



50-50-50
Consulting

Building Financial Projections

February 2, 2017

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Nuts
and
Bolts
2/1/17





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Agenda

Business Plan Financials

- Building Financial Projections
- Cash Flow

Knowing your Audience & Dividing Equity

- What VCs (and \$100K Judges) Want
- Sharing the Pie



Background

- 1991 Sloan SM: Entrepreneurial Finance
- Third Place 1990 \$10K Contest
 - Summer Intern - Boston Capital Ventures
- '91 to '00 CFO: NetScout Systems (NTCT)
- \$51M in 2 VC financings
 - IPO in August 1999
- '02 to '07 CFO: Reveal Imaging Technologies
- 9 financing transactions
 - Sold to SAIC in 2010

Raised \$125 million in 10+ Transactions

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Life Goals



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GOALS BY 25th REUNION (SUMMER/2016)

2/14/91

- [Redacted]

- [Redacted]

- Be A Mentor & Angel investor for small startups / entrepreneurs

- [Redacted]

- [Redacted]

Life Goals

GOALS BY 25th REUNION (SUMMER/2016)

2/14/91

- [Redacted]

- [Redacted]

- [Redacted]

- Fly in F-16 type Fighter Plane And in cockpit of 737/767/747 type

- [Redacted]



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Life Goals

Go Home TONIGHT

- Write down what you hope to accomplish by your **10th** MIT reunion
- Write down what you hope to accomplish by your **25th** MIT reunion
- Contact me in 2042!

Table I Continued
(Single Life Expectancy)
(For Use by Beneficiaries)

Age	Life Expectancy	
56	28.7	
57	27.9	
58	27.0	
59	26.1	
60	25.2	

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- **Why are you here?**

- Start a business?
- Win \$100K contest?

- **What you need:**

- Product
- Team
- Customers
- **MONEY**
- **CASH = Oxygen**





Your Financial Plan

- The ROADMAP to determine cash needs
- AND the VEHICLE to obtain that cash

ALSO

- The process helps you understand:
 - Assumptions
 - Key Drivers
 - Milestones
 - Exposures/Risks



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Reveal Imaging Timeline

Always be Fundraising



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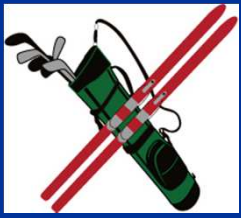
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- Q4 '02 Founded
- Q1 '03 Angel Round \$1M
- Q3 '03 VC: Series A-1 \$5M
- Q2 '04 Bank: Equipment Line \$500k
- Q3 '04 VC: Bridge Loan \$1M
- Q1 '05 VC: Series A-2 \$5M
- Q2 '05 Venture Debt \$4M
- Q3 '05 VC: Series B \$5M
- Q2 '06 Bank: A/R Line of Credit \$6M
- Q3 '06 Private Equity: Debt \$15M

Total of \$42.5M



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The Income Statement (Profit and Loss Statement)

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Sales (Revenue)	\$ 50.0	100%	After discounts
Cost of Goods Sold (COGS)	<u>\$ 20.0</u>	<u>40%</u>	Direct & indirect costs but NOT R&D
Gross Profit (Gross Margin)	\$ 30.0	60%	Sales minus COGS
Sales & Marketing (S&M)	\$ 15.0	30%	
Research & Development (R&D)	\$ 5.0	10%	
General & Admin (G&A)	<u>\$ 2.5</u>	<u>5%</u>	Rent, Accounting, HR, IT
Total Expenses	\$ 22.5	45%	
Operating Profit (EBITDA)	\$ 7.5	15%	Gross Profit minus Total Expenses

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Profit and Loss – 4 years



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P & L by Year

		Source	Year 1		Year 2		Year 3		Year 4	
Revenue										
Product Revenue	P&L By Qtr		\$1,700,000	95%	\$12,180,000	93%	\$34,810,000	92%	\$60,200,000	90%
Support Revenue	P&L By Qtr		\$87,656	5%	\$910,649	7%	\$3,037,887	8%	\$6,431,460	10%
Total Revenue			\$1,787,656	100%	\$13,090,649	100%	\$37,847,887	100%	\$66,631,460	100%
COGS										
Product COGS	P&L By Qtr		\$598,063	33%	\$3,009,288	23%	\$9,366,100	25%	\$16,216,400	24%
Support COGS	P&L By Qtr		\$326,975	18%	\$754,040	6%	\$1,355,383	4%	\$2,294,416	3%
Total COGS			\$925,038	52%	\$3,763,327	29%	\$10,721,483	28%	\$18,510,816	28%
Gross Margin			\$862,619	48%	\$9,327,322	71%	\$27,126,404	72%	\$48,120,644	72%
Expenses										
Engineering	P&L By Qtr		\$1,746,688	98%	\$3,824,863	29%	\$6,685,350	18%	\$11,415,663	17%
Marketing	P&L By Qtr		\$811,375	45%	\$2,076,000	16%	\$3,448,350	9%	\$5,268,750	8%
Sales	P&L By Qtr		\$1,316,500	74%	\$3,370,650	26%	\$6,016,050	16%	\$10,001,750	15%
G&A	P&L By Qtr		\$1,091,625	61%	\$2,161,100	17%	\$3,593,250	9%	\$5,138,250	8%
Operating Exp.			\$4,966,188	278%	\$11,432,613	87%	\$19,743,000	52%	\$31,824,413	48%
Operating Profit			\$(4,103,569)	-230%	\$(2,105,291)	-16%	\$7,383,404	20%	\$16,296,232	24%



