad's motto will be implemented.

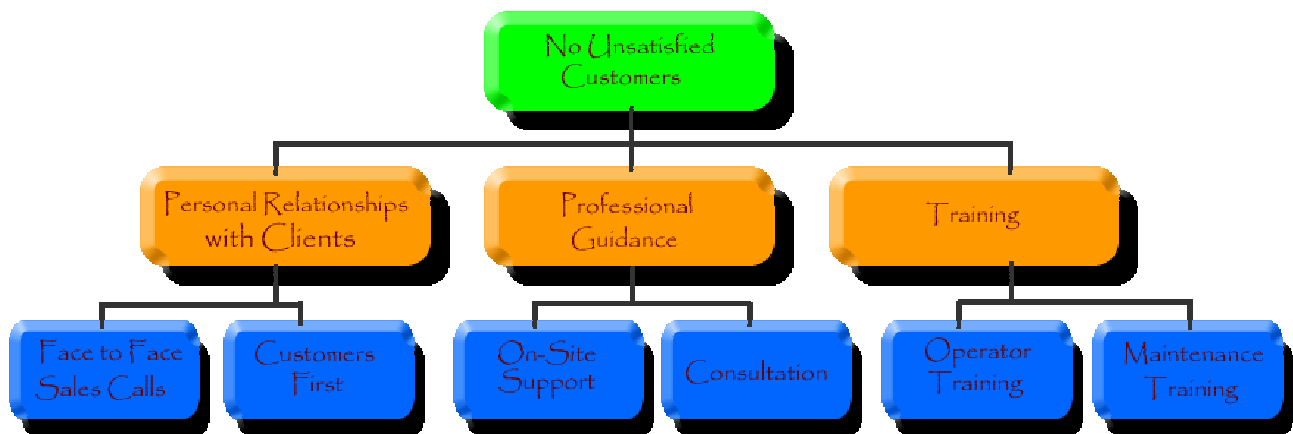


Figure 5.1.a: Strategy Pyramid

The first tactic is to build personal relationships with our clients. Every employee is the face of the company and can make or break AutoLoad's reputation. Most of AutoLoad's reputation will come from the employee's work ethic and some will come from the reliability of our product. Also the sales team must make face-to-face sales and spend quality time with the customers. When a sale is made in person then there is a connection between the two companies and it feels more personal.

The second tactic is to give guidance to our customers. Our sales team will also be able to consult our customers on how to accurately manage their inventory systems have will be an expert in AutoLoad's products and systems. The best sales team is one that knows their product as well as the engineers who make it. Also AutoLoad will provide on-site support or any failures that are under warrantee. The company will also sell extended warrantees because the engineers who created the robots are the ones that will be able to accurately find the problem and create a solution.

The third tactic to keeping customers happy is to offer extensive training. An airplane packaging robot is not a simple device and will only need to be used by trained professionals. AutoLoad will offer two training classes when a company buys a robot. There will be training for the operators that will use wireless communication to tell the robot when to start and the details necessary to place a package onto an airplane correctly. AutoLoad also does not want to be called for every small maintenance error

that occurs on a robot. The company that owns the robot also does not want to call AutoLoad for each small error because it would be cheaper if they fix the problem themselves. Each air transportation company has an extensive airplane maintenance department that is capable of fixing these robots with a small amount of extra training to learn the specifics of our product. These two training classes will help with customer relations by showing our customers that we care about the lasting relationship between the two companies and are not solely worried about making a single sale.

## 5.2 Milestones

AutoLoad's important milestones are shown in figure 5.2.a. Every task is statically laid out. FedEx will be offered their monopoly after the first prototype is completed. Once the monopoly runs out, AutoLoad will have a second revision of the robot to use as a bargaining chip or to sell to other air freight companies.

Table 5.2.a: Milestones

Milestone		Duration	Start Date	End Date	Department
Corporation					
	Corporate Identity	33 days	2/1/2006	3/17/2006	Administration
	Business Plan Review	1 day	3/23/2006	3/23/2006	Administration
	Obtain Funding	37 days	3/23/2006	5/12/2006	Administration
Prototype					
	Design	110 days	5/29/2006	10/27/2006	Engineering Board
	Mechanical	525 days	10/30/2006	10/31/2008	ME
	Software	525 days	10/30/2006	10/31/2008	SE
	Wiring	95 days	9/29/2008	2/6/2009	ME,SE
	Final Version	86 days	2/9/2009	6/8/2009	ME,SE
Sales					
	Sales Strategy	25 days	9/29/2008	10/31/2008	Sales
	Corporate Brochure	20 days	11/3/2008	11/28/2008	Sales
	Find other Customers	611 days	5/4/2009	9/5/2011	Sales
2nd Prototype					
	Design	110 days	12/1/2008	5/1/2009	Engineering Board
	Mechanical	525 days	5/4/2009	5/6/2011	ME
	Software	525 days	5/4/2009	5/6/2011	SE
	Wiring	95 days	5/2/2011	9/0/2011	ME,SE
	Final Version	86 days	5/9/2011	9/5/2011	ME,SE

