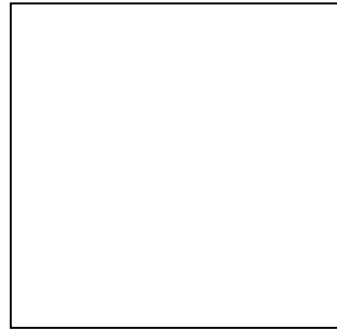


# Deliverable 7

## Financial Model

### Team



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# Financial Model Assumptions

## Supplier Assumptions

- GM / Dealer would outsource production to current seat supplier
- Tooling and facilitation costs at supplier would equal \$500K and could be done in under 6-months
- Could be made for under \$138 per unit and sold at 40% mark-up of \$193 to dealer

## Dealer Assumptions

- Crew training would be \$15K and added inventory would be \$7k / year
- From GM Dealer interview tray table would have retail value of \$400 installed
- From GM Dealer Interview tray table would require \$70 labor cost to install

## GM Assumptions

- Tray table could be developed in 6-months at cost of \$500K
- GM makes 10% from dealer sale, but also makes money through increased car sales from option
- GM sells 80K SRX a year assume 20% purchase the tray table from dealer (16,000 per year)

## Overall Assumptions

- Discount rate assumed at 10%
- Assume 4 year cycle

# Financial Model Results

## Supplier Financial Model

Development Cost	\$0 GM Pays															
Ramp-up Cost	\$500,000															
Marketing and Support Cost	\$10,000 year															
Unit Production Cost	\$138 per unit															
Sales and Production Volume	16,000 units / year															
Unit Price	\$193 per unit															
Discount Rate	10%															
	Year 1				Year 2				Year 3				Year 4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Development Cost	0	0														
Ramp-up Cost		-\$250,000	-\$250,000													
Marketing & Support Cost				-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500
Production Cost				-\$550,000	-\$550,000	-\$550,000	-\$550,000	-\$550,000	-\$550,000	-\$550,000	-\$550,000	-\$550,000	-\$550,000	-\$550,000	-\$550,000	-\$550,000
Production Volume				4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
Unit Production Cost				-\$138	-\$138	-\$138	-\$138	-\$138	-\$138	-\$138	-\$138	-\$138	-\$138	-\$138	-\$138	-\$138
Sales Revenue				\$770,000	\$770,000	\$770,000	\$770,000	\$770,000	\$770,000	\$770,000	\$770,000	\$770,000	\$770,000	\$770,000	\$770,000	\$770,000
Sales Volume				4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
Unit Price				\$193	\$193	\$193	\$193	\$193	\$193	\$193	\$193	\$193	\$193	\$193	\$193	\$193
Period Cash Flow	\$0	-\$250,000	-\$250,000	\$225,555	\$225,555	\$225,555	\$225,555	\$225,555	\$225,555	\$225,555	\$225,555	\$225,555	\$225,555	\$225,555	\$225,555	\$225,555
PV Year 1, r=10%	\$0	-\$237,954	-\$232,150	\$204,342	\$199,358	\$194,495	\$189,752	\$185,123	\$180,608	\$176,203	\$171,906	\$167,713	\$163,622	\$159,631	\$155,738	\$151,939
<b>Supplier Project NPV</b>	<b>\$1,830,327</b>															

## Dealer Financial Model

Crew Training	\$15,000															
Inventory Purchase (30 units)	\$5,775															
Support Cost (Part Order/Storage)	\$7,000 per year															
GM share of profit from every unit	10%															
Dealer Installation Time	45 minutes															
Unit Production Cost (\$70 labor)	\$263 per unit															
Sales and Production Volume	16,000 units / year															
Unit Price	\$400 per unit															
Discount Rate	10%															
	Year 1				Year 2				Year 3				Year 4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Crew Installation Training			-\$15,000													
Initial Inventory Order			-\$5,775													
GM's share of profit from every unit				-160000	-160000	-160000	-160000	-160000	-160000	-160000	-160000	-160000	-160000	-160000	-160000	-160000
Marketing & Support Cost				-\$1,750	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500
Production Cost				-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000	-\$1,050,000
Production Volume				4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
Unit Production Cost				-\$263	-\$263	-\$263	-\$263	-\$263	-\$263	-\$263	-\$263	-\$263	-\$263	-\$263	-\$263	-\$263
Sales Revenue				\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000
Sales Volume				4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
Unit Price				\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400
Period Cash Flow			-\$20,775	\$396,388	\$395,638	\$395,638	\$395,638	\$395,638	\$395,638	\$395,638	\$395,638	\$395,638	\$395,638	\$395,638	\$395,638	\$395,638
PV Year 1, r=10%			-\$19,292	\$359,108	\$349,686	\$341,157	\$332,836	\$324,718	\$316,798	\$309,071	\$301,533	\$294,179	\$287,004	\$280,003	\$273,174	\$266,511
<b>Dealer Project NPV</b>	<b>\$4,016,486</b>															

## GM Financial Model

Development Cost	\$500,000															
	Year 1				Year 2				Year 3				Year 4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Development Cost	-\$500,000															
GM's share of profit from Dealer				160000	160000	160000	160000	160000	160000	160000	160000	160000	160000	160000	160000	160000
Period Cash Flow	-\$500,000	\$0	\$0	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000
PV Year 1, r=10%	-\$500,000	\$0	\$0	\$144,952	\$141,417	\$137,967	\$134,602	\$131,319	\$128,117	\$124,992	\$121,943	\$118,969	\$116,067	\$113,236	\$110,474	\$107,780
<b>GM Project NPV</b>	<b>\$1,131,837</b>															

# Sensitivity Analysis

## Key Financial Uncertainties

	Supplier	Dealer	GM
<b>Per 10% Sales Volume Change</b>	\$1,162,683	\$2,029,646	\$815,919
<b>Product Cost or Sales Price per \$1 change</b>	\$16,323	\$57,167	\$0
<b>Per 10% Development Cost Change</b>	\$0	\$0	\$50,000
<b>Per added month of Development Time (assume fixed window of opportunity for sales)</b>	\$192,875	\$358,637	\$144,952

Note: above analysis assumes fixed window of sale and does not consider potential sales on other GM Cadillac cars

# Process Notes

## Summary:

We had smooth transition from the engineering design phase to the prototype building phase. We used our meetings during the week to review the progress of the build team, and address questions and problems.

## Prototype Production Status:

- Purchased armrest from dealer, decomposed it, and evaluated what can be used for the prototype and what will be made at the shop or outsourced.
- The frame and leatherette covering will be used for the final prototype.
- Several components have already been outsourced to outside manufacturers.
- We also reviewed the financial model as a group, commenting on critical factors to the projected financial performance (discount rate, supplier, dealer and GM margins, etc.).

## Financial Model:

- The last three weeks were also used to develop our financial model and conduct sensitivity analysis

## Conference Call with GM representatives

- We found the responses of the representatives at the GM conference call (with the Cadillac Accessories Manager and one Cadillac Program Manger) very supportive of our efforts and design. They also:
  - Liked the possibility of very quick installation (way below the 45 min. limit)
  - Liked the fact that changes to other interior components was minimal.
  - Confirmed that the deliverables we are producing (these reports, the customer data, the concept drawings and prototype) are in-line with their expectations.
  - Confirmed that our retail price goals were reasonable for the accessories market and our product in particular (\$400 for both tray tables)
- Additionally, the GM executives did not see the detachability as an immediate concern, as long as it is well made, easy to use, and easily storable (will fit well in rear map pocket or behind the back seats).

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