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What Investors Will Look At



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P & L by Year		Source	Year 1		Year 2		Year 3		Year 4	
Revenue										
	Model 1	P&L By Qtr	\$ 1,275,000	100%	\$ 10,500,000	88%	\$ 33,750,000	82%	\$ 37,500,000	50%
	Model 2	P&L By Qtr	\$ -	0%	\$ 1,400,000	12%	\$ 5,250,000	13%	\$ 27,500,000	36%
	Model 3	P&L By Qtr	\$ -	0%	\$ -	0%	\$ 2,400,000	6%	\$ 10,500,000	14%
	Total Revenue		\$ 1,275,000	100%	\$ 11,900,000	100%	\$ 41,400,000	100%	\$ 75,500,000	100%
COGS		P&L By Qtr	\$ 425,000	33%	\$ 3,920,000	33%	\$ 13,385,000	32%	\$ 23,200,000	31%
Gross Margin			\$ 850,000	67%	\$ 7,980,000	67%	\$ 28,015,000	68%	\$ 52,300,000	69%
Expenses										
	Engineering	P&L By Qtr	\$ 1,326,625	104%	\$ 3,475,275	29%	\$ 7,212,188	17%	\$ 12,205,975	16%
	Marketing	P&L By Qtr	\$ 710,750	56%	\$ 1,810,750	15%	\$ 3,239,350	8%	\$ 5,300,000	7%
	Sales	P&L By Qtr	\$ 1,214,250	95%	\$ 3,466,500	29%	\$ 7,171,500	17%	\$ 12,393,500	16%
	G&A	P&L By Qtr	\$ 964,575	76%	\$ 1,817,750	15%	\$ 3,117,000	8%	\$ 5,308,500	7%
	Operating Exp.		\$ 4,216,200	331%	\$ 10,570,275	89%	\$ 20,740,038	50%	\$ 35,207,975	47%
Operating Profit			\$ (3,366,200)	-264%	\$ (2,590,275)	-22%	\$ 7,274,963	18%	\$ 17,092,025	23%



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Building YOUR Profit and Loss

A walkthrough of THE Spreadsheet



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P & L by Year

		Source	Year 1		Year 2		Year 3		Year 4	
Revenue										
Product Revenue	P&L By Qtr		\$1,700,000	95%	\$12,180,000	93%	\$34,810,000	92%	\$60,200,000	90%
Support Revenue	P&L By Qtr		\$87,656	5%	\$910,649	7%	\$3,037,887	8%	\$6,431,460	10%
Total Revenue			\$1,787,656	100%	\$13,090,649	100%	\$37,847,887	100%	\$66,631,460	100%
COGS										
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Operating Profit			\$(4,103,569)	-230%	\$(2,105,291)	-16%	\$7,383,404	20%	\$16,296,232	24%

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Profit and Loss - Quarterly



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P & L by Quarter	Source	Q1 Year 1	Q2 Year 1	Q3 Year 1	Q4 Year 1	Q1 Year 2	Q2 Year 2
Revenue							
Product Revenue	Sales Plan	\$-	\$200,000	\$500,000	\$1,000,000	\$1,740,000	\$2,610,000
Support Revenue	Sales Plan	\$-	\$7,500	\$24,375	\$55,781	\$107,086	\$178,189
Total Revenue		\$-	\$207,500	\$524,375	\$1,055,781	\$1,847,086	\$2,788,189
COGS							
Product COGS	COGS	\$84,000	\$114,000	\$146,500	\$253,563	\$492,575	\$698,538
Support COGS	COGS	\$75,900	\$77,900	\$82,400	\$90,775	\$153,161	\$174,252
Total COGS		\$159,900	\$191,900	\$228,900	\$344,338	\$645,736	\$872,790
Gross Margin		\$(84,000)	\$93,500	\$377,875	\$802,219	\$1,354,511	\$2,089,652
Expenses							
Engineering	Expenses	\$230,000	\$426,938	\$497,813	\$591,938	\$731,363	\$914,250
Marketing	Expenses	\$132,813	\$157,813	\$213,875	\$306,875	\$367,163	\$496,388
Sales	Expenses	\$160,563	\$240,250	\$411,000	\$504,688	\$623,450	\$809,925
G&A	Expenses	\$213,013	\$243,538	\$313,238	\$321,838	\$505,863	\$516,088
Operating Exp.		\$736,388	\$1,068,538	\$1,435,925	\$1,725,338	\$2,227,838	\$2,736,650
Operating Profit		\$(820,388)	\$(975,038)	\$(1,058,050)	\$(923,119)	\$(873,327)	\$(646,998)

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Sales

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Sales Plan	Source	Q1 Year 1	Q2 Year 1	Q3 Year 1	Q4 Year 1	Q1 Year 2	Q2 Year 2	Q3 Year 2	Q4 Year 2	
Unit Sales										
	Model 1	Input	-	20	50	100	200	300	400	500
	Model 2	Input	-	-	-	-	20	30	40	50
	Model 3	Input	-	-	-	-	-	-	-	-
	Total Units		-	20	50	100	220	330	440	550
Sales Price										
	Model 1	Input		\$10,000	\$10,000	\$10,000	\$7,500	\$7,500	\$7,500	\$7,500
	Model 2	Input					\$12,000	\$12,000	\$12,000	\$12,000
	Model 3	Input								
Product Revenue										
	Model 1		\$-	\$200,000	\$500,000	\$1,000,000	\$1,500,000	\$2,250,000	\$3,000,000	\$3,750,000
	Model 2		\$-	\$-	\$-	\$-	\$240,000	\$360,000	\$480,000	\$600,000
	Model 3		\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
	Total Product Revenue		\$-	\$200,000	\$500,000	\$1,000,000	\$1,740,000	\$2,610,000	\$3,480,000	\$4,350,000
Support Revenue										
	Installed Base		\$-	\$200,000	\$700,000	\$1,700,000	\$3,440,000	\$6,050,000	\$9,530,000	\$13,880,000
	Supported Base (retention)	75%	\$-	\$200,000	\$650,000	\$1,487,500	\$2,855,625	\$4,751,719	\$7,043,789	\$9,632,842
	Support Revenue	15%	\$-	\$7,500	\$24,375	\$55,781	\$107,086	\$178,189	\$264,142	\$361,232
Revenue										
	Sales Revenue		\$-	\$200,000	\$500,000	\$1,000,000	\$1,740,000	\$2,610,000	\$3,480,000	\$4,350,000
	Support Revenue		\$-	\$7,500	\$24,375	\$55,781	\$107,086	\$178,189	\$264,142	\$361,232
	Total Revenue		\$-	\$207,500	\$524,375	\$1,055,781	\$1,847,086	\$2,788,189	\$3,744,142	\$4,711,232

