The Open Source Business Model

Key Metrics and Levers

# Key Elements in "Business Model"

- Cost to Acquire the Customer (CAC)

- Profit from that Customer (LTV)

  - For subscription revenue businesses = the value of that customer over their lifetime

  - This number takes into account the COGS or cost to serve

■ There is a common problem:

Startup Killer

An out of balance Business Model

Entrepreneurs are over-optimistic

Cost to Acquire a Customer (CAC)

Monetization (LTV)
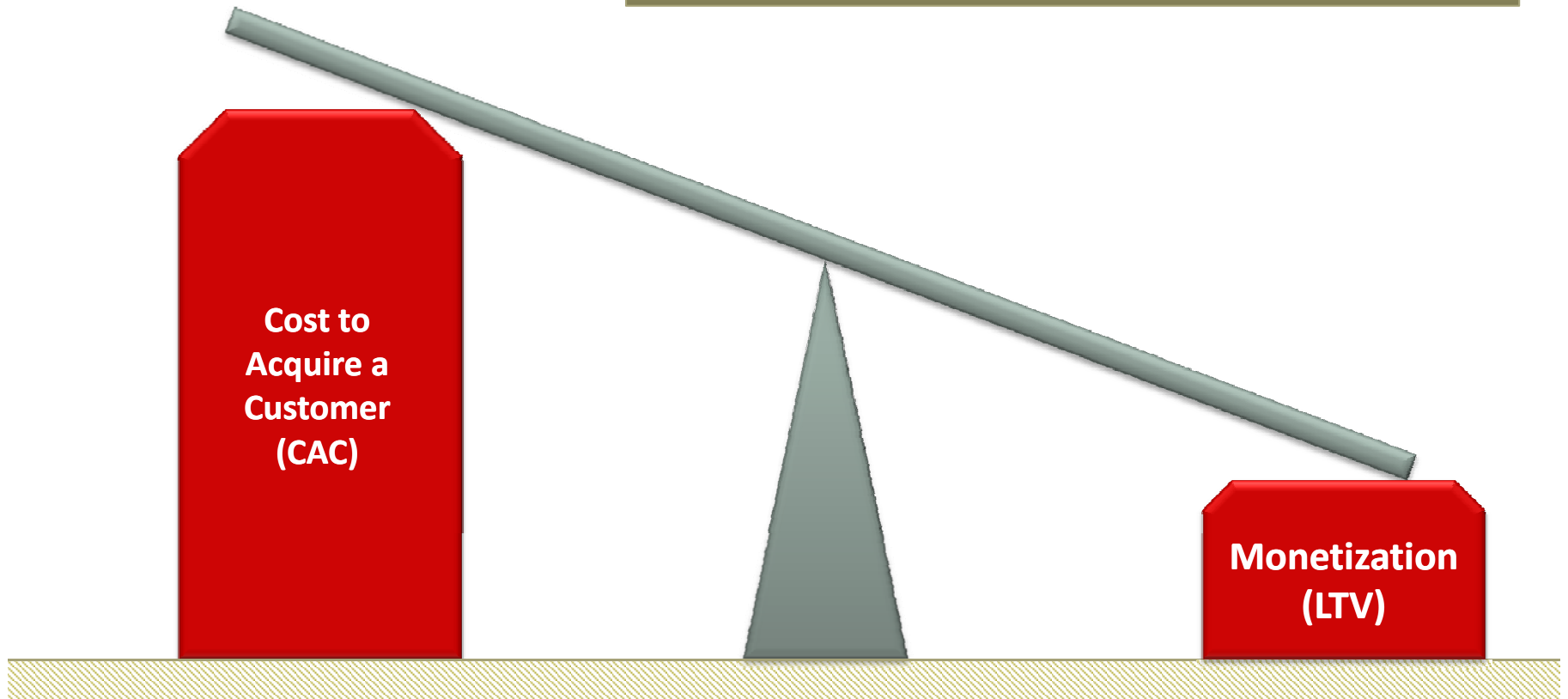
CAC for a Direct Salesforce

	Sales	Sales Eng	Inside Sales	
Team composition	1	1	0.5	Annual numbers
On target earnings	$ 230,000	$ 140,000	$ 90,000	
Salary Cost	$ 230,000	$ 140,000	$ 45,000	
Salary + Overhead	$ 310,500	$ 189,000	$ 60,750	
Total Team Cost	$ 560,250			
Avg. team Failure Rate	25%			
Adjusted Team Cost	$ 747,000			
No. of Marketing people	0.5			
Average cost per person	$ 200,000			
Marketing Programs Spend	$ 150,000			
Total Marketing Costs	$ 350,000			
Total Sales & Marketing spend	$1,097,000			
No of deals per team per year	10			
Cost of Customer Acquisition	$ 109,700			

What we are looking for

A well balanced business model
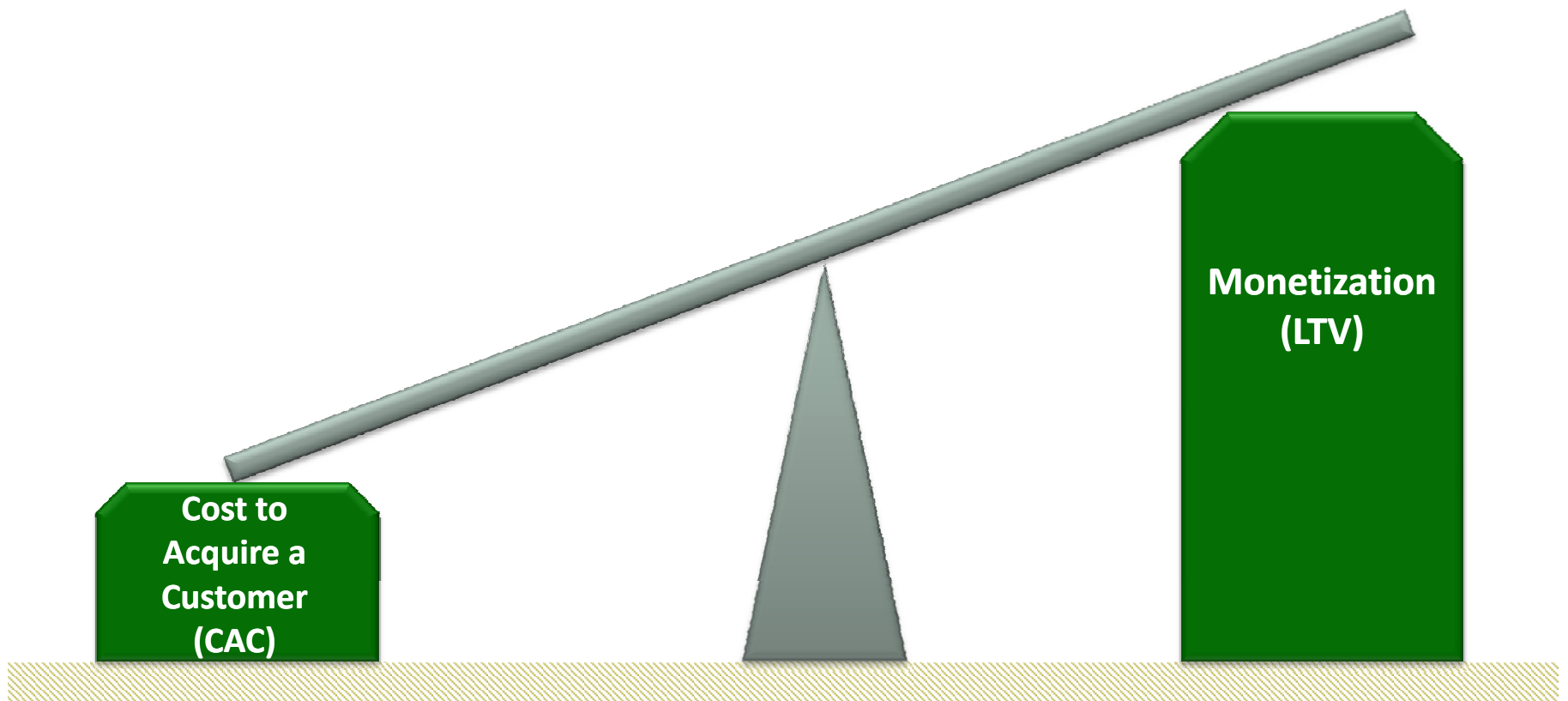
Open Source is a Business Model Disruption

- Freemium concept
  - Give away a free version of the product
  - Goal: Drive viral customer adoption
    - Lower CAC

- Second Stage
  - Upsell some portion of the free customer base
  - Many variations:
    - Subscription
    - SaaS offering
    - Premium version
    - Etc.

To work well, the OS Model requires:

- The Free version must sell itself
  - At this price, you can't afford much marketing
  - For this to happen: needs a well defined category
    - No customer education needed
    - Significant existing customer demand

The Free Product must sell itself

- The product becomes your salesperson

  Unless selling to developers:

- Time to WOW should be very short
  - Installation should be quick and foolproof
  - Operation should be self-evident
  - Any required instruction should be easily accessible in both text and video form
  - Tangible results should happen fast

To work well, the OS Model requires:

- A large market
  - You will typically only monetize a small %
  - And monetization per customer will be much lower than the old enterprise software model

The Freemium Business Model

First Sale

- Free product

Second Sale
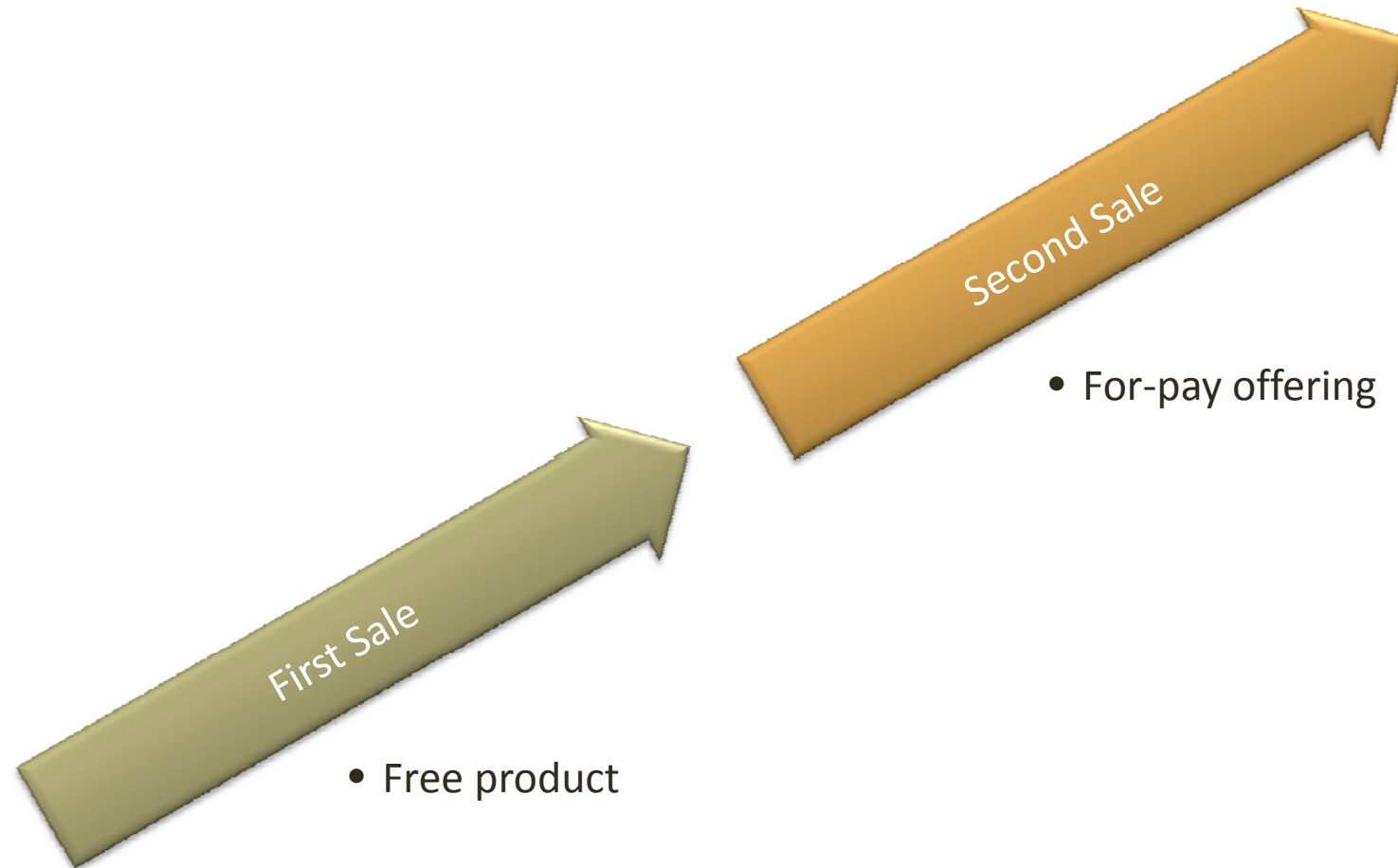
- For-pay offering

Successful Freemium Models require:

- A free product that is highly compelling
- A for-pay offering that is also highly compelling

- What typically goes wrong:
  - Not enough value in the free product
  - Too much value in the free product
    - Makes the for-pay offering less compelling
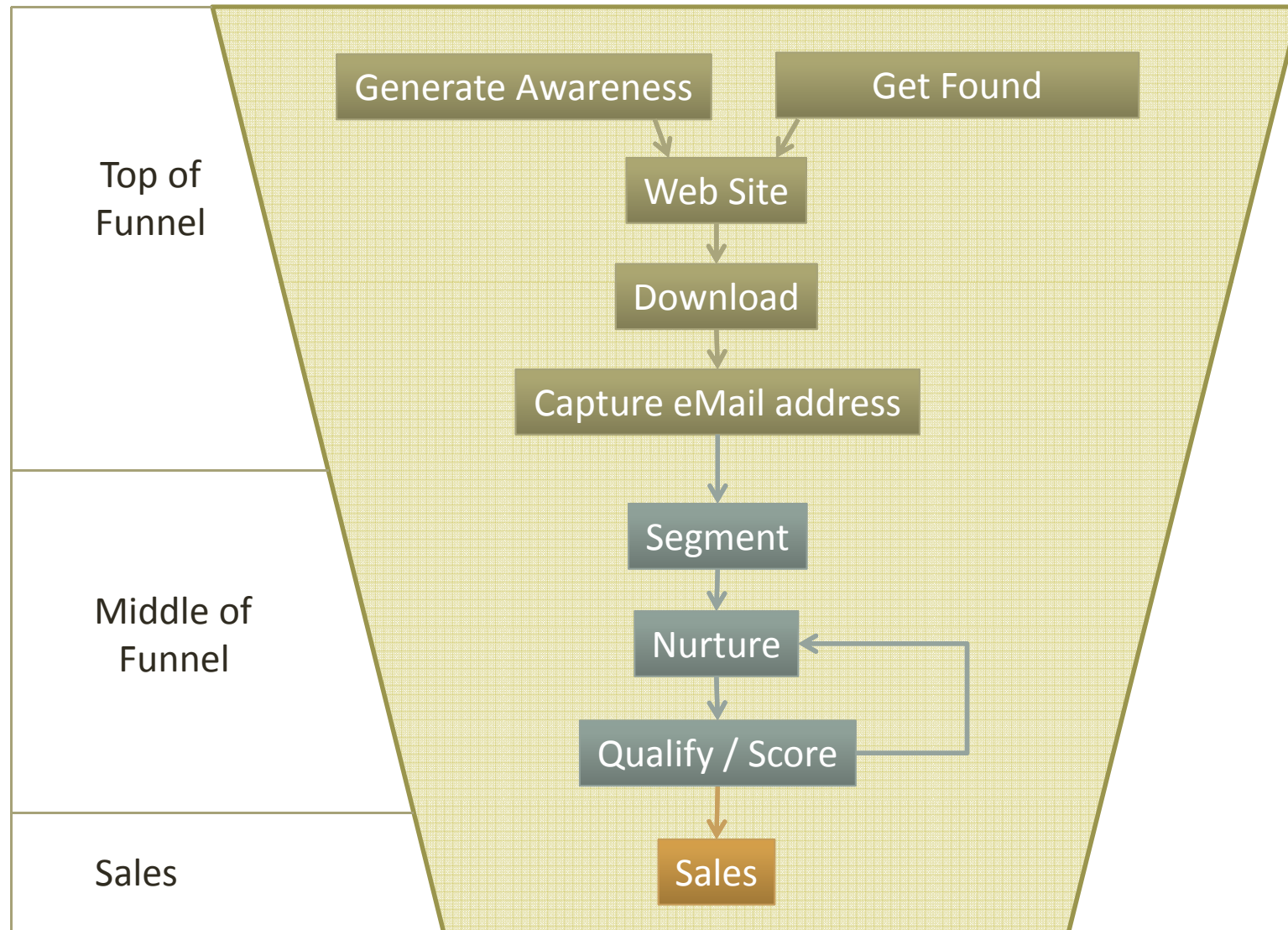
Low Conversion Rate to paying is OK

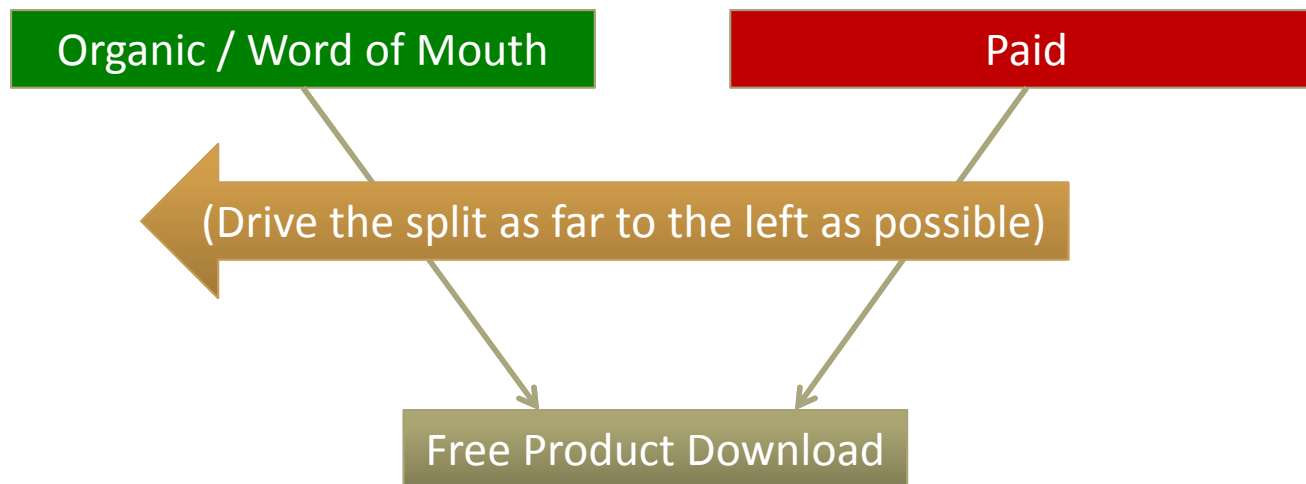- Recognize that your audience is divided:

Customers that are OK to pay	Many people that will never pay

Non-paying customers are OK, as they will spread the word

Typical Open Source Funnel

Top of Funnel

Generate Awareness → Web Site

Get Found → Web Site

Web Site → Download

Download → Capture eMail address

Capture eMail address → Segment

Middle of Funnel

Segment → Nurture

Nurture → Qualify / Score

Qualify / Score → Nurture

Qualify / Score → Sales

Sales

Sales

Top of the Funnel CAC

Organic / Word of Mouth	Paid

(Drive the split as far to the left as possible)

Free Product Download

Even the "Free version" customers have CAC unless you are highly viral

Computing LTV

(LTV = Lifetime Value of a Customer)

Computing Customer Lifetime

- Average Lifetime $=$ 1 / Churn rate

Computing Average Lifetime Examples

Monthly example – 2.5% monthly churn:
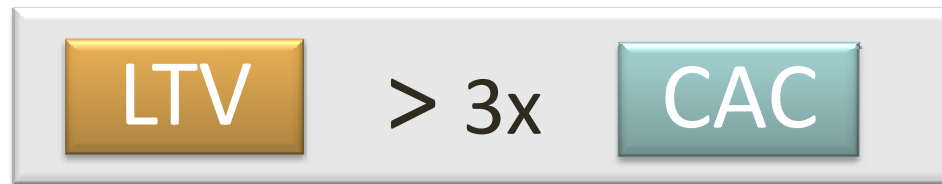- Average Lifetime = 2.5% (40 months)

Annual example – 25% annual churn
- Average Lifetime = 1/25%   (4 years)

Computing LTV

- LTV = Monthly Subscription / Monthly Churn

- LTV = $500 / 2.5%   ($20,000)

Churn rate has a major impact on LTV

My rules for CAC/LTV balance in a SaaS model

LTV > 3x **CAC**

Months to recover CAC < 12 months

Required for Capital Efficiency

How Sales Complexity impacts CAC

Sales Complexity

Freemium → No Touch Self-Service → Light Touch Inside Sales → High Touch Inside Sales → Field Sales → Field Sales with SE's

How I assumed the two would relate

CAC (Cost of Customer Acquisition) vs Sales Complexity

Freemium — No Touch — Inside Sales — Channel Sales — Field Sales
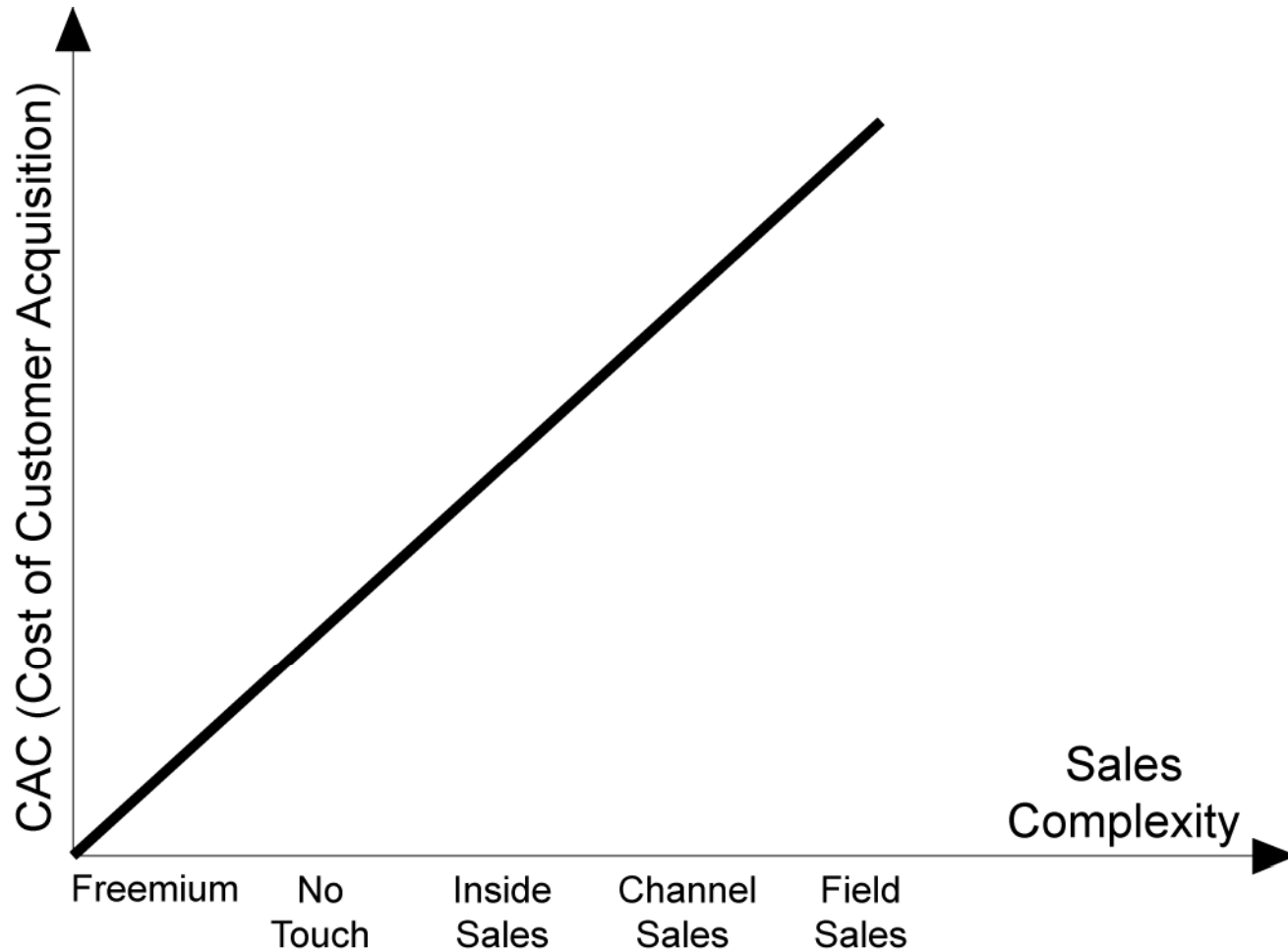
A rough estimate of CAC versus Sales Complexity

| Freemium | No Touch Self-Service | Light Touch Inside Sales | High Touch Inside Sales | Field Sales | Field Sales with SE's |

