RAISING STARTUP CAPITAL

SESSION 2: FINANCIAL MODELING

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HELLO.

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HI. MY NAME IS…

Nathan Beckord, CFA. Principal, www.VentureArchetypes.com

- My Job: Startup CFO, Advisor, and BD Guy
- 100+ Startup clients over the past eight years
  - E.g. Kickstarter, Clicker, Autonet, Zerply, GetHired, etc.
- Clients have collectively raised over $98 million in seed capital and achieved 5 exits
  - Example: I ran financial modeling for Clicker.com, which raised 2 rounds of VC and sold for $100m in 3 years.
- Previous Career: Technology Valuation | Investment Banking | Venture Capital
- Chartered Financial Analyst (CFA) and MBA

WHY MODEL?

- A financial model is a **strategic framework** for thinking through the **key drivers** of your business
- A financial model is also an **operating plan** and **roadmap** for your startup…sales targets, hiring, marketing plan, etc.
- A good financial model is a mark of **credibility** and can help **convince investors** of the overall potential of your opportunity
- A model provides **operational metrics** that help drive better **strategic decision-making**
- A model tells you **how much money** you need to **raise** and **when,** as well as overall **ROI.**

VC'S PERSPECTIVE

"I look at financials because they are a credibility test for the entrepreneur … A good entrepreneur understands both the technical and business opportunities and how to flesh out the numbers behind it"

- *Russel Siegelman, Kleiner Perkins Caufiled & Byers*

"I look at financials to see if they make sense. I actually look at them more for mistakes. If someone thinks they will have 40% after-tax margin after 5 years, they clearly do not understand the cost of running a business"

- *Sonja Hoel, Managing Director, Menlo Ventures*

"The financial model discussion is more often a good insight into how smart a team is."

- *Fred Wang, Trinity Ventures*

MORE

Dream the Vision, but Live the Numbers

Gaurav Tewari http://mashable.com/2011/06/28/vc-partnership-pitch-tips/

"CEOs and entrepreneurs are typically good at communicating their big-picture excitement for their company and its market opportunity. In fact, this ability to "sell" others on your big vision probably played a key role in your initial success with employees and investors.

*During the partnership pitch, be sure to **complement your qualitative vision with a firm grasp of your key numbers.** As companies evolve and grow, investors expect them to become increasingly **data-driven** and **grounded in quantitative facts.** As my colleague Dan Nova is fond of saying, "You can fly an airplane at low altitudes by looking out the window, but when you're above the clouds, you need control panels and instrumentation to avoid veering off course, or worse, crashing into a mountain."*

*Demonstrate your data-driven management by **exhibiting fluency in the key numbers of your business.** What constitutes "key numbers" will differ depending on the nature of your business, but it is safe to say that **historical and forecasted financials, capital structure, important operational metrics, terms of key contracts, major expense categories, etc. are fair game."***

10 BEST PRACTICES

1. Build it bottoms-up, on a month basis
2. Identify key business drivers
3. Use benchmarks & comps
4. Focus on the first two years
5. Make it easy to change / edit
6. Build it to scale (+/-)
7. "Over-scenario-lize" (best case, middle, worst case)
8. Be comprehensive with headcount (typically, the biggest cost)
9. Apply multiple sanity checks: "Does this look <u>reasonable?"</u>
10. Cash flow is king + Never run out of cash!

FIRST THINGS FIRST…

What Type of Company Are You?

What value do you provide to customers?

How can you monetize the value you are delivering?

What does it cost you to deliver this value?

--

7 GOLDEN QUESTIONS

1. *How* do you get users / customers? = **marketing / sales**
2. How *rapidly* do you get customers? = **growth curve**
3. Once you get them, *what do they do?* = **activity streams**
4. Once they are doing things, how do you *monetize?* = **business model**
5. What does it *cost* to keep it all running? = **COGS, OpEx**

+

6. What is *left over* at the end of the day? = **cash flow**
7. *What will it take* to put these wheels in motion? = **investment capital**

http://howto.wired.com/wiki/Make_Money_Around_Free_Content

OK, LET'S MODEL!