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COGS

Cost of Goods Sold		Source	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
			Year 1	Year 1	Year 1	Year 1	Year 2	Year 2	Year 2	Year 2
Unit Sales										
	Model 1	Sales Plan		20	50	100	200	300	400	500
	Model 2	Sales Plan					20	30	40	50
	Model 3	Sales Plan								
	Total Units		-	20	50	100	220	330	440	550
	Total Installed Units		-	20	70	170	390	720	1,160	1,710
	Total Supported Base	Sales Plan	\$0	\$200,000	\$650,000	\$1,487,500	\$2,855,625	\$4,751,719	\$7,043,789	\$9,632,842
Product COGS										
Mfg Staffing Plan										
	VP Mfg		1	1	1	1	1	1	1	1
	Supervisor	1 per 10				1	1	1	2	2
	Technician	1 unit/day	1	1	1	2	5	8	11	13
	Other/Admin		1	1	1	1	1	1	2	2
	Total MFG Staff		3	3	3	5	8	11	16	18
Variable COGS per Unit										
	Model 1		\$1,500	\$1,500	\$1,250	\$1,250	\$1,250	\$1,250	\$1,000	\$1,000
	Model 2						\$2,000	\$2,000	\$1,500	\$1,500
	Model 3									
	Model 1		\$-	\$30,000	\$62,500	\$125,000	\$250,000	\$375,000	\$400,000	\$500,000
	Model 2		\$-	\$-	\$-	\$-	\$40,000	\$60,000	\$60,000	\$75,000
	Model 3		\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
	Total Variable Costs		\$-	\$30,000	\$62,500	\$125,000	\$290,000	\$435,000	\$460,000	\$575,000
Product COGS										
	Salaries & Benefits		\$69,000	\$69,000	\$69,000	\$113,563	\$172,575	\$233,538	\$338,800	\$384,375
	Variable Costs	from above	\$-	\$30,000	\$62,500	\$125,000	\$290,000	\$435,000	\$460,000	\$575,000
	Facilities		\$15,000	\$15,000	\$15,000	\$15,000	\$30,000	\$30,000	\$30,000	\$30,000
	Total Product COGS		\$84,000	\$114,000	\$146,500	\$253,563	\$492,575	\$698,538	\$828,800	\$989,375

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Staffing Plan

Staffing Plan

Staff	Staff	Staff	Staff	Staff	Staff	Staff	Staff	Staff
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Year 1	Year 1	Year 1	Year 1	Year 2	Year 2	Year 2	Year 2	Year 2

Engineering

CTO	Input	1	1	1	1	1	1	1	1
VP Engineering	Input					1	1	1	1
Project Manager	Input	1	2	2	2	2	3	3	3
Programmer	Input	4	8	10	12	14	16	18	22
Tech Writer	Input	-	1	1	2	2	4	4	4
Other	Input	-	-	-	-	-	-	-	-
Total Eng		6	12	14	17	20	25	27	31

Marketing

VP Marketing	Input	1	1	1	1	1	1	1	1
Product Manager	Input	1	1	2	2	3	3	4	4
Mar-Com	Input	-	-	1	1	2	2	2	2
Other	Input	1	1	1	2	2	2	3	3
Total Mktg		3	3	5	6	8	8	10	10

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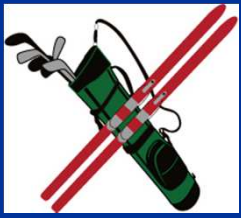
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Salary Expenses

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Staffing Plan	Annual Salary	Expense Q1 Year 1	Expense Q2 Year 1	Expense Q3 Year 1	Expense Q4 Year 1	Expense Q1 Year 2	Expense Q2 Year 2	Expense Q3 Year 2	Expense Q4 Year 2	
		Benefits/COLA ->								
		115%	115%	115%	115%	117%	119%	121%	123%	
Engineering										
CTO	\$175,000	\$50,313	\$50,313	\$50,313	\$50,313	\$51,188	\$52,063	\$52,938	\$53,813	
VP Engineering	\$150,000	\$-	\$-	\$-	\$-	\$43,875	\$44,625	\$45,375	\$46,125	
Project Manager	\$125,000	\$35,938	\$71,875	\$71,875	\$71,875	\$73,125	\$111,563	\$113,438	\$115,313	
Programmer	\$85,000	\$97,750	\$195,500	\$244,375	\$293,250	\$348,075	\$404,600	\$462,825	\$575,025	
Tech Writer	\$60,000	\$-	\$17,250	\$17,250	\$34,500	\$35,100	\$71,400	\$72,600	\$73,800	
Other	\$80,000	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	
Total Eng		To Dept Exp	\$184,000	\$334,938	\$383,813	\$449,938	\$551,363	\$684,250	\$747,175	\$864,075
Marketing										
VP Marketing	\$175,000	\$50,313	\$50,313	\$50,313	\$50,313	\$51,188	\$52,063	\$52,938	\$53,813	
Product Manager	\$120,000	\$34,500	\$34,500	\$69,000	\$69,000	\$105,300	\$107,100	\$145,200	\$147,600	
Mar-Com	\$75,000	\$-	\$-	\$21,563	\$21,563	\$43,875	\$44,625	\$45,375	\$46,125	
Other	\$80,000	\$23,000	\$23,000	\$23,000	\$46,000	\$46,800	\$47,600	\$72,600	\$73,800	
Total Mktg		To Dept Exp	\$107,813	\$107,813	\$163,875	\$186,875	\$247,163	\$251,388	\$316,113	\$321,338