Rough Estimates of Cost of Customer Acquisition (CAC)

| $0-$10 | $50 – $200 | $1,000 - $2,000 | $3,000 - $8,000 | $25,000 – $75,000 | $75,000 – $200,000 |

The relationship is roughly exponential

CAC (Cost of Customer Acquisition)

Sales Complexity

Freemium   No Touch   Inside Sales   Channel Sales   Field Sales

?
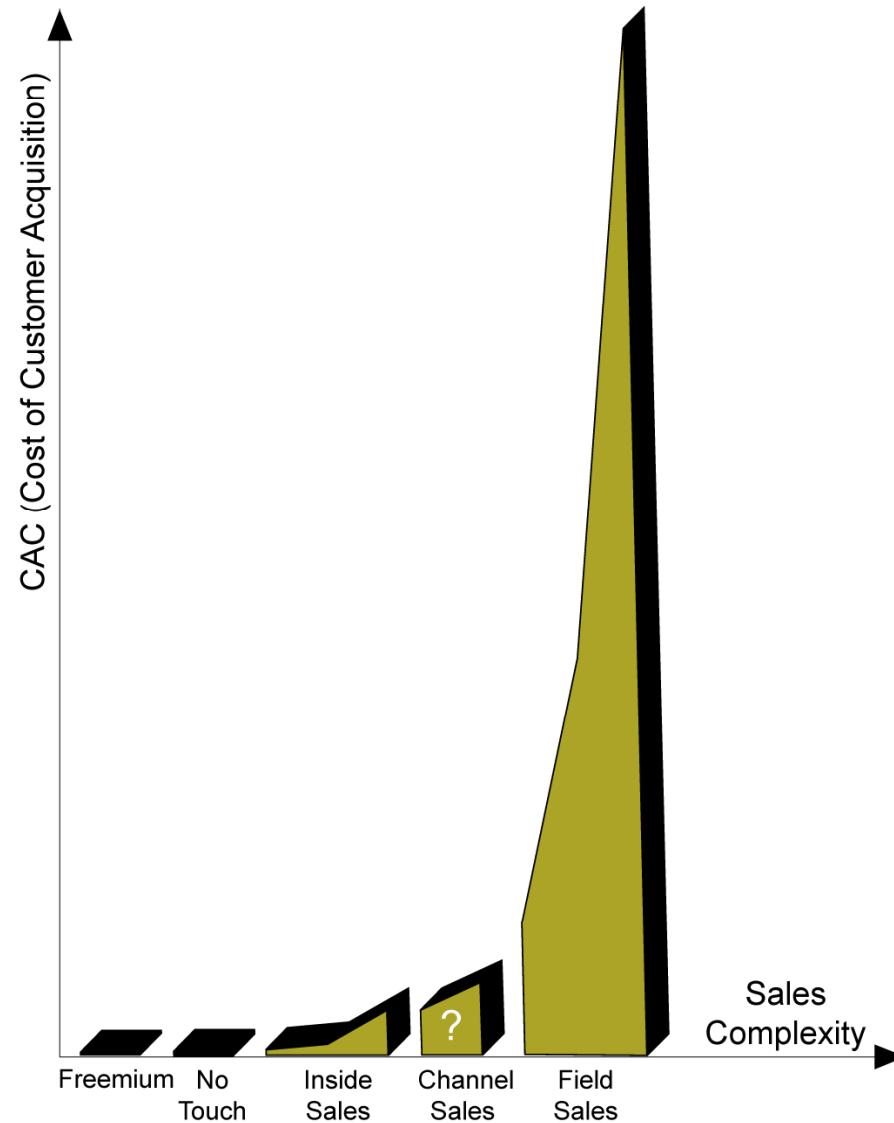
Clearly adding Human Touch dramatically increases costs

How SaaS changes Sales Complexity

↑ **Value / Pain / Urgency = LTV (logarithmic)**

$1,000,000

$100,000

$10,000

$1,000

$100

$10

$1

Freemium   No Touch   Inside Sales   Channel   Field Sales

Sales Complexity →

The Balancing Act

Cost to Acquire a Customer CAC)

- Viral effects
- Inbound Marketing
- Free or Freemium
- Open Source
- Free Trials
- Touchless conversion
- Inside Sales
- Channels
- Strategic partnerships

- Field Sales
- Outbound Marketing

Monetization (LTV)

- High Churn Rates
- Low customer satisfaction

- Recurring Revenue
- Scalable Pricing
- Cross Sell/Upsell
- Product line expansion
- Lead Gen for 3rd parties

Key Questions to Ask

Key Questions

- Where are we in the company lifecycle?
  - Tells you what you should be focused on
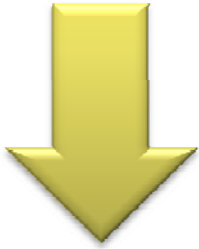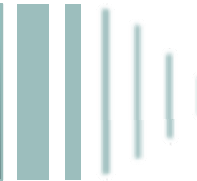
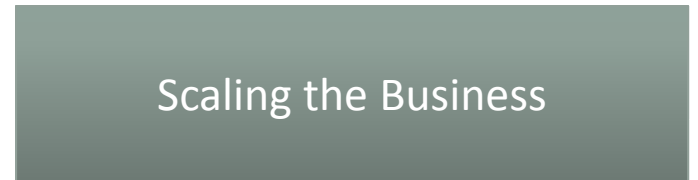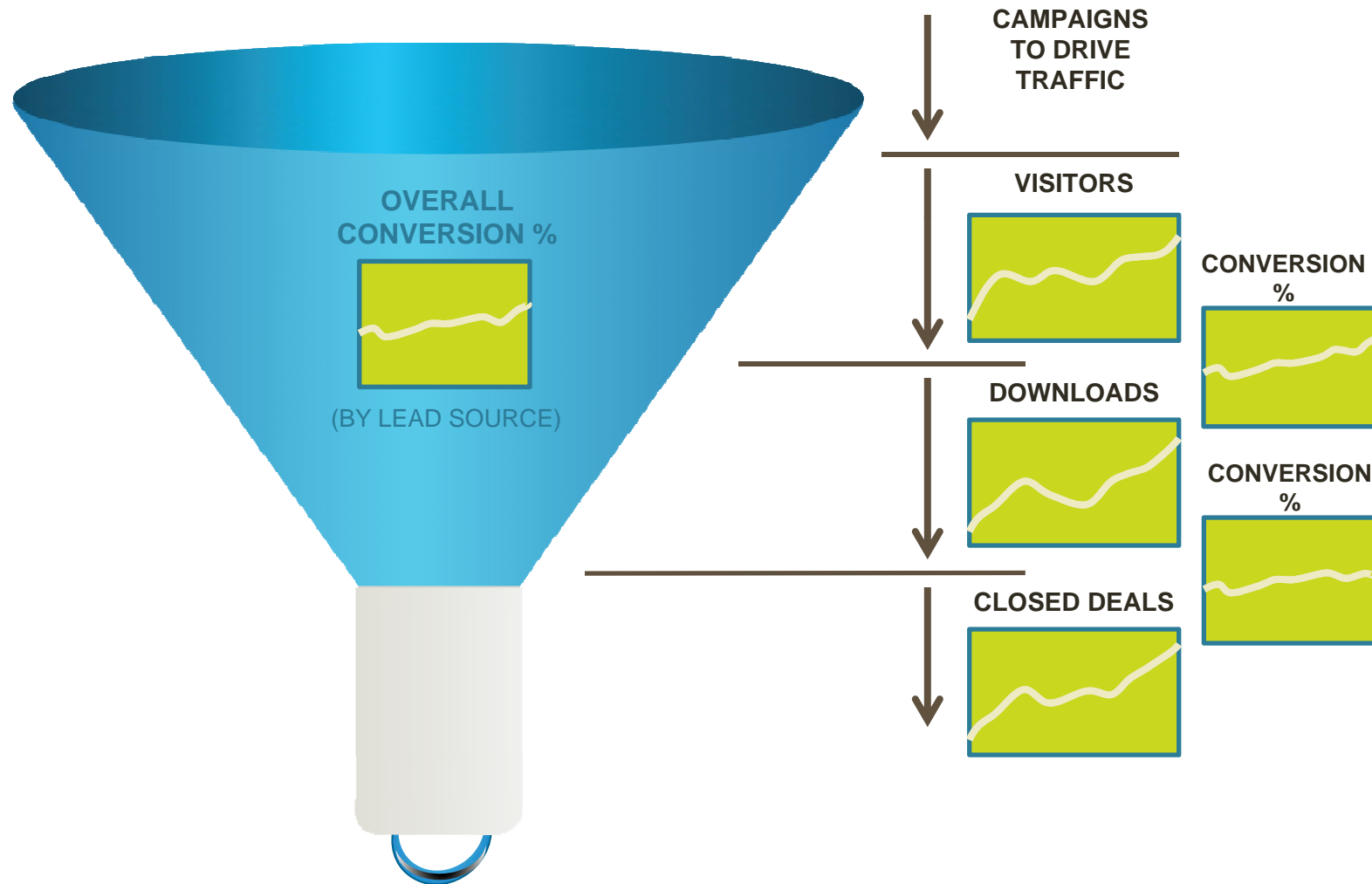# Questions when searching for Repeatable/Scalable Sales Model

- What is LTV?

- What is our CAC?
  - Different for each lead source?
  - Do we have a positive ROI when we pay for more leads?

- What happens when we try to scale?
  - Are the results repeatable?
  - Is our salesforce productive?

The Key Metrics

OVERALL
CONVERSION %

(BY LEAD SOURCE)

CAMPAIGNS
TO DRIVE
TRAFFIC

VISITORS

CONVERSION
%

DOWNLOADS

CONVERSION
%

CLOSED DEALS

The SaaS/Subscription Cash Flow Trough

The Problem with SaaS

- SaaS businesses suffer from a cash flow trough
  - Invest up front in sales & marketing to acquire a customer
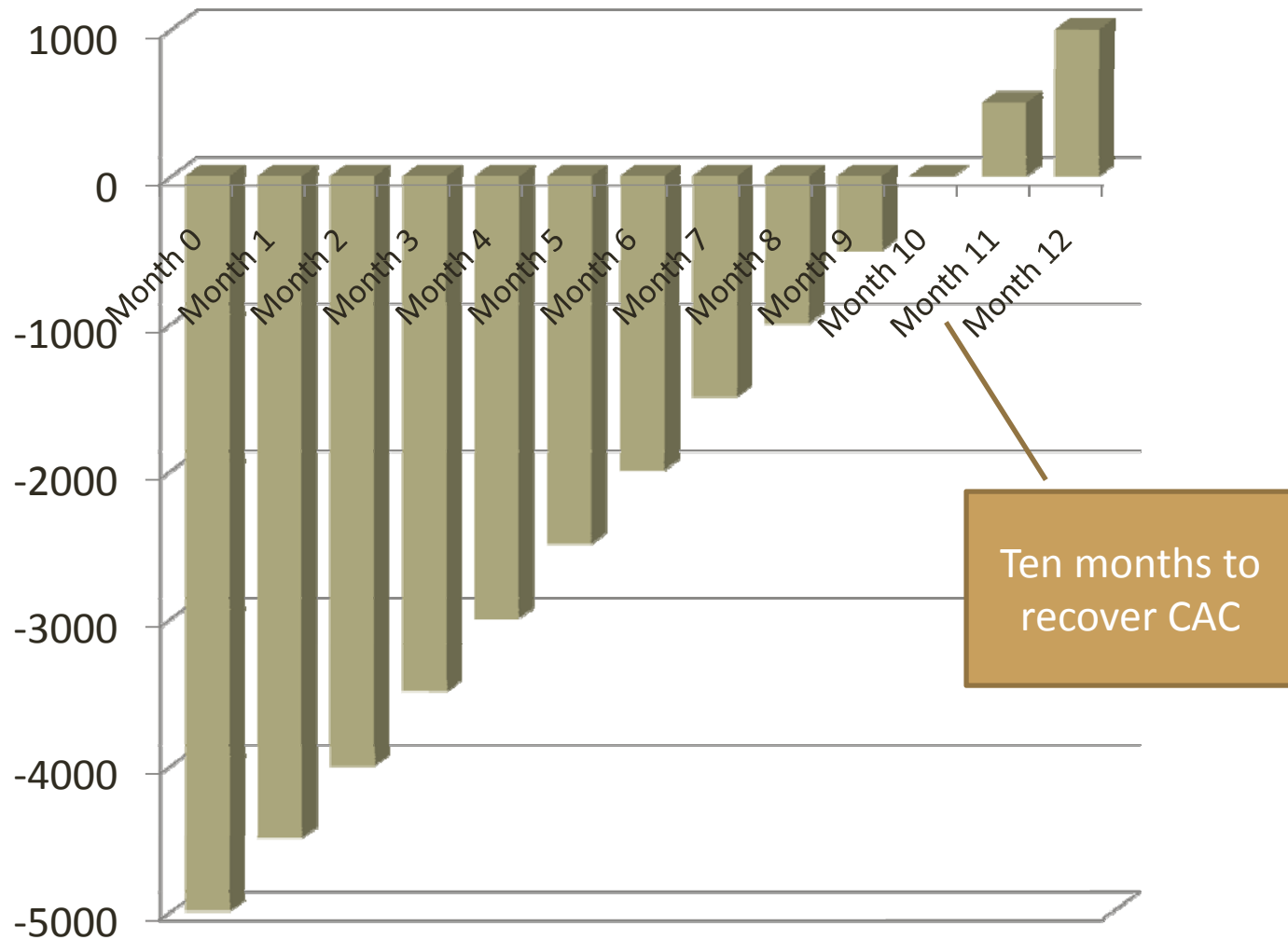 - But only get return over a long period of time