Times Table - 12x12

	1	2	3	4	5	6	7	8	9	10	11	12
1	**1**	2	3	4	5	6	7	8	9	10	11	12
2	2	**4**	6	8	10	12	14	16	18	20	22	24
3	3	6	**9**	12	15	18	21	24	27	30	33	36
4	4	8	12	**16**	20	24	28	32	36	40	44	48
5	5	10	15	20	**25**	30	35	40	45	50	55	60
6	6	12	18	24	30	**36**	42	48	54	60	66	72
7	7	14	21	28	35	42	**49**	56	63	70	77	84
8	8	16	24	32	40	48	56	**64**	72	80	88	96
9	9	18	27	36	45	54	63	72	**81**	90	99	108
10	10	20	30	40	50	60	70	80	90	**100**	110	120
11	11	22	33	44	55	66	77	88	99	110	**121**	132
12	12	24	36	48	60	72	84	96	108	120	132	**144**

Don't be intimidated– a model is really just a ***large multiplication table.***

You ***do*** *know how to* ***multiply,*** *don't you?*

GETTING STARTED: REVENUE BUILD-UP

- Approach #1: Existing Pipeline + Annual Growth
  – Take historical or pending sales and grow by reasonable % over time
- Approach #2: Direct Sales Model Using Salesperson Ramp
  – Build a realistic salesperson hiring plan and establish per-rep quotas
  – Build in revenue lines for upsells, ancillary revenue, maintenance, etc.
- Approach #3: User Adoption & Conversion (Web/SaaS/Freemium)
  – Forecast activities that bring in traffic and lead to user adoption
  – Form reasonable conversion, activity, and churn assumptions
  – Apply your relevant monetization model (s)
- Approach #4: Percent of Total Market
  – "Top down" approach (not recommended)
  – Many flaws here; you will lose investor credibility

EXAMPLE #1 – EXISTING PIPELINE OR HISTORICAL SALES

	Historical			Projected		
	2008	**2009**	**2010**	**2011**	**2012**	**2013**
Units sold	46	64	86	112	140	168
Annual Increase	n/a	39%	34%	**30%**	**25%**	**20%**
Average selling price	300	304	310	316	323	329
Annual Increase	n/a	1.3%	2.0%	**2.0%**	**2.0%**	**2.0%**
Total Revenue	$ 13,800	$ 19,456	$ 26,660	$ 35,351	$ 45,073	$ 55,169

Go-forward growth rate should reflect the stage and maturity of the company

EXAMPLE #2 – DIRECT SALES MODEL

New Salesperson hiring plan

Monhtly, 2011

Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11
		1	1	1	
Jul-11	**Aug-11**	**Sep-11**	**Oct-11**	**Nov-11**	**Dec-11**
	1				

Salesperson hiring plan

	2011	2012	2013	2014	2015
Salesperson Subscription quotas					
Avg. # of Subscriptions sold per salesperson per month	8	10	10	10	10
Salesperson Subscription Upsell ratios					
% of sales that also have an Advertising upsell	5%	10%	15%	15%	20%
% of sales that also have an iPhone upsell	1%	1%	1%	1%	1%

Salesperson monthly quotas (core product + upsells)

Subscriptions	**Price**	**% of sales mix**
Pro subscription, low end (per year)	$ 2,500	25%
Pro subscription, mid end	$ 5,000	50%
Pro subscription, high end	$ 6,000	25%

	2012	2013	2014	2015
Annual Subscription Pricing Increase	20%	20%	20%	20%

Advertising (LinkedIn / Email Digest)	**2011**	**2012**	**2013**	**2014**	**2015**
Price per premium placement per category per	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
# of available categories	30	32	36	40	44
# of available countries	1	4	8	12	16
Total units available for sale	30	128	288	480	704