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Non-Salary Expenses

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Departmental Expenses	Source	Q1 Year 1	Q2 Year 1	Q3 Year 1	Q4 Year 1
Engineering					
Salaries & Benefits	Staffing Plan	\$184,000	\$334,938	\$383,813	\$449,938
Tech Supplies (PP/PM)	\$2,000 input/formula	\$36,000	\$72,000	\$84,000	\$102,000
Misc / Other	input	\$10,000	\$20,000	\$30,000	\$40,000
Total Engineering	To P&L	\$230,000	\$426,938	\$497,813	\$591,938
Marketing					
Salaries & Benefits	Staffing Plan	\$107,813	\$107,813	\$163,875	\$186,875
Literature / PR	input	\$5,000	\$5,000	\$10,000	\$10,000
Trade Shows	input	\$-	\$25,000	\$-	\$50,000
Misc / Other	input	\$20,000	\$20,000	\$40,000	\$60,000
Total Marketing	To P&L	\$132,813	\$157,813	\$213,875	\$306,875

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Non-Salary Expenses

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Sales

Salaries & Benefits		Staffing Plan	\$136,563	\$201,250	\$345,000	\$409,688
Travel (PP/PM)	\$3,000	input/formula	\$9,000	\$18,000	\$36,000	\$45,000
Commission (% Rev)	3.00%	input/formula	\$-	\$6,000	\$15,000	\$30,000
Misc / Other		input	\$15,000	\$15,000	\$15,000	\$20,000
Total Sales		To P&L	\$160,563	\$240,250	\$411,000	\$504,688

General & Admin

Salaries & Benefits		Staffing Plan	\$107,813	\$127,938	\$185,438	\$185,438
Legal / Audit			\$30,000	\$30,000	\$30,000	\$30,000
Rent		See Below	\$50,000	\$50,000	\$50,000	\$50,000
Tel & Internet (PP/PM)	\$200	input/formula	\$10,200	\$15,600	\$22,800	\$26,400
Misc / Other		input	\$15,000	\$20,000	\$25,000	\$30,000
Total G&A		To P&L	\$213,013	\$243,538	\$313,238	\$321,838

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Profit and Loss Statement Quarterly

P & L by Quarter	Source	Q1 Year 1	Q2 Year 1	Q3 Year 1	Q4 Year 1	Q1 Year 2	Q2 Year 2
Revenue							
Product Revenue	Sales Plan	\$-	\$200,000	\$500,000	\$1,000,000	\$1,740,000	\$2,610,000
Support Revenue	Sales Plan	\$-	\$7,500	\$24,375	\$55,781	\$107,086	\$178,189
Total Revenue		\$-	\$207,500	\$524,375	\$1,055,781	\$1,847,086	\$2,788,189
COGS							
Product COGS	COGS	\$84,000	\$114,000	\$146,500	\$253,563	\$492,575	\$698,538
Support COGS	COGS	\$75,900	\$77,900	\$82,400	\$90,775	\$153,161	\$174,252
Total COGS		\$159,900	\$191,900	\$228,900	\$344,338	\$645,736	\$872,790
Gross Margin		\$(84,000)	\$93,500	\$377,875	\$802,219	\$1,354,511	\$2,089,652
Expenses							
Engineering	Expenses	\$230,000	\$426,938	\$497,813	\$591,938	\$731,363	\$914,250
Marketing	Expenses	\$132,813	\$157,813	\$213,875	\$306,875	\$367,163	\$496,388
Sales	Expenses	\$160,563	\$240,250	\$411,000	\$504,688	\$623,450	\$809,925
G&A	Expenses	\$213,013	\$243,538	\$313,238	\$321,838	\$505,863	\$516,088
Operating Exp.		\$736,388	\$1,068,538	\$1,435,925	\$1,725,338	\$2,227,838	\$2,736,650
Operating Profit		\$(820,388)	\$(975,038)	\$(1,058,050)	\$(923,119)	\$(873,327)	\$(646,998)

Red – Input

Black – Calculated

Magenta – TO another spreadsheet

Blue – FROM another spreadsheet



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Cash Flow Projections

**Happiness is a positive cash flow
Or at least knowing when you need to raise more**

- Burn Rate
 - Monthly operating loss plus capital expenditures
- Cash Flow Projection
 - When you need cash based on projected burn rates
- To determine the total cash required
 - Cumulative operating losses PLUS
 - Cumulative capital expenses
 - On the month that you turn cash positive

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CAPEX & Cash Flow

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Cash Flow	Source	Q1	Q2	Q3	Q4	Q1
		Year 1	Year 1	Year 1	Year 1	Year 2
Beginning Cash		\$-	\$4,019,713	\$2,607,275	\$923,950	\$11,090,650
Investment	Input	\$5,000,000	\$-	\$-	\$12,000,000	
Total Revenue	From P&L Quarterly * * delay 1 quarter	\$-	\$-	\$207,500	\$524,375	\$1,055,781
COGS Expenses	From P&L Quarterly	\$(159,900)	\$(191,900)	\$(228,900)	\$(344,338)	\$(645,736)
Departmental Expenses	From P&L Quarterly	\$(736,388)	\$(1,068,538)	\$(1,435,925)	\$(1,725,338)	\$(2,227,838)
Capital Expense	From P&L CAPEX	\$(84,000)	\$(152,000)	\$(226,000)	\$(288,000)	\$(312,000)
Change in Cash		\$4,019,713	\$(1,412,438)	\$1,683,325	\$10,166,700	\$(2,129,793)
Ending Balance		\$4,019,713	\$2,607,275	\$923,950	\$11,090,650	\$8,960,858

Capital Expenses		Q1	Q2	Q3	Q4	Q1
		Year 1	Year 1	Year 1	Year 1	Year 1
Employee Workstations (PP)	\$2,000	\$34,000	\$52,000	\$76,000	\$88,000	\$112,000
Prototype Expenses	Input	\$50,000	\$100,000	\$150,000	\$200,000	\$200,000
		\$84,000	\$152,000	\$226,000	\$288,000	\$312,000
Cumulative CAPEX		\$84,000	\$236,000	\$462,000	\$750,000	\$1,062,000

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Blue – FROM another spreadsheet



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Think like a CFO

I need to build a financial model for an enterprise software company who expects to grow to between \$30M - \$50M and I am looking for input as to what are reasonable benchmarks for:

- Total Gross Margin %, assuming there is a 4-6 month professional services requirement to implement the software
- Sales & Marketing as a % of revenue
- Product Development as a % of revenue
- G&A as a % of revenue
- EBITDA as a % of revenue

Anyone who wish to talk through the benchmarks, please contact me.