Illustration of the Problem

- Inside Sales CAC $5,000

- Monthly Subscription $500
- Monthly Churn Rate   2.5%

Cash Flow at the Customer Level

Cumulative Cash Flow

Ten months to recover CAC
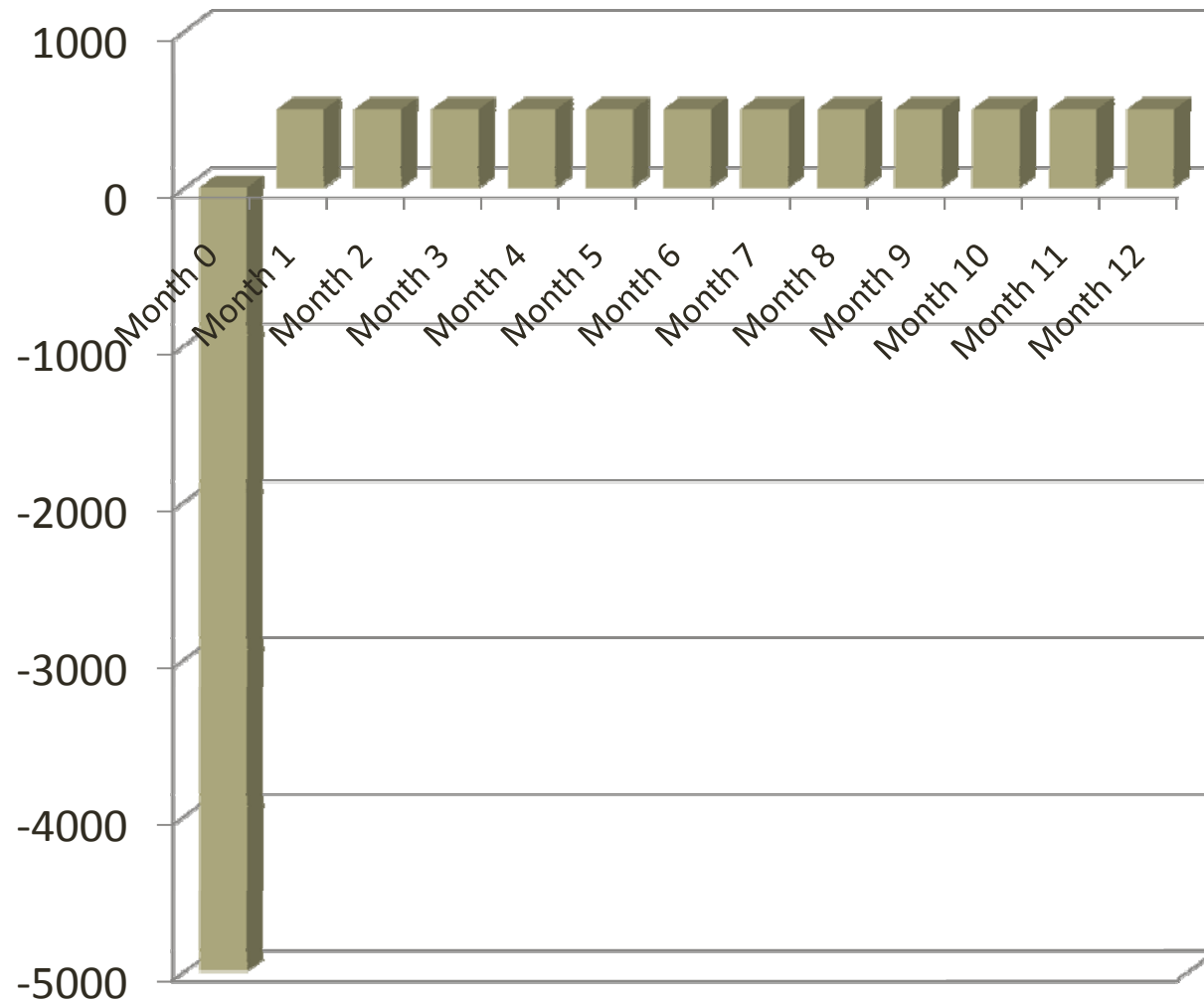
Modeling a single sales hire

Another Valuable Analysis

Key Variables

Sales compensation and overhead

Base Compensation	$ 50,000			
Variable Compensation	$ 55,000	with 50% draw for first four months		
Draw on Variable Comp	100%	70%	30%	0%
Productivity Ramp	10%	33%	66%	100%
Additional overhead	$ 30,000			
Sales attrition factor	15%	a factor to discount bookings to account for failed sales hires and attrition		

On target annual bookings

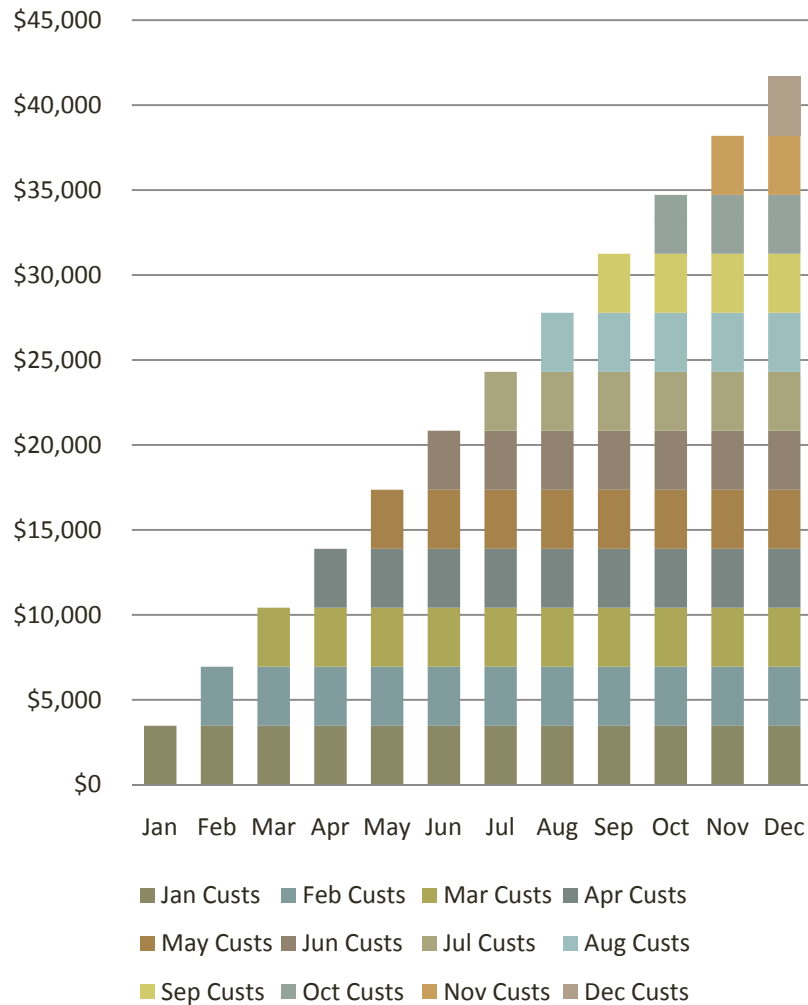|		
Annual Bookings	500,000	ACV (Annual Contract Value)
Monthly Bookings	$ 41,667	ACV (Annual Contract Value)
Monthly Bookings	$ 3,472	Billed monthly (=ACV / 12)

Churn Rate and Margin

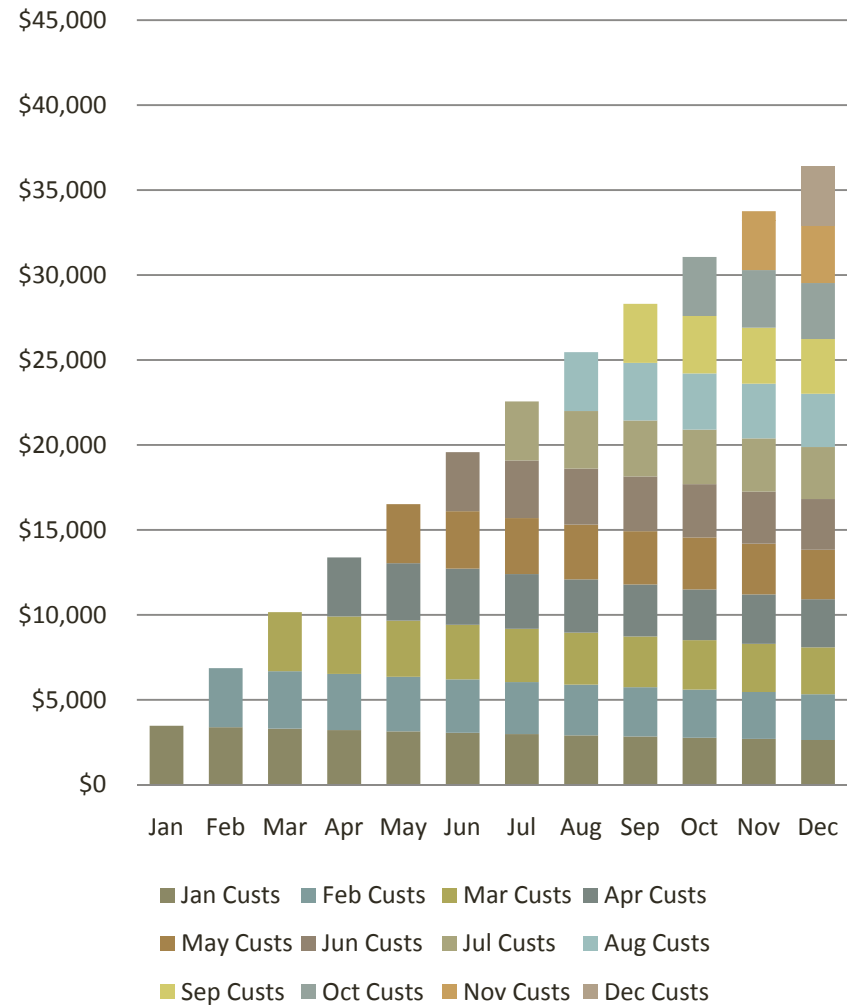|	
Churn Rate (monthly)	2.50%
Gross Margin	80.00%