Product pricing (plus changes over time)

EXAMPLE #3: USER ADOPTION & CONVERSION

	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11
On-line Channels						
CPC Buildup						
Average Daily Budget	$ 67	$ 67	$ 67	$ 67	$ 67	$ 67
Average Cost Per Click	$ 0.25	$ 0.25	$ 0.25	$ 0.25	$ 0.25	$ 0.25
New visits from Cost Per Click (per month)	8,000	8,000	8,000	8,000	8,000	8,000
CPM Buildup						
Number of impressions purchased	150,000	150,000	150,000	150,000	150,000	150,000
Expected Clickthrough	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New visits from CPM advertising	3,000	3,000	3,000	3,000	3,000	3,000
New visits from organic efforts (Search)	2,000	2,660	3,538	4,705	6,258	8,323
New visits from on-line affiliate	-	-	-	-	200	210
Total New Visits from On-line Channels	13,000	13,660	14,538	15,705	17,458	19,533

Here's what you're doing to get traffic in the door / site (e.g. guying Google ads)

Percentage of visitors who become Members	5%	5%	5%	5%	5%	5%
aka "take rate"...could be subscribers, purchasers, etc						
New Members	-	1,400	1,433	1,477	1,535	1,623
Cumulative Members	-	1,400	2,833	4,310	5,845	7,468
Monthly visits per member	3	3	3	3	3	3
Total Visits from Cumulative Members	-	4,200	8,499	12,930	17,535	22,404

Here's how you are converting your traffic into paid and ad-supported members

Pageviews per new visitor	3	3	3	3	3	3
Pageviews per member	6	6	6	6	6	6
Total Pageviews	84,000	111,180	139,607	169,694	202,587	238,024
Average number of impressions per page view	3.0	3.0	3.0	3.0	3.0	3.0
Total Ad Impressions	252,000	333,540	418,822	509,082	607,760	714,073
Price Per 1K Impressions (CPM)	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00
Total Revenue from On-page Advertising	$ 1,260	$ 1,668	$ 2,094	$ 2,545	$ 3,039	$ 3,570
Subscription Fees	-	42,000	84,990	129,297	175,355	224,042

And this is how you are monetizing these visitors

RECAP: KEY THINGS TO CONSIDER

- **What are the activities / channels that bring in customer traffic?**
  - Paid search marketing, PR, advertising, etc.
  - Grassroots & guerilla marketing
  - Viral mechanisms/metrics if appropriate

- **What are reasonable conversion / assumptions?**
  - What percent of raw visitors become customers, members, subscribers, purchasers, active contributors?
  - Think: acquisition→ activation→ engagement + viral coefficient or WOM

- **What are appropriate revenue / monetization model(s)?**
  - Direct sales of products or services
  - Ads-- CPM/CPC/CPA text & banner ads; Video & audio ads;
  - "Freemium" (free version + premium version upsell)
  - Subscription fees, custom services
  - Affiliate revenue, lead-gen revenue, licensing
  - Sponsorships & paid inclusion
  - Auctions, ecommerce, widgets, souvenirs…etc etc etc…

NEXT STEP: LAYER ON EXPENSES

1. Match your COGS (Per-unit variable expenses)
   - Product firms: materials, labor, raw inputs, customer support
   - Software/Internet firms: bandwidth, hosting, licensing fees, etc.

2. Build your hiring plan (Who, when, how much per head)
   - By category: R&D, COS/ Support, Sales & Marketing, G&A
   - Don't forget travel costs, benefits, bonuses, etc.

3. Build your marketing & sales budgets
   - SEO/PPC, PR, events, trade shows, mailers, sponsorships, etc.
   - Commissions, referral fees, spiffs, etc.

4. Add-in other OpEx and CapEx
   - Legal/IP, rent, HR, outsourced/offshore work
   - Computer hardware, travel, "miscellaneous"

Tip: What can be driven off / linked to revenue?