Thanks

Eric



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“The Business Model”

Your Income Statement in % terms

- Once the business reaches “critical mass”
 - o Unit volume
 - o Geography
 - o Transactions or Customers

Explains the business’s dynamics

- Gross Margin
- S&M required to generate revenue

Documents you can make money



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Business Models - Retail



WAL*MART*

TARGET

NORDSTROM

	WAL*MART*	TARGET	NORDSTROM
Revenue	100%	100%	100%
COGS	76%	66%	63%
Gross Margin	24%	34%	37%
R&D	0%	0%	0%
SGA	18%	23%	27%
Expenses	18%	23%	27%
Op Profit	6%	11%	10%
Annual Revenue	\$344B	\$59B	\$8.5B
Employees	1.9M	352k	53k
Rev per Emp per Yr	\$181k	\$167k	\$160k



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Business Models – Fast Food



	McDonald's	Wendy's	Starbucks
Revenue	100%	100%	100%
COGS	68%	76%	42%
Gross Margin	32%	24%	58%
R&D	0%	0%	0%
SGA	11%	14%	42%
Expenses	11%	14%	42%
Op Profit	21%	11%	16%
Annual Revenue	\$21B	\$2.2B	\$9.4B
Employees	465k	46k	144k
Rev per Emp per Yr	\$45k	\$48k	\$65k



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Business Models – Tech H/W



Revenue	100%	100%	100%	100%
COGS	36%	47%	83%	26%
Gross Margin	64%	53%	17%	74%
R&D	13%	11%	1%	10%
SGA	26%	29%	10%	34%
Expenses	39%	40%	11%	44%
Op Profit	25%	13%	6%	30%
Annual Revenue	\$35B	\$11B	\$57B	\$12B
Employees	61k	31k	90k	38k
Rev per Emp perYr	\$573k	\$358k	\$633k	\$323k



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Business Models – Tech S/W



ORACLE



	Microsoft	ORACLE	SAP
Revenue	100%	100%	100%
COGS	19%	23%	34%
Gross Margin	81%	77%	66%
R&D	13%	12%	14%
SGA	24%	30%	25%
Expenses	37%	42%	39%
Op Profit	44%	35%	27%
Annual Revenue	\$51B	\$18B	\$12B
Employees	79k	75k	43k
Rev per Emp per Yr	\$645k	\$240k	\$288k

Business Models – Internet



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	Apple	Google	Facebook	Zynga	LinkedIn	OpenTable	P
Revenue	100%	100%	100%	100%	100%	100%	100%
COGS	56%	35%	25%	27%	15%	27%	62%
Gross Margin	44%	65%	75%	73%	85%	73%	38%
R&D	2%	14%	10%	31%	23%	9%	4%
S&M		12%	11%	13%	30%	19%	22%
G&A	6%	9%	10%	11%	21%	14%	12%
Total Expenses	9%	34%	31%	56%	74%	42%	38%
Operating Profit	35%	31%	44%	17%	11%	31%	0%
Annual Rev (M)	\$156,508	\$37,905	\$5,048	\$1,140	\$522	\$139	\$274
Employees	75,000	32,500	4,300	2,850	2,100	550	530
Rev/Emp (000)	\$2,087	\$1,166	\$1,174	\$400	\$249	\$253	\$517

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Own your financial plan

- Don't delegate building the financial plan
- Generate Sales Projections from the bottom up
- Do NOT project best-case/worst-case

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Presentation Suggestions

- Steady, consistent evolution of your model
 - Revenue growth in \$
 - Expenses over time in %
- Show % next to quarterly & yearly columns
- Show pre-tax only
- Do NOT allocate G&A expenses
- Do NOT depreciate capital expenses
- Remove color coding, source, and rev/employee



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Charlie's Rules-of-Thumb

Disclaimer

- Focused on making attractive to investors
- Most relevant for technology companies
- May not apply to your industry
- May not apply to your company



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Building a Tech Model

- What is your product
 - Price that customer will pay
 - COGS - Unit costs & mfg O/H & support
- Distribution Strategy will impact
 - Your sales price
 - S & M and support expenses
- R&D should end up at 10% to 20%
- G&A should end up at 5% to 15%
- Target an operating profit of 15% to 20%

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Charlie's Rules-of-Thumb

- Sales Projections
 - Grow to \$50M to \$100M by year 5
- Revenue per Employee
 - Between \$250K and \$400K
- Revenue per Salesperson
 - Between \$1M and \$3M
- Most common Business Plan errors:
 - Revenue too high in year 4
 - Profit margin too high in year 4

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Charlie's Rules-of-Thumb

Staffing **DRIVES** departmental expenses

- Average employee salary will be \$90K or more
- Employee benefits will add 20%
- Salaries will be 66% of total expenses (non-COGS)
 - Remainder will be rent, utilities, travel, etc.
 - UNLESS you have extraordinary marketing
 - Will reduce to 55% to 60% over time
- Sales staff will cost \$175 to \$250k per person per year
 - ~\$200k compensation (50% base, 50% commission)
 - \$50k in annual travel costs



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How Much to Pay Yourself

VCs

- Don't want their entrepreneurs to starve
BUT
DO want them to be hungry
- Don't want you to spend your own money
BUT
DO want you to spend money like it was your own