How Revenue Builds for a SaaS Salesperson
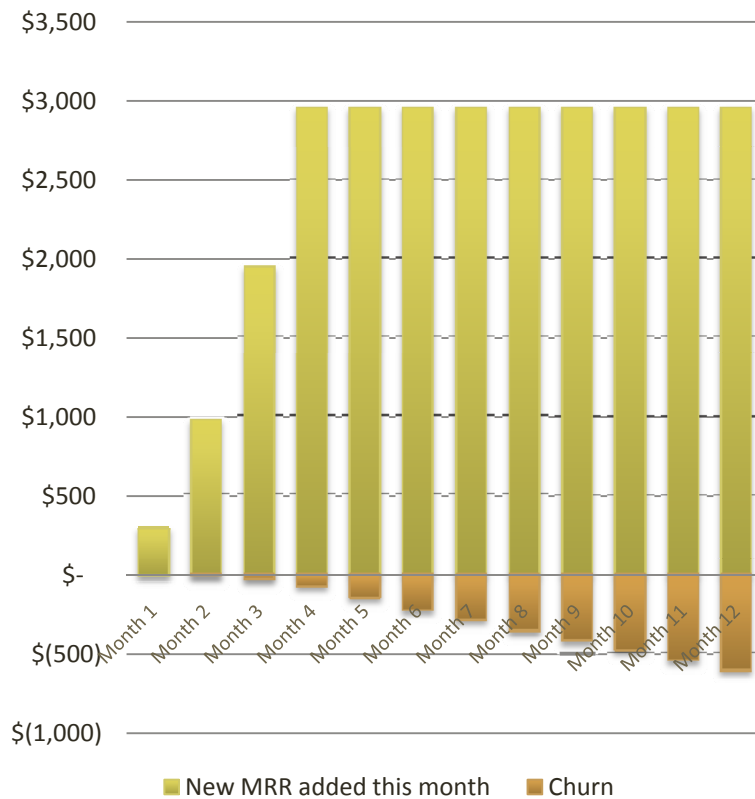
(assuming no ramp up time)
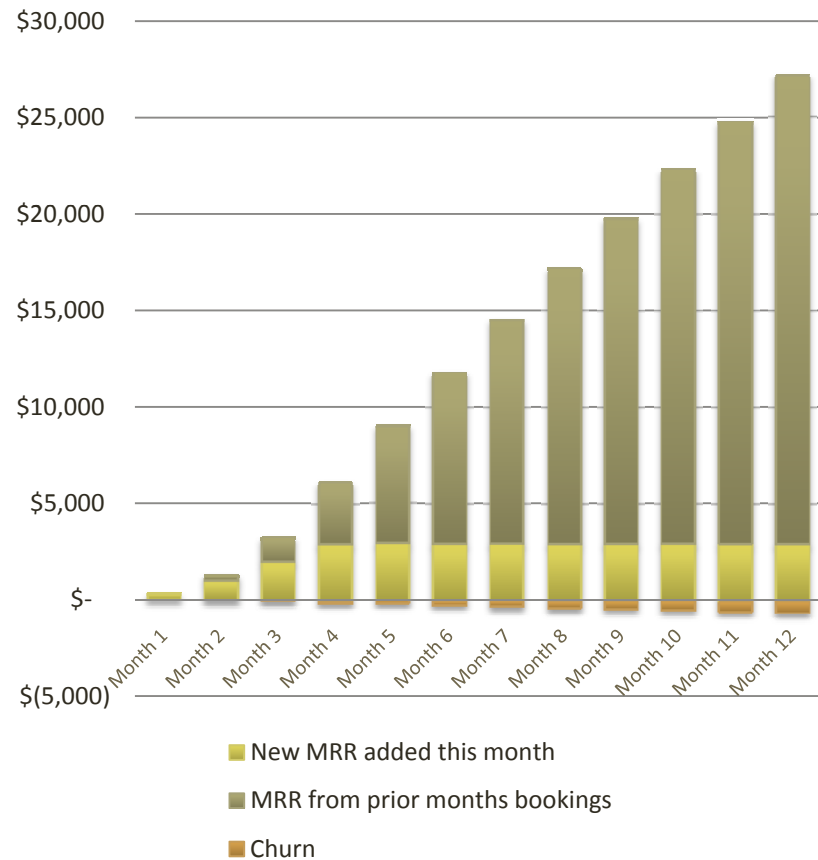
With no Churn

With Churn of 2.5%

Looking at a Single Salesperson
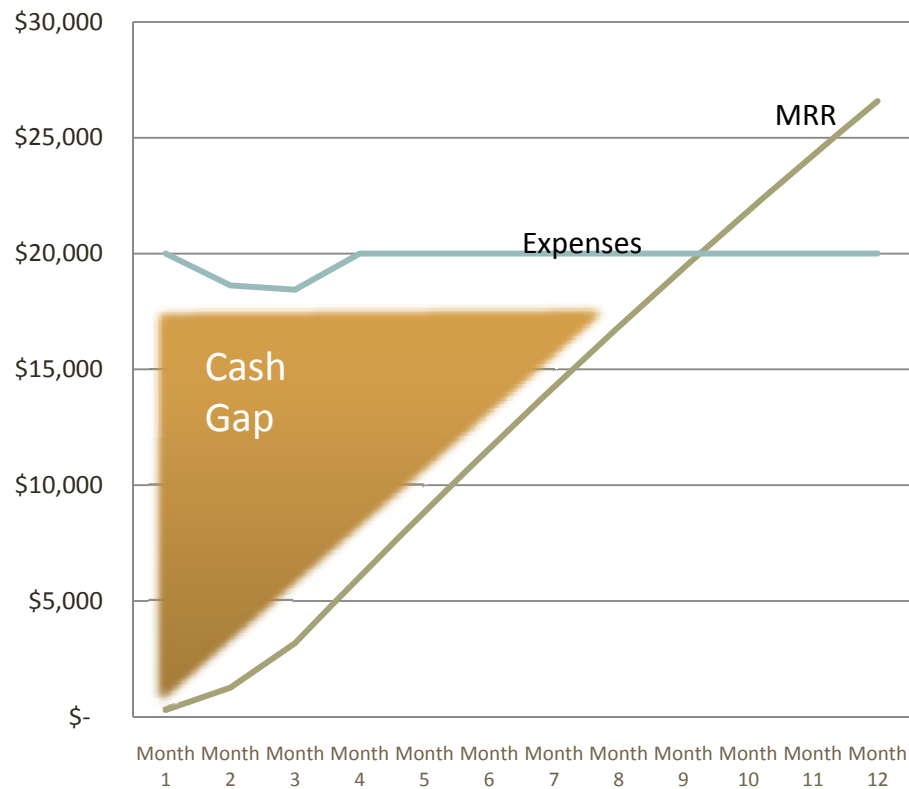

Bookings & Churn – Single Sales Hire

Legend: New MRR added this month, Churn

MRR – Single Sales Hire

Legend: New MRR added this month, MRR from prior months bookings, Churn

The Cash Flow Gap

MRR vs Expenses – New Sales Hire

MRR

Expenses

Cash Gap

Net profit - New Sales Hire

11 months to breakeven
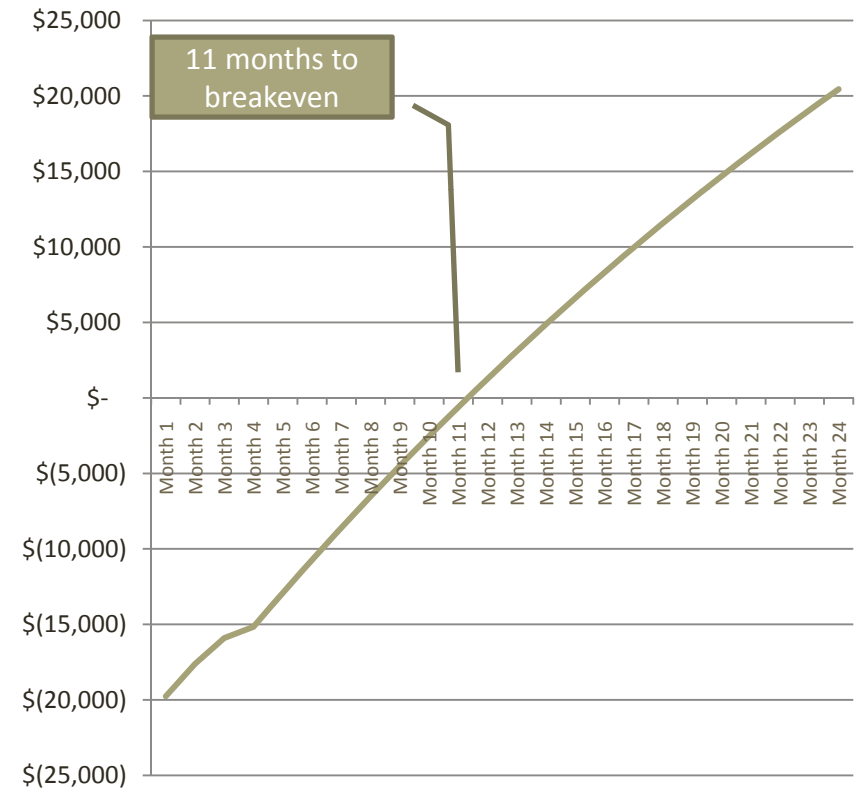
(Slightly later breakeven point, because Gross Profit is less than MRR)

The SaaS Cash Flow Trough

Cumulative Net Profit - New Sales Hire

Total amount invested: $110k

23 Months to get back the investment

But a great return on investment
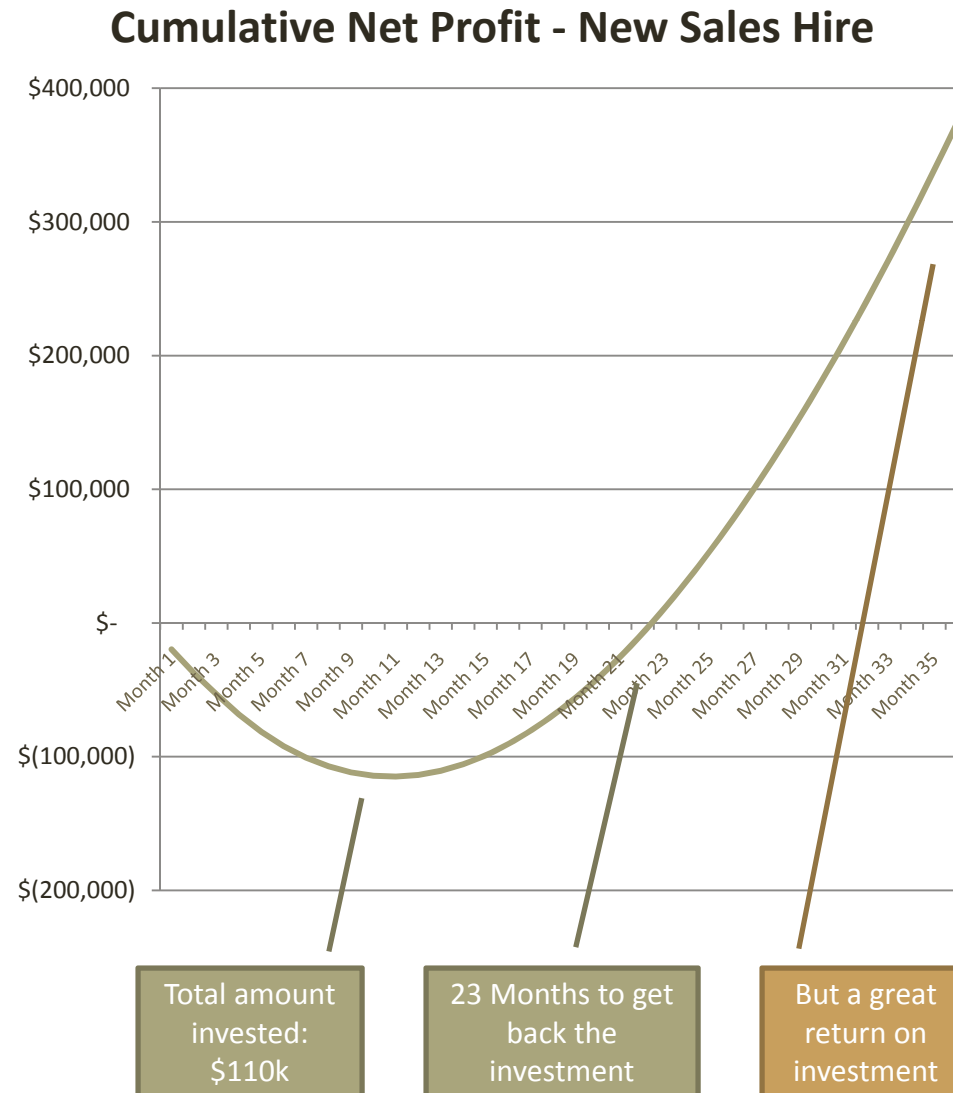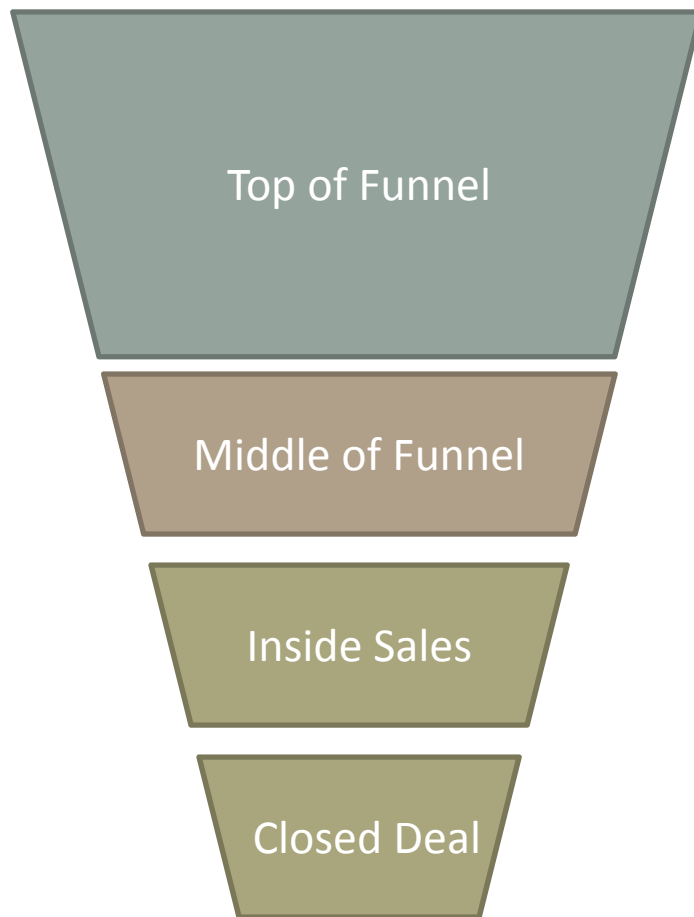
Another Guideline