HOW VCS THINK ABOUT EXPENSES

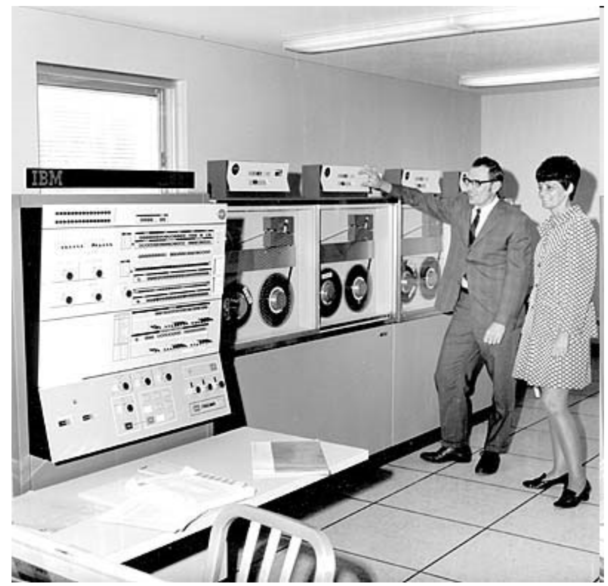
"You can't predict your revenue with any kind of precision, but you should be able to manage your expenses exactly to plan."

--Brad Feld and Jason Mendelson, Venture Deals, p 21

ROLL IT UP & ANALYZE

Summarize:

1. Roll monthly into quarterly, quarterly into annual summaries
2. Combine revenue lines and expenses into summary categories
3. Adjust net income to get *cash flow*
    - CapEx, Depreciation and Amortization



Analyze:

- Tie it all together + Sanity Check
    - (Does it "look right?")
    - Focus on growth rates, margins, headcount
- Parse into per-user, per-unit economics
- Parse into common-size, and benchmark margins vs. peers

PER UNIT ECONOMICS

Investors love to drill into this stuff:

- Revenue per user, cost to acquire a user, cost to retain a user, cost to serve a user.
- Revenue per sale, COGS per sale, marketing costs per sale, shipping costs per sale, etc.

VC Valhalla Equation:

LTV - CSC > CAC

MORE THINGS TO CONSIDER

Notes for all approaches

- Focus on adoption / **sales cycle** and how customers *actually* buy
  - A good model captures realistic customer behavior, not "idealized"
- Use **"top-down"** approach to check for reasonableness.
- Don't forget **churn**– not all customers stick around or re-up!

And, pay attention to the almighty *cash flow*

- Expenses arrive on time or early, but…
  - Revenue can take it's own sweet time
  - Cash is even harder: Bookings vs. Billings vs. Collection
  - Returns & allowance for bad credit reduce profit