Sharing the Pie

Thoughts on Equity Distribution



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What VCs Want

- VC Requirements
 - Get a “significant” amount of \$ invested (at least \$5M - \$10M)
 - Own a “significant” ownership % (50% +/-)
 - Target a 4x absolute returns in 7 years
- The “Formula”
 - $VC \% = \$invested / (pre\text{-}money\ valuation + \$invested)$
 - Pre-money valuation is company’s value prior to investment
 - $Post\text{-}money\ valuation = pre\text{-}money + \$invested$
- Example
 - \$4M investment on a \$6M pre-money valuation
 - $VC \% = \$4M / (\$6M + \$4M) = 4 / 10 = 40\%$



Typical VCs Scenario

- 2 Investment Rounds (A & B)
 - Series A - \$5M invested on \$5M pre-money (50%)
 - Series B - \$10M invested on \$15M pre-money (40%)
 - Note – Series A 50% ownership is diluted by 40% to 30%
- \$ Invested and Ownership %
 - VC has \$15M invested
 - VC owns 70% (30% + 40%)
- Result
 - Target 4x return= $4 \times \$15M = \$60M + \$15M = \$75M$
 - Company exit needs to be \$108M for 70% to be worth \$75M
 - To get a \$108M valuation, revenues need to be \$50M

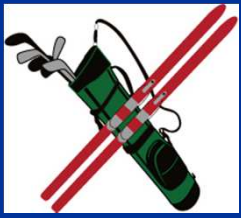
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Typical Dilution

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	At Founding		After Early Emp.		Post Angel		Post VC 1		Post VC 2	
	Shares	%	Shares	%	Shares	%	Shares	%	Shares	%
Founders	4,000,000	100.0%	4,000,000	88.9%	4,000,000	80.0%	4,000,000	30.3%	4,000,000	18.2%
Key Early Employees	-	0.0%	425,000	9.4%	425,000	8.5%	425,000	3.2%	425,000	1.9%
Advisors	-	0.0%	75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%
Option Plan	-	0.0%	-	0.0%	-	0.0%	1,610,000	12.2%	1,610,000	7.3%
Investors										
Angels (\$500K at \$4.5MM)					500,000	10.0%	500,000	3.8%	500,000	2.3%
VC Round (\$5MM at \$5MM)							6,610,000	50.0%	6,610,000	30.0%
VC Round (\$10MM at \$15MM)									8,813,333	40.0%
Total Investors	-	0.0%	-	0.0%	500,000	10.0%	7,110,000	53.8%	15,923,333	72.3%
Grand Total	<u>4,000,000</u>	<u>100%</u>	<u>4,500,000</u>	<u>100%</u>	<u>5,000,000</u>	<u>100%</u>	<u>13,220,000</u>	<u>100%</u>	<u>22,033,333</u>	<u>100%</u>

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Equity Distribution Philosophy

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- Compensate for:
 - Ownership of IP
 - COMMITMENT
 - Risk (stage of company, e.g. pre-funding)
 - Sacrifice (e.g. external compensation)
 - Past & future contribution
- Work to be Completed > Work Completed
- Maintain internal equity
- Maintain external equity
- EVERYONE should vest – 4 years

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Employee Specifics

Ownership % after 2 rounds of financing

CEO	5%
VP	1% to 2 1/2 %
Sr Manager	.25% (1/4 of 1%)
Sr Ind Contributor	.1% (1/10 of 1%)

- Founding management might get 2x to 3x
- Founding employees might get 5x to 10x

YOU CAN ALWAYS GRANT MORE LATER



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Equity Distribution Example

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Name	Title	#	Initial		After Early Employees		Post Angel		Post VC 1		Post VC 2		PP		
			Shares	%	Shares	%	Shares	%	Shares	%	Shares	%			
Founders															
Jack	CEO		2,000,000	50.0%	2,000,000	44.4%	2,000,000	40.0%	2,000,000	15.1%	2,000,000	9.1%			
Susan	CTO		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%			
Anil	VP Sales		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%			
Total			4,000,000	100.0%	4,000,000	88.9%	4,000,000	80.0%	4,000,000	30.3%	4,000,000	18.2%			
Key Early Employees															
Jack	VP R&D				250,000	5.6%	250,000	5.0%	250,000	1.9%	250,000	1.1%			
Julie	Manager 1				100,000	2.2%	100,000	2.0%	100,000	0.8%	100,000	0.5%			
Sam	Manager 2				75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%			
Total			-	0.0%	425,000	9.4%	425,000	8.5%	425,000	3.2%	425,000	1.9%			
Advisors															
Board Members		25,000	3			75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%	0.11%	
Total						75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%		
Option Plan															
Manager		50,000	10						500,000	3.8%	500,000	2.3%	0.23%		
Sr. Eng		25,000	20						500,000	3.8%	500,000	2.3%	0.11%		
Jr. Eng		15,000	40						600,000	4.5%	600,000	2.7%	0.07%		
Admin		1,000	10						10,000	0.1%	10,000	0.0%			
Total			80	-	0.0%	-	0.0%	-	0.0%	1,610,000	12.2%	1,610,000	7.3%		
Investors															
Angels (\$500K at \$4.5MM)								500,000	10.0%	500,000	3.8%	500,000	2.3%		
VC Round (\$5MM at \$5MM)										6,610,000	50.0%	6,610,000	30.0%		
VC Round (\$10MM at \$15MM)												8,813,333	40.0%		
Total								500,000	10.0%	7,110,000	53.8%	15,923,333	72.3%		
Grand Total						4,000,000	100%	4,500,000	100%	5,000,000	100%	13,220,000	100%	22,033,333	100%