- Salespeople should be able to 4-6 times what they cost you

  (Gross margin)

Marketing Funnel Economics

Top of Funnel

Middle of Funnel

Inside Sales

Closed Deal

Visitors to Web Site

Organic Traffic

SEM

Other Paid lead sources

Raw Leads

Registered Visitors

Qualified Leads

Inside Sales

Closed Deal

Marketing Funnel Economics

Quick Marketing Calculation	
50%	amount of traffic that is organic versus paid
$1.50	cost per paid visitor (Google AdWords, etc.)
$ 0.75	Cost per visitor (both paid and unpaid)
3%	visitors convert to raw leads
20%	number of raw leads that turn into qualified leads
1	qualified lead
5	raw leads required
167	visitors required
$125	Cost of visitors (also = Cost per qualified lead)

Marketing Funnel Economics

Cost of Leads required to feed sales		
Average Deal Size	$6,000	(ACV) Annual Contract Value
Deals to meet target	6.9	per month
Leads to closed deal	10	
Cost per Qualified Lead	$125	
Cost of Leads required	$ 8,698	per month, for 1 fully productive sales person

The model also computes CAC and LTV

Lead Gen costs per deal	$	1,253	**Excludes people costs** (Cost per qualified lead x no of leads required per closed deal)
Selling costs per deal	$	1,620	**Excludes cost of sales management**
Total CAC	$	2,873	**Excludes people costs in marketing, and sales management.** (CAC= Cost to Acquire a Customer)
Total LTV	$	16,000	Calculated by dividing average monthly gross profit per customer (ARPU x Gross Margin) by the churn rate

This excludes people costs in marketing, and sales management costs

What we learn from the model

- How long it takes to get to breakeven
- What is the investment required?
  - i.e. Bottom of the trough
- How long it takes to recover the investment
- How profitable a salesperson can be over a long period of time

Where this is applicable

- Applies equally well to any other form of recurring revenue business where there is a salesforce needed

- Does not apply to the perfect business: touchless conversion
  - Those are usually extremely profitable early on

Part 2: Scaling the Sales Force

Scaling the Business

- From my prior blog post, you will know that:
  - After you have reached a repeatable, scalable sales model - it is time to invest aggressively
- This model shows you what it looks like to scale a SaaS business that needs sales people
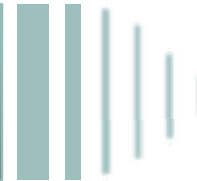 - It assumes that you have already found product/market fit and a repeatable, scalable sales model.
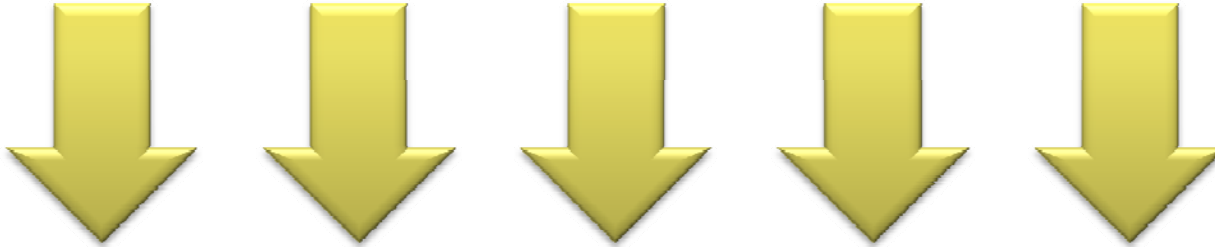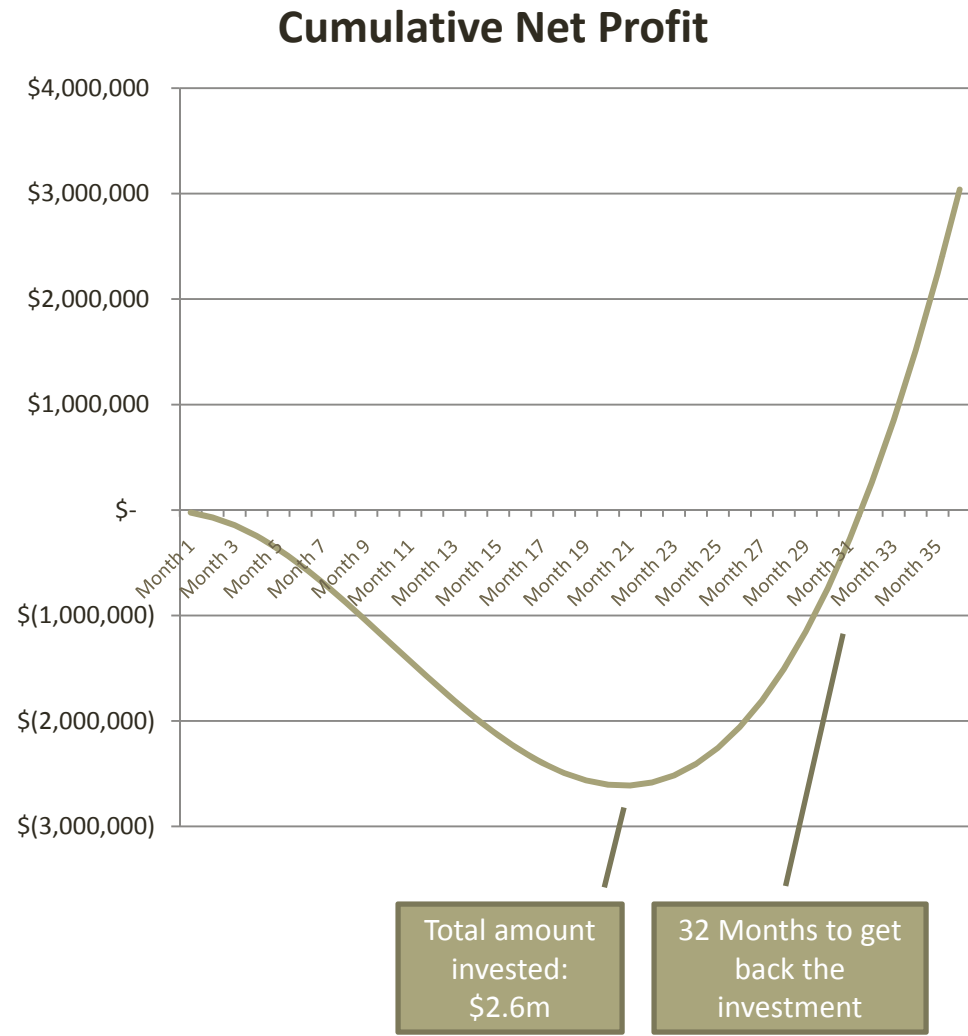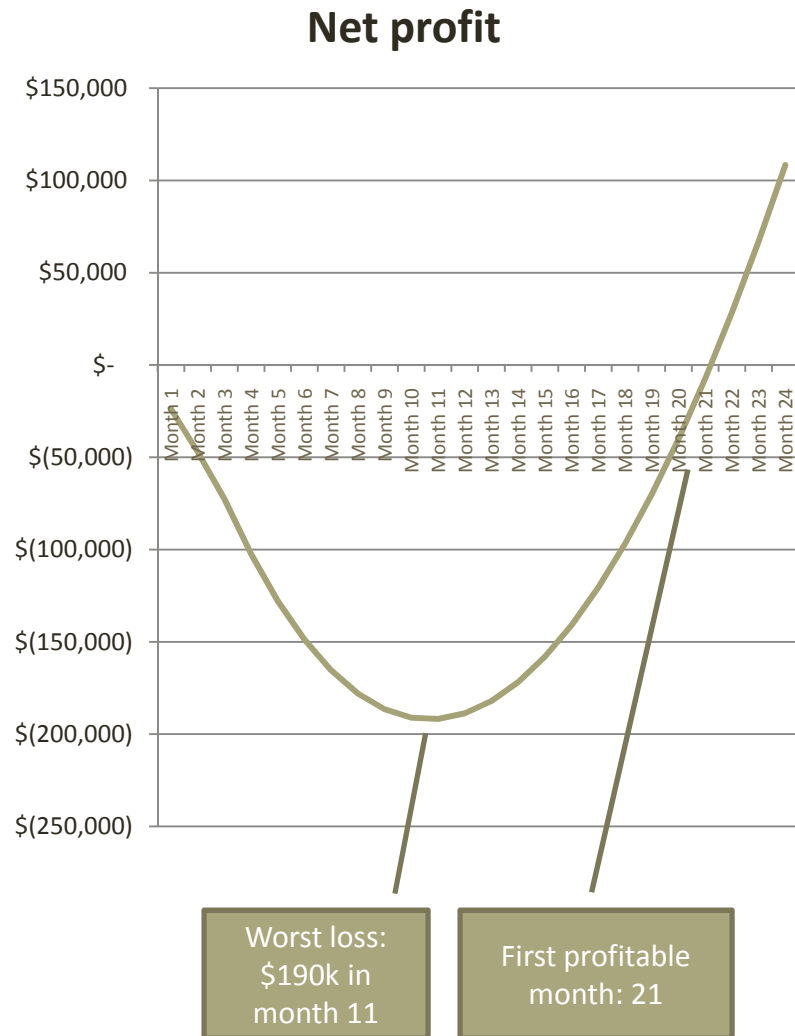
What is a Repeatable, Scalable Sales Model?

- The process that you go through to acquire a paying customer is clearly repeatable.
    - If your process involves salespeople, you can add new hires and they can achieve the same productivity level as the original sales team.
    - If it is a touchless web sales model, your web traffic converts in a predictable way through your web site.
- The process is scalable.
    - You can increase the sources of your leads and/or web traffic without reaching a near-term limit.
    - The resources (e.g. salespeople) in your conversion funnel can easily be scaled without reaching a near-term limit.

- Your cost to acquire a customer [http://www.forentrepreneurs.com/startup-killer/] (CAC) is significantly less than the amount you can monetize them over the customer's lifetime.
    - In a SaaS business I recommend that LTV should be more than three times higher than CAC.
    - It should also be possible to recover CAC in less than 12 months for a capital-efficient startup.
    - Lifetime value (LTV) should be calculated using gross profit (not revenue) after cost of goods, cost to serve and cost of on-boarding.
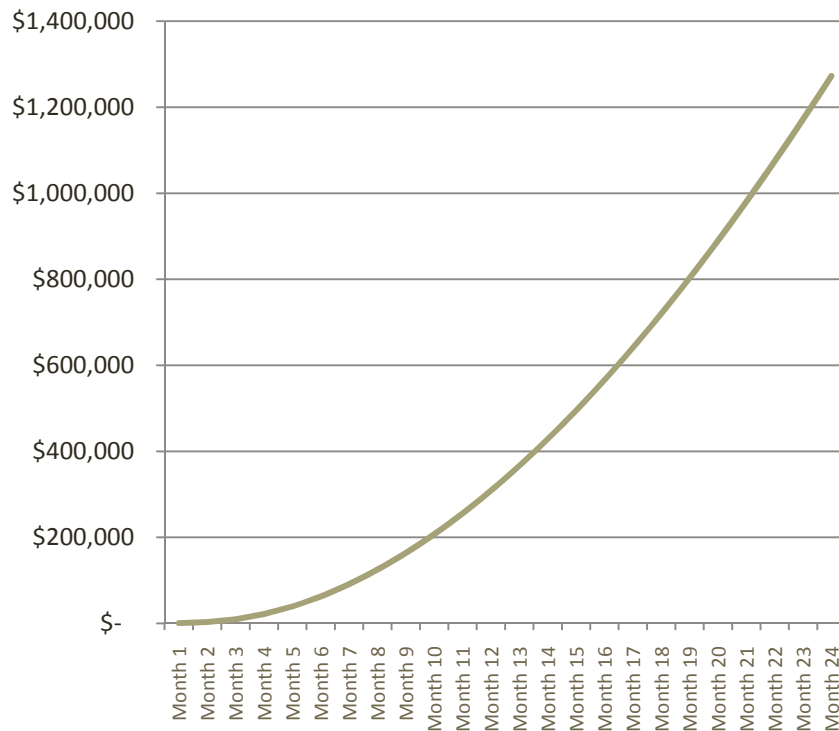
What happens at the company level when we add 2 new sales hires every month?