HERE'S WHAT IT LOOKS LIKE

	2011	2012	2013	2014	2015
Key Data					
Cumulative Releases	4	5	7	9	11
End of Period Total Users	5,628,633	22,575,599	40,968,387	65,065,020	85,364,880
Average ACME Active Users	626,152	3,949,219	6,230,724	10,419,086	11,248,381
Revenue					
Display & Video Advertising	$463,090	$9,176,837	$22,131,532	$41,409,616	$61,767,107
Premium Upsells	$92,756	$4,132,270	$14,878,969	$35,237,350	$45,122,075
Sponsor & Marketing	$18,750	$1,263,656	$6,727,346	$15,777,858	$19,862,204
Total Revenue	**$574,596**	**$14,572,763**	**$43,737,847**	**$92,424,824**	**$126,751,386**
Revenue Growth	*0%*	*2436%*	*200%*	*111%*	*37%*
Cost of Sales	**$1,353,378**	**$8,222,254**	**$12,281,961**	**$19,949,193**	**$21,519,430**
Gross Margin	**($778,783)**	**$6,350,509**	**$31,455,886**	**$72,475,630**	**$105,231,956**
Gross Margin %	*-136%*	*44%*	*72%*	*78%*	*83%*
Operating Expenses					
Research and Development	$381,479	$1,830,802	$3,189,838	$5,701,083	$7,652,2[illegible]
Sales & Marketing	$714,942	$2,837,271	$5,614,126	$11,024,425	$23,536,445
General Administrative	$379,279	$2,674,545	$4,017,048	$5,991,639	$7,265,802
Total Operating Expenses	**$1,475,700**	**$7,342,618**	**$12,821,013**	**$22,717,147**	**$38,454,522**
Operating Income (EBIT)	**($2,254,483)**	**($992,109)**	**$18,634,873**	**$49,758,483**	**$66,777,434**
EBIT %	*289%*	*-16%*	*59%*	*69%*	*63%*
Interest Expense	$0	$0	$0	$0	$0
Taxes	$0	$0	$6,155,312	$19,903,393	$26,710,973
Net Income	**($2,254,483)**	**($992,109)**	**$12,479,560**	**$29,855,090**	**$40,066,460**
- Capital Expenses	$56,250	$157,500	$97,500	$187,500	$116,250
+ Depreciation & Amortization	$1,725	$35,554	$55,967	$82,642	$76,896
Cash Flow	**($2,309,008)**	**($1,114,055)**	**$12,438,027**	**$29,750,232**	**$40,027,106**

This is a standard 5-year forecast that summarizes key data, primary revenue lines, main expense categories, and cash flow.

HERE'S WHAT IT LOOKS LIKE

Per User Income Statement		2011		2012		2013		2014
Revenue	**$**	**1.10**	**$**	**2.51**	**$**	**4.81**	**$**	[illegible]
Cost of Sales	$	2.63	$	1.70	$	0.82	$	0.70
Gross Margin	**$**	**(1.53)**	**$**	**0.81**	**$**	**3.99**	**$**	**6.13**
Operating Expenses								
Research and Development	$	6.08	$	0.81	$	0.55	$	0.76
Sales & Marketing	$	3.61	$	0.66	$	0.36	$	0.37
General Administrative	$	4.49	$	1.46	$	0.69	$	0.52
Total Operating Expenses	**$**	**14.18**	**$**	**2.93**	**$**	**1.60**	**$**	**1.65**
Operating Income (EBIT)	**$**	**(15.71)**	**$**	**(2.12)**	**$**	**2.39**	**$**	**4.48**

This breaks the data down into per-unit information (e.g. average revenue per customer)

Common Size Income Statement	2009	2010	2011	2012
Revenue				
Display & Video Advertising	81%	63%	51%	[illegible]
Premium Upsells	16%	28%	34%	38%
Sponsor & Marketing	3%	9%	15%	17%
Total Revenue	**100%**	**100%**	**100%**	**100%**
	0%	0%	0%	0%
Cost of Sales	**236%**	**56%**	**28%**	**22%**
Gross Margin	**-136%**	**44%**	**72%**	**78%**

This is a common-size presentation of the data, useful to see overall trends and any margin aberrations

Max Cash Trough	**$4,460,465**	***<<-- this is the minimum amount you need to raise***
Target amount to raise w/30% cushion	$5,798,605	
Target amount to raise w/50% cushion	$6,690,698	

This is the cumulative negative cash flow prior to break-even– useful as a proxy for the amount of VC funding to raise.

AT THE END OF THE DAY…

Your VC-Ready Model Should Be:

- Logical and Reasonable
- Simple
- Navigable
- User Friendly
- Geared for Sensitivity & Scenario Analysis
- Telling a Good Story!

PITCHING THE NUMBERS

Build a killer summary slide (in PDF or PPT)

(but have the model handy to refer to during Q&A)

+

Know your model, <u>*own*</u> your model

(prepare for likely questions in advance + have cheat sheet handy)

+

Show how you use investor's $$ to create value

(detailed use of funds + path to ROI)

=

"Instant Credibility" for raising capital and maintaining negotiating leverage

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