At Company Founding

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Name	Title	#	Initial		After Early Employees		Post Angel		Post VC 1		Post VC 2			
			Shares	%	Shares	%	Shares	%	Shares	%	Shares	%		
Founders														
Jack	CEO		2,000,000	50.0%	2,000,000	44.4%	2,000,000	40.0%	2,000,000	15.1%	2,000,000	9.1%		
Susan	CTO		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%		
Anil	VP Sales		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%		
Total			4,000,000	100.0%	4,000,000	88.9%	4,000,000	80.0%	4,000,000	30.3%	4,000,000	18.2%		
Key Early Employees														
Jack	VP R&D				250,000	5.6%	250,000	5.0%	250,000	1.9%	250,000	1.1%		
Julie	Manager 1				100,000	2.2%	100,000	2.0%	100,000	0.8%	100,000	0.5%		
Sam	Manager 2				75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%		
Total					-	0.0%	425,000	9.4%	425,000	8.5%	425,000	1.9%		
Advisors														
		Per Person #												
Board Members		25,000	3		75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%		
Total					-	0.0%	75,000	1.7%	75,000	1.5%	75,000	0.3%		
Option Plan														
		Per Person #												
Manager		50,000	10						500,000	3.8%	500,000	2.3%		
Sr. Eng		25,000	20						500,000	3.8%	500,000	2.3%		
Jr. Eng		15,000	40						600,000	4.5%	600,000	2.7%		
Admin		1,000	10						10,000	0.1%	10,000	0.0%		
Total			80		-	0.0%	-	0.0%	1,610,000	12.2%	1,610,000	7.3%		
Investors														
Angels (\$500K at \$4.5MM)								500,000	10.0%	500,000	3.8%	500,000	2.3%	
VC Round (\$5MM at \$5MM)										6,610,000	50.0%	6,610,000	30.0%	
VC Round (\$10MM at \$15MM)												8,813,333	40.0%	
Total					-	0.0%	-	0.0%	500,000	10.0%	7,110,000	53.8%	15,923,333	72.3%
Grand Total					4,000,000	100%	4,500,000	100%	5,000,000	100%	13,220,000	100%	22,033,333	100%



After Early Employees

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Name	Title	#	Initial		After Early Employees		Post Angel		Post VC 1		Post VC 2			
			Shares	%	Shares	%	Shares	%	Shares	%	Shares	%		
Founders														
Jack	CEO		2,000,000	50.0%	2,000,000	44.4%	2,000,000	40.0%	2,000,000	15.1%	2,000,000	9.1%		
Susan	CTO		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%		
Anil	VP Sales		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%		
Total			4,000,000	100.0%	4,000,000	88.9%	4,000,000	80.0%	4,000,000	30.3%	4,000,000	18.2%		
Key Early Employees														
Jack	VP R&D				250,000	5.6%	250,000	5.0%	250,000	1.9%	250,000	1.1%		
Julie	Manager 1				100,000	2.2%	100,000	2.0%	100,000	0.8%	100,000	0.5%		
Sam	Manager 2				75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%		
Total					-	0.0%	425,000	9.4%	425,000	8.5%	425,000	1.9%		
Advisors														
			Per Person #									PP		
Board Members		25,000	3		75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%	0.11%	
Total					-	0.0%	75,000	1.7%	75,000	1.5%	75,000	0.3%		
Option Plan														
			Per Person #									PP		
Manager		50,000	10						500,000	3.8%	500,000	2.3%	0.23%	
Sr. Eng		25,000	20						500,000	3.8%	500,000	2.3%	0.11%	
Jr. Eng		15,000	40						600,000	4.5%	600,000	2.7%	0.07%	
Admin		1,000	10						10,000	0.1%	10,000	0.0%		
Total			80		-	0.0%	-	0.0%	1,610,000	12.2%	1,610,000	7.3%		
Investors														
Angels (\$500K at \$4.5MM)								500,000	10.0%	500,000	3.8%	500,000	2.3%	
VC Round (\$5MM at \$5MM)										6,610,000	50.0%	6,610,000	30.0%	
VC Round (\$10MM at \$15MM)												8,813,333	40.0%	
Total					-	0.0%	-	0.0%	500,000	10.0%	7,110,000	53.8%	15,923,333	72.3%
Grand Total					4,000,000	100%	4,500,000	100%	5,000,000	100%	13,220,000	100%	22,033,333	100%



After Angel Round

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Name	Title	#	Initial		After Early Employees		Post Angel		Post VC 1		Post VC 2			
			Shares	%	Shares	%	Shares	%	Shares	%	Shares	%		
Founders														
Jack	CEO		2,000,000	50.0%	2,000,000	44.4%	2,000,000	40.0%	2,000,000	15.1%	2,000,000	9.1%		
Susan	CTO		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%		
Anil	VP Sales		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%		
Total			4,000,000	100.0%	4,000,000	88.9%	4,000,000	80.0%	4,000,000	30.3%	4,000,000	18.2%		
Key Early Employees														
Jack	VP R&D				250,000	5.6%	250,000	5.0%	250,000	1.9%	250,000	1.1%		
Julie	Manager 1				100,000	2.2%	100,000	2.0%	100,000	0.8%	100,000	0.5%		
Sam	Manager 2				75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%		
Total					-	0.0%	425,000	9.4%	425,000	3.2%	425,000	1.9%		
Advisors														
												PP		
Board Members		25,000	3		75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%	0.11%	
Total					-	0.0%	75,000	1.7%	75,000	0.6%	75,000	0.3%		
Option Plan														
												PP		
Manager		50,000	10						500,000	3.8%	500,000	2.3%	0.23%	
Sr. Eng		25,000	20						500,000	3.8%	500,000	2.3%	0.11%	
Jr. Eng		15,000	40						600,000	4.5%	600,000	2.7%	0.07%	
Admin		1,000	10						10,000	0.1%	10,000	0.0%		
Total			80						1,610,000	12.2%	1,610,000	7.3%		
Investors														
Angels (\$500K at \$4.5MM)								500,000	10.0%	500,000	3.8%	500,000	2.3%	
VC Round (\$5MM at \$5MM)										6,610,000	50.0%	6,610,000	30.0%	
VC Round (\$10MM at \$15MM)												8,813,333	40.0%	
Total								500,000	10.0%	7,110,000	53.8%	15,923,333	72.3%	
Grand Total					4,000,000	100%	4,500,000	100%	5,000,000	100%	13,220,000	100%	22,033,333	100%