Net profit

Cumulative Net Profit

Worst loss: $190k in month 11

First profitable month: 21

Total amount invested: $2.6m
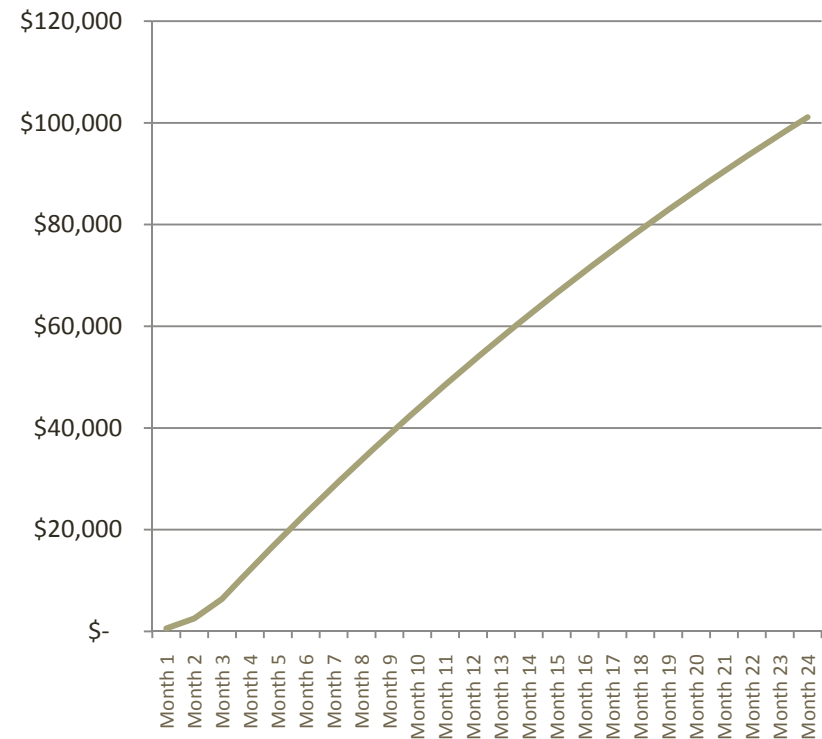
32 Months to get back the investment

How MRR Grows when hiring 2 salespeople per month
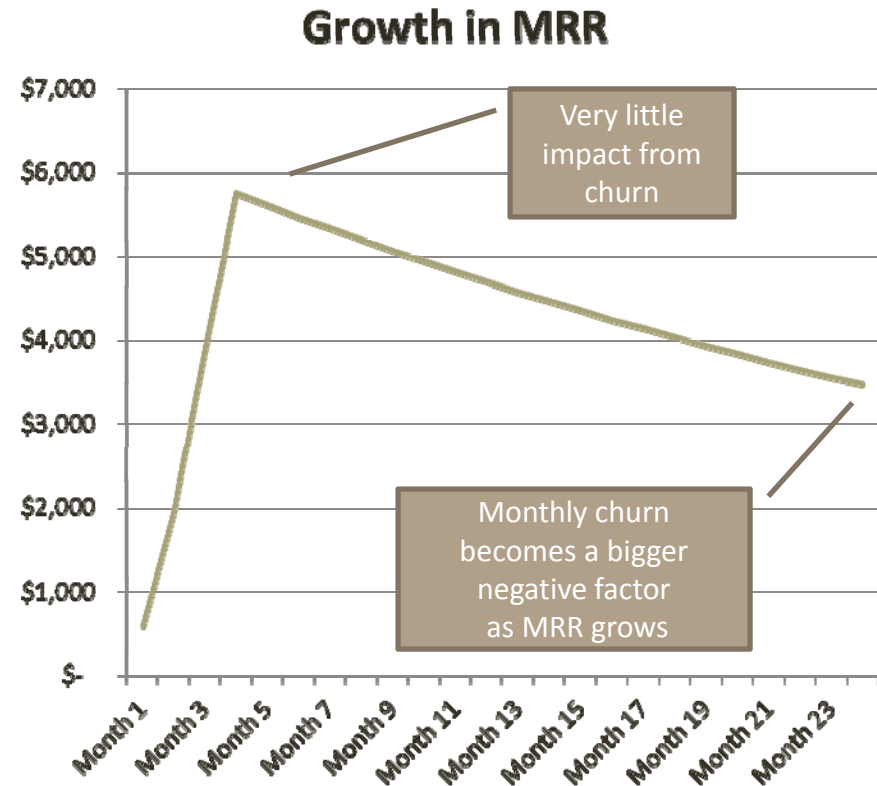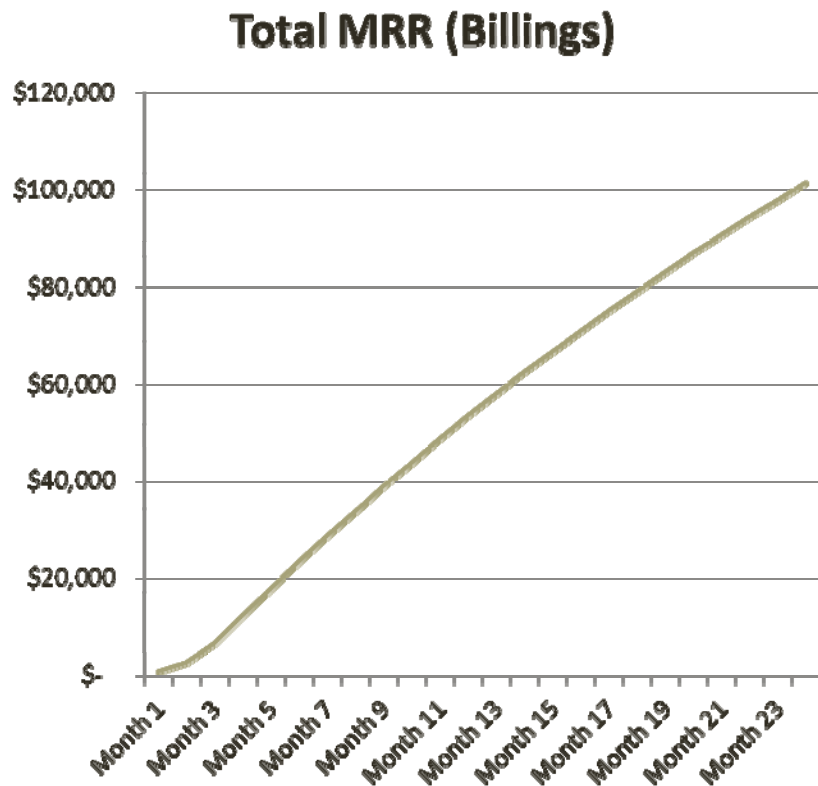
Total MRR (Billings)
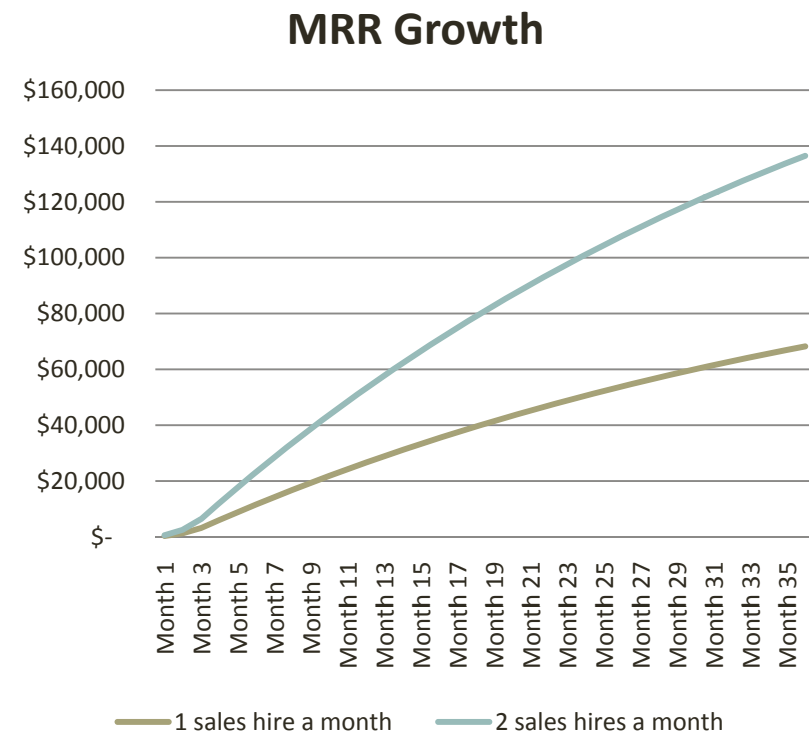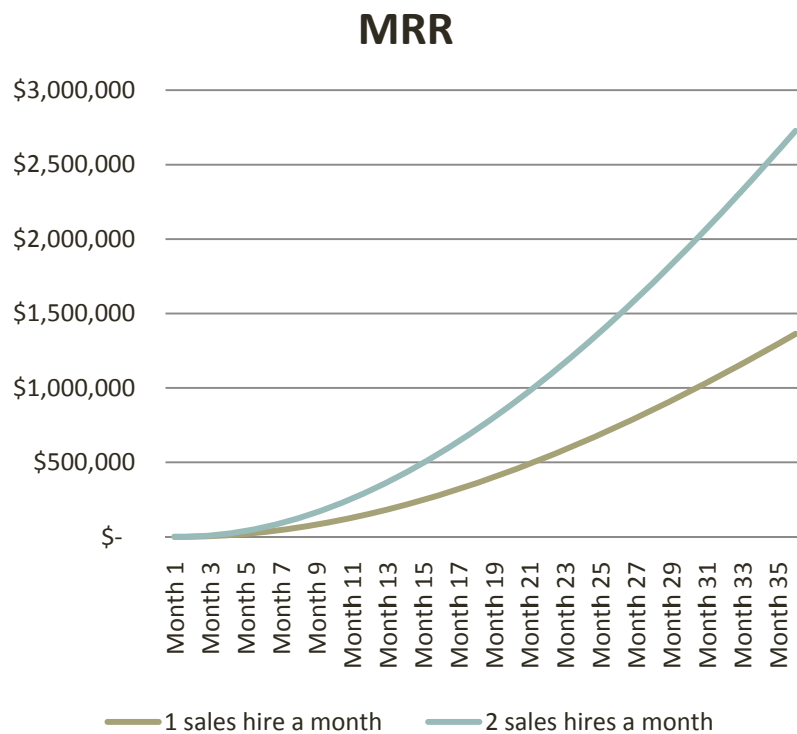

Growth in MRR

- Tracking growth in MRR shows new bookings
  - Shows how constantly adding new sales hires increases the bookings every month

What happens if you don't keep hiring new sales people?

Total MRR (Billings)

Growth in MRR

Very little impact from churn

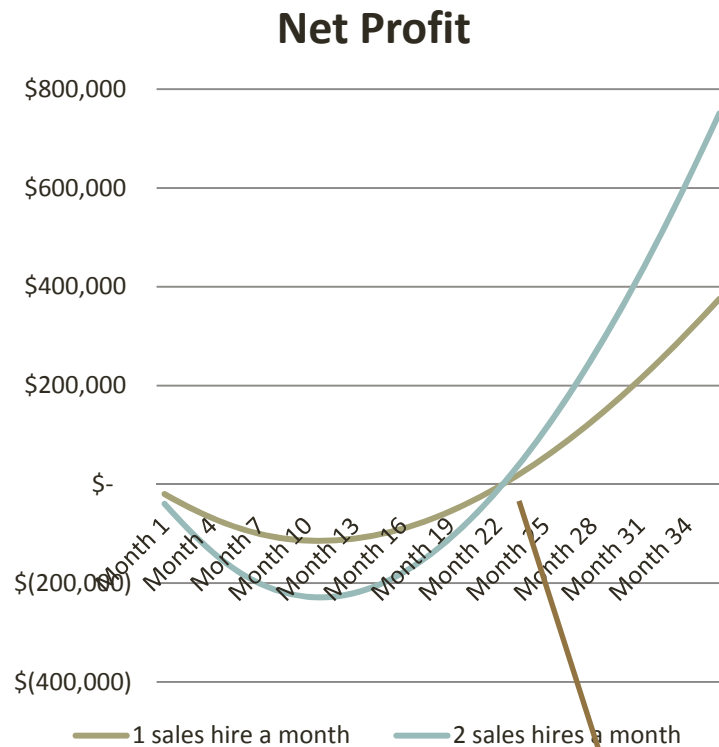Monthly churn becomes a bigger negative factor as MRR grows

- The business still keeps growing, but at a slower, slightly declining rate

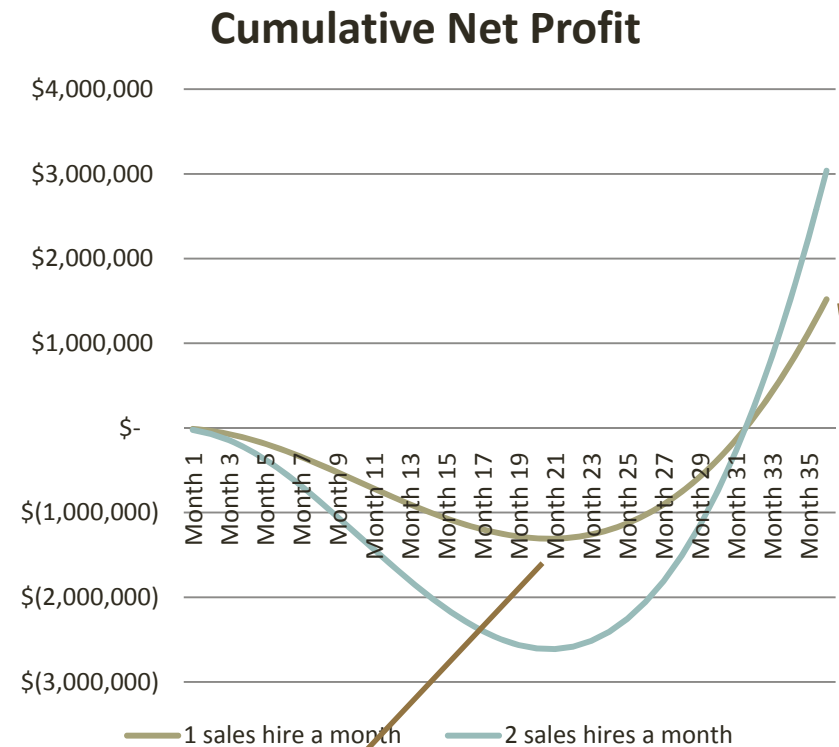# Comparison: hiring one versus two sales people per month

MRR

MRR Growth

- Not surprisingly, MRR and Growth in MRR directly correlate to sales hiring rate

Comparison: hiring one versus two sales people per month

Net Profit

$800,000
$600,000
$400,000
$200,000
$-
$(200,000)
$(400,000)

Month 1 Month 4 Month 7 Month 10 Month 13 Month 16 Month 19 Month 22 Month 25 Month 28 Month 31 Month 34

—— 1 sales hire a month   —— 2 sales hires a month

The time to breakeven remains the same

Cumulative Net Profit

$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$(2,000,000)
$(3,000,000)

Month 1 Month 3 Month 5 Month 7 Month 9 Month 11 Month 13 Month 15 Month 17 Month 19 Month 21 Month 23 Month 25 Month 27 Month 29 Month 31 Month 33 Month 35

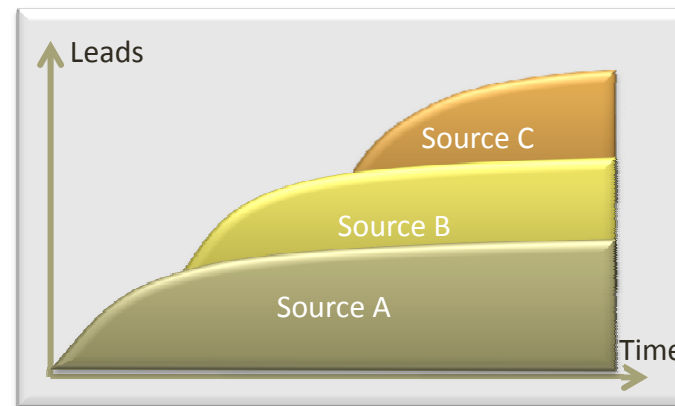—— 1 sales hire a month   —— 2 sales hires a month

The cash flow trough is halved

Not adequately shown, but the acceleration after breakeven is also halved

What's the blocker to faster growth?

- Usually it is the rate at which you can grow leads
  - Typically each lead source maxes out
  - Adding new lead sources often means paying more per lead

- Another blocker:
  - The rate at which you can hire and train really high quality sales people
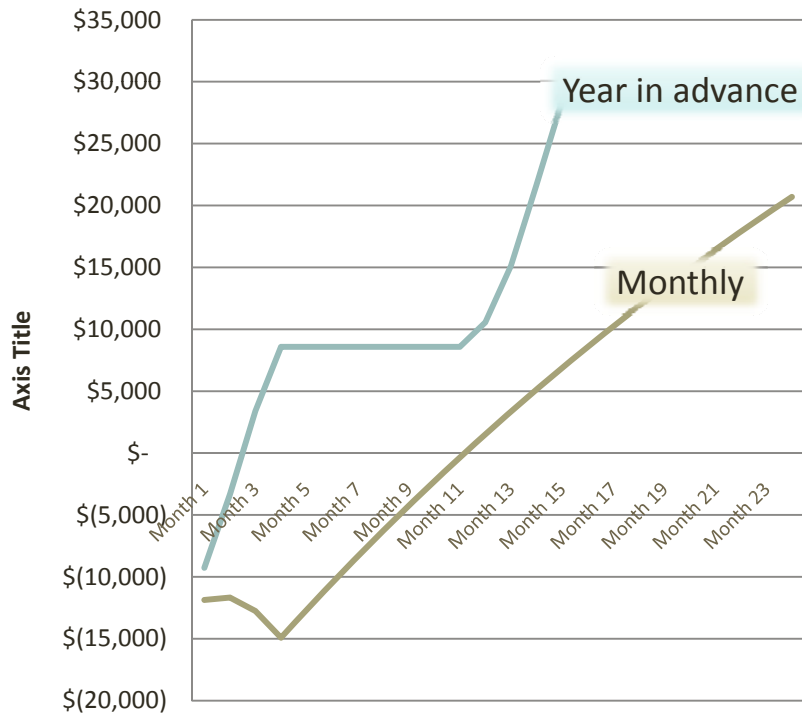
Personal Lesson Learned

- Once you have a repeatable, scalable sales model:
  - Grow as fast as you can
    - Grab market leadership position
  - Limited by:
    - Available capital
      - But capital and/or debt are easy to raise when your model works
    - Growth in lead generation
    - Ability to hire and train great quality sales people

- What's the worst that can happen?
  - You hire too fast and the sales model starts to break
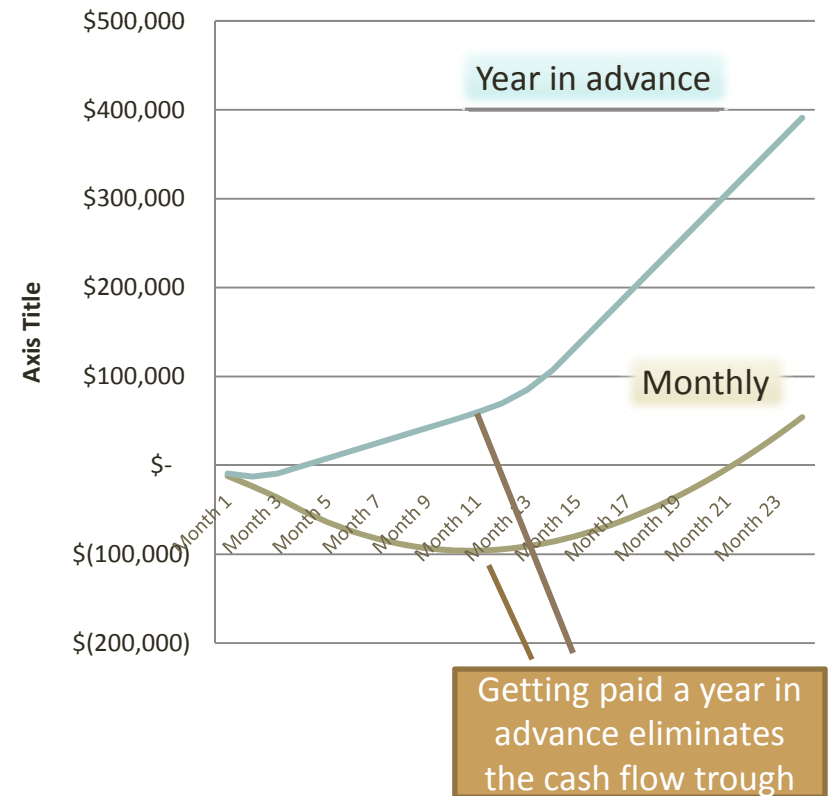 - Solution: simply stop hiring and let the model catch up

What happens if we collect a year's payment in advance?

Looking at an individual sales person

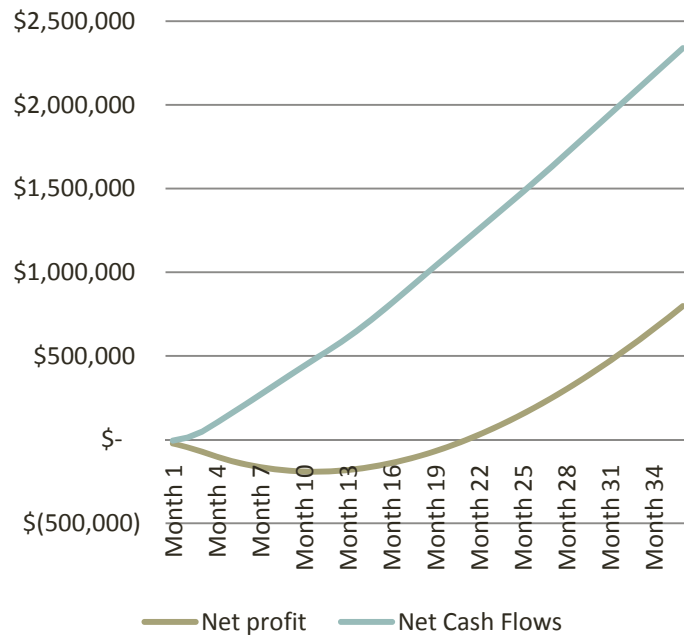### Cashflow comparison - monthly payments vs year in advance

Year in advance

Monthly

Cumulative Cashflow comparision - monthly payments vs year in advance

Year in advance

Monthly

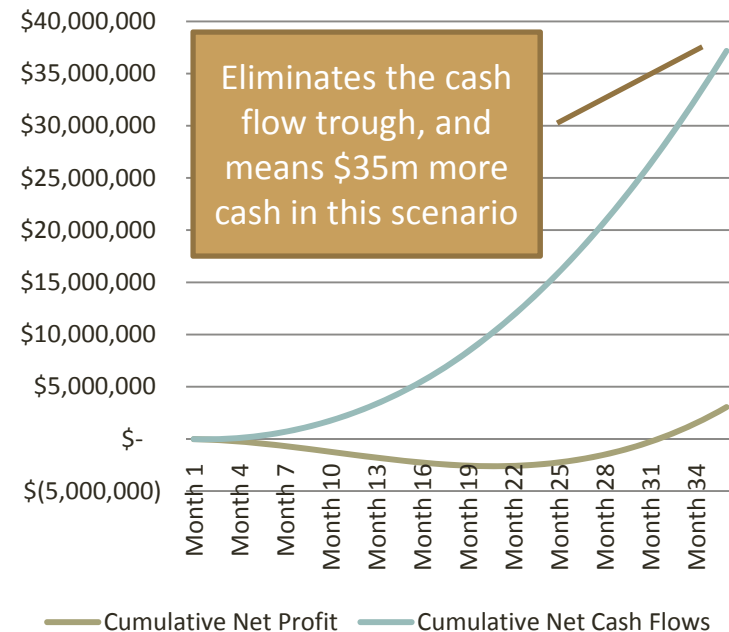Getting paid a year in advance eliminates the cash flow trough

What happens if we collect a year's payment in advance?

Looking at the whole company picture when hiring 2 sales people per month

Cashflow comparison - monthly payments vs year in advance

Legend: Net profit — Net Cash Flows

Cumulative Cashflow comparision - monthly payments vs year in advance

Eliminates the cash flow trough, and means $35m more cash in this scenario