## 7.1 Financial Assumptions

The financial plan is based of the following assumptions:

- No new competition entering the market until 2011
- Having FedEx's support for first prototype
- AutoLoad will be able to produce enough robots to meet the demand

## 7.2 Financial Indicators

AutoLoad is different than most other companies because its product is very expensive compared to most products that can be found in convenience stores. This difference means that the cycle of design a product, make it, market it, sell it, and repeat is on a much longer time table than most. Also AutoLoad's expected sales will be in the range of 3 to 30 and not 1,000 to 1,000,000. These two facts mean that AutoLoad's financial indicators will occur on a tri-yearly basis instead of a yearly basis.

## 7.2 Employee's Salaries

Table 7.2.a: Employee's Salaries for 2007 – 2015

Year	Position	Salary	# of Employees	Total Salary for that Position	Total Salary for Year
<b>2007</b>	Pres	\$110,000	1	\$110,000	
	VP	\$110,000	3	\$330,000	
	Team Leader	\$70,000	2	\$140,000	
	ME	\$55,000	5	\$275,000	
	SE	\$55,000	5	\$275,000	
	Sec	\$50,000	2	\$100,000	
	Custodian	\$35,000	2	\$70,000	
				20	
<b>2008</b>	Pres	\$110,000	1	\$110,000	
	VP	\$110,000	3	\$330,000	
	Team Leader	\$70,000	2	\$140,000	
	ME	\$55,000	5	\$275,000	
	SE	\$55,000	5	\$275,000	
	Sec	\$50,000	2	\$100,000	
	Custodian	\$35,000	2	\$70,000	
				20	
<b>2009</b>	Pres	\$110,000	1	\$110,000	
	VP	\$110,000	3	\$330,000	
	Team Leader	\$70,000	3	\$210,000	
	ME	\$55,000	7	\$385,000	

	SE	\$55,000	7	\$385,000	
	Sec	\$50,000	2	\$100,000	
	Custodian	\$35,000	2	\$70,000	
			25		\$1,590,000
<b>2010</b>	Pres	\$120,000	1	\$120,000	
	VP	\$120,000	3	\$360,000	
	Team Leader	\$78,000	4	\$312,000	
	ME	\$65,000	8	\$520,000	
	SE	\$65,000	8	\$520,000	
	Sec	\$55,000	3	\$165,000	
	Custodian	\$40,000	3	\$120,000	
			30		\$2,117,000
<b>2011-2015</b>	Pres	\$150,000	1	\$150,000	
	VP	\$150,000	3	\$450,000	
	Team Leader	\$90,000	6	\$540,000	
	ME	\$75,000	15	\$1,125,000	
	SE	\$75,000	15	\$1,125,000	
	Sec	\$65,000	5	\$325,000	
	Custodian	\$42,000	5	\$210,000	
			50		\$3,925,000

### 7.3 Unit Cost

Table 7.3.a: Unit Cost of Robot

Revision	Years	Fee Type	Cost	Total Cost
<b>Prototype</b>	<b>2007</b>	<b>Caterpillar Fee</b>	\$1,500,000	Per unit
	<b>2008</b>	<b>Materials</b>	\$50,000	Per unit
	<b>2009</b>	<b>Wires</b>	\$7,000	Per unit
		<b>Electrical</b>	\$50,000	Per unit
		<b>Units Sold</b>	1	
				\$1,607,000.00
<b>Rev 1 &amp; 2</b>	<b>2010</b>	<b>Caterpillar Fee</b>	\$1,000,000	Per unit
	<b>2011</b>	<b>Materials</b>	\$50,000	Per unit
	<b>2012</b>	<b>Wires</b>	\$7,000	Per unit
	<b>2013</b>	<b>Electrical</b>	\$50,000	Per unit
	<b>2014</b>	<b>Units Sold</b>	?	
	<b>2015</b>			

### 7.4 Fixed Cost

Table 7.4.a: Fixed Cost

Year	Type of	Cost	Total Cost	Total Cost
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	Expense		for Group	for Year
<b>2007</b>	Building	\$6,000.00		
	Furniture	\$7,000.00		
	Office Supplies	\$300.00		
	Utilities	\$3,000.00		
			\$16,300.00	
	Salaries	\$1,300,000.00		
	Benefits	\$3,000.00		
	Number of People	20		
			\$1,360,000.00	
	Sales	\$10,000.00		
	Travel Expenses	\$15,000.00		
			\$25,000.00	
				\$1,401,300.00
<b>2008</b>	Building	\$6,000.00		
	Furniture	\$7,000.00		
	Office Supplies	\$300.00		
	Utilities	\$3,000.00		
			\$16,300.00	
	Salaries	\$1,300,000.00		
	Benefits	\$3,000.00		
	Number of People	20		
			\$1,360,000.00	
	Sales	\$10,000.00		
	Travel Expenses	\$15,000.00		
			\$25,000.00	
				\$1,401,300.00
<b>2009</b>	Building	\$6,000.00		
	Furniture	\$7,000.00		
	Office Supplies	\$300.00		
	Utilities	\$3,000.00		
			\$16,300.00	
	Salaries	\$1,590,000.00		
	Benefits	\$3,000.00		
	Number of People	25		
			\$1,665,000.00	
	Sales	\$10,000.00		
	Travel Expenses	\$15,000.00		
			\$25,000.00	
				\$1,706,300.00
<b>2010</b>	Building	\$6,000.00		
	Furniture	\$7,000.00		
	Office Supplies	\$300.00		
	Utilities	\$3,000.00		
			\$16,300.00	
	Salaries	\$2,117,000.00		
	Benefits	\$3,000.00		
	Number of	30		

	People			
			\$2,207,000.00	
	Sales	\$10,000.00		
	Travel Expenses	\$15,000.00		
			\$25,000.00	
				\$2,248,300.00
<b>2011</b>	Building	\$6,000.00		
	Furniture	\$7,000.00		
	Office Supplies	\$300.00		
	Utilities	\$3,000.00		
			\$16,300.00	
	Salaries	\$3,925,000.00		
	Benefits	\$3,000.00		
	Number of People	50		
			\$4,075,000.00	
	Sales	\$10,000.00		
	Travel Expenses	\$15,000.00		
			\$25,000.00	
				\$4,116,300.00

## 7.5 Break-Even Analysis

Table 7.5.a: Break Even Analysis

<b>Prototype</b>				
<b>2007</b>	Unit Cost	\$1,607,000.00		
<b>2008</b>	Special First Time cost	\$2,415,000		
<b>2009</b>	Fixed Cost	\$4,508,900.00	Total Cost	\$8,675,900.00
	Other Fixed Cost	\$145,000		
	Expected Unit Sales	1	Total Revenue	\$3,000,000.00
	Price Per Unit	\$3,000,000.00	Profit	-\$5,675,900.00
<b>Rev 1</b>				
<b>2010</b>	Unit Cost	\$207,000.00		
<b>2011</b>	Fixed Cost	\$10,480,900.00	Total Cost	\$14,899,900.00
<b>2012</b>	Expected Unit Sales	17	Total Revenue	\$25,500,000.00
	Price Per Unit	\$1,500,000.00	Profit	\$10,600,100.00
	R & D	\$900,000		
<b>Rev 2</b>				
<b>2013</b>	Unit Cost	\$207,000.00		
<b>2014</b>	Fixed Cost	\$12,348,900.00	Total Cost	\$32,389,900.00
<b>2015</b>	Expected Unit Sales	63	Total Revenue	\$63,000,000.00
	Price Per Unit	\$1,000,000.00	Profit	\$30,610,100.00

## 7.6 Cash Flow Projections

Table 7.6.a: Cash Flow Projections

	End of Pervious Year	Units Sold	Price	Cash Sales	Material Costs	Fixed Cost	R & D of Warehouse Market	Net Profit	Net Profit Margin
<b>Investment Prototype</b>	-\$5,653,900	0	\$0	\$0	\$0	\$0	\$0	-\$5,653,900	0.00%
<b>2007</b>	-\$5,653,900	1	\$3,000,000	\$3,000,000	-\$535,667	\$1,401,300	\$0	-\$4,590,867	153.03%
<b>2008</b>	-\$4,590,867	0	\$3,000,000	\$0	-\$535,667	\$1,401,300	\$0	-\$6,527,833	0.00%
<b>2009</b>	-\$6,527,833	0	\$3,000,000	\$0	-\$535,667	\$1,706,300	\$0	-\$8,769,800	0.00%
<b>Rev 1</b>									
<b>2010</b>	-\$8,769,800	8	\$1,500,000	\$12,000,000	\$1,656,000	\$2,248,300	-\$100,000	-\$774,100	-6.45%
<b>2011</b>	-\$774,100	5	\$1,500,000	\$7,500,000	\$1,035,000	\$4,116,300	-\$300,000	\$1,274,600	16.99%
<b>2012</b>	\$1,274,600	4	\$1,500,000	\$6,000,000	-\$828,000	\$4,116,300	-\$500,000	\$1,830,300	30.51%
<b>Rev 2</b>									
<b>2013</b>	\$1,830,300	31	\$1,000,000	\$31,000,000	\$6,417,000	\$4,116,300	-\$1,000,000	\$21,297,000	68.70%
<b>2014</b>	\$21,297,000	20	\$1,000,000	\$20,000,000	\$4,140,000	\$4,116,300	-\$3,000,000	\$30,040,700	150.20%
<b>2015</b>	\$30,040,700	12	\$1,000,000	\$12,000,000	\$2,484,000	\$4,116,300	-\$3,000,000	\$32,440,400	270.34%