After VC Round 1

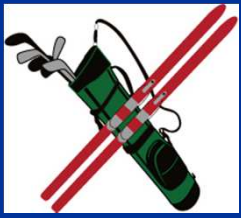
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Name	Title	#	Initial		After Early Employees		Post Angel		Post VC 1		Post VC 2		PP	
			Shares	%	Shares	%	Shares	%	Shares	%	Shares	%		
Founders														
Jack	CEO		2,000,000	50.0%	2,000,000	44.4%	2,000,000	40.0%	2,000,000	15.1%	2,000,000	9.1%		
Susan	CTO		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%		
Anil	VP Sales		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%		
Total			4,000,000	100.0%	4,000,000	88.9%	4,000,000	80.0%	4,000,000	30.3%	4,000,000	18.2%		
Key Early Employees														
Jack	VP R&D				250,000	5.6%	250,000	5.0%	250,000	1.9%	250,000	1.1%		
Julie	Manager 1				100,000	2.2%	100,000	2.0%	100,000	0.8%	100,000	0.5%		
Sam	Manager 2				75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%		
Total			-	0.0%	425,000	9.4%	425,000	8.5%	425,000	3.2%	425,000	1.9%		
Advisors														
			Per Person #											
Board Members		25,000	3		75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%	0.11%	
Total		-	0.0%		75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%		
Option Plan														
			Per Person #											
Manager		50,000	10						500,000	3.8%	500,000	2.3%	0.23%	
Sr. Eng		25,000	20						500,000	3.8%	500,000	2.3%	0.11%	
Jr. Eng		15,000	40						600,000	4.5%	600,000	2.7%	0.07%	
Admin		1,000	10						10,000	0.1%	10,000	0.0%		
Total		80	-	0.0%	-	0.0%	-	0.0%	1,610,000	12.2%	1,610,000	7.3%		
Investors														
Angels (\$500K at \$4.5MM)								500,000	10.0%	500,000	3.8%	500,000	2.3%	
VC Round (\$5MM at \$5MM)										6,610,000	50.0%	6,610,000	30.0%	
VC Round (\$10MM at \$15MM)												8,813,333	40.0%	
Total		-	0.0%		-	0.0%		500,000	10.0%	7,110,000	53.8%	15,923,333	72.3%	
Grand Total		4,000,000	100%		4,500,000	100%		5,000,000	100%	13,220,000	100%	22,033,333	100%	



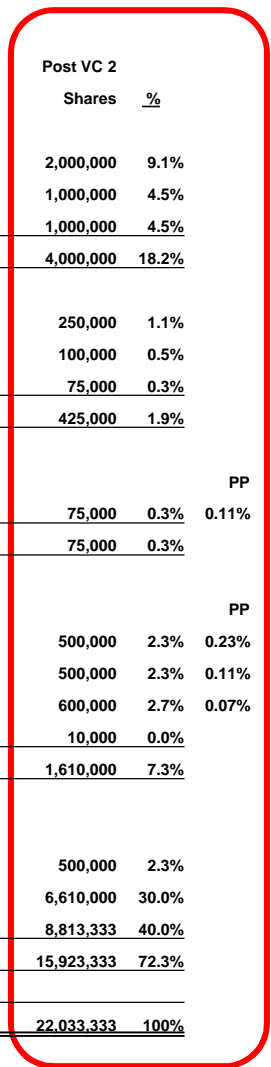
After VC Round 2

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Name	Title	#	Initial		After Early Employees		Post Angel		Post VC 1		Post VC 2		PP		
			Shares	%	Shares	%	Shares	%	Shares	%	Shares	%			
Founders															
Jack	CEO		2,000,000	50.0%	2,000,000	44.4%	2,000,000	40.0%	2,000,000	15.1%	2,000,000	9.1%			
Susan	CTO		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%			
Anil	VP Sales		1,000,000	25.0%	1,000,000	22.2%	1,000,000	20.0%	1,000,000	7.6%	1,000,000	4.5%			
Total			4,000,000	100.0%	4,000,000	88.9%	4,000,000	80.0%	4,000,000	30.3%	4,000,000	18.2%			
Key Early Employees															
Jack	VP R&D				250,000	5.6%	250,000	5.0%	250,000	1.9%	250,000	1.1%			
Julie	Manager 1				100,000	2.2%	100,000	2.0%	100,000	0.8%	100,000	0.5%			
Sam	Manager 2				75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%			
Total			-	0.0%	425,000	9.4%	425,000	8.5%	425,000	3.2%	425,000	1.9%			
Advisors															
Board Members		25,000	3			75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%	0.11%	
Total						75,000	1.7%	75,000	1.5%	75,000	0.6%	75,000	0.3%		
Option Plan															
Manager		50,000	10						500,000	3.8%	500,000	2.3%	0.23%		
Sr. Eng		25,000	20						500,000	3.8%	500,000	2.3%	0.11%		
Jr. Eng		15,000	40						600,000	4.5%	600,000	2.7%	0.07%		
Admin		1,000	10						10,000	0.1%	10,000	0.0%			
Total			80	-	0.0%	-	0.0%	-	1,610,000	12.2%	1,610,000	7.3%			
Investors															
Angels (\$500K at \$4.5MM)								500,000	10.0%	500,000	3.8%	500,000	2.3%		
VC Round (\$5MM at \$5MM)										6,610,000	50.0%	6,610,000	30.0%		
VC Round (\$10MM at \$15MM)												8,813,333	40.0%		
Total								500,000	10.0%	7,110,000	53.8%	15,923,333	72.3%		
Grand Total						4,000,000	100%	4,500,000	100%	5,000,000	100%	13,220,000	100%	22,033,333	100%





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Questions?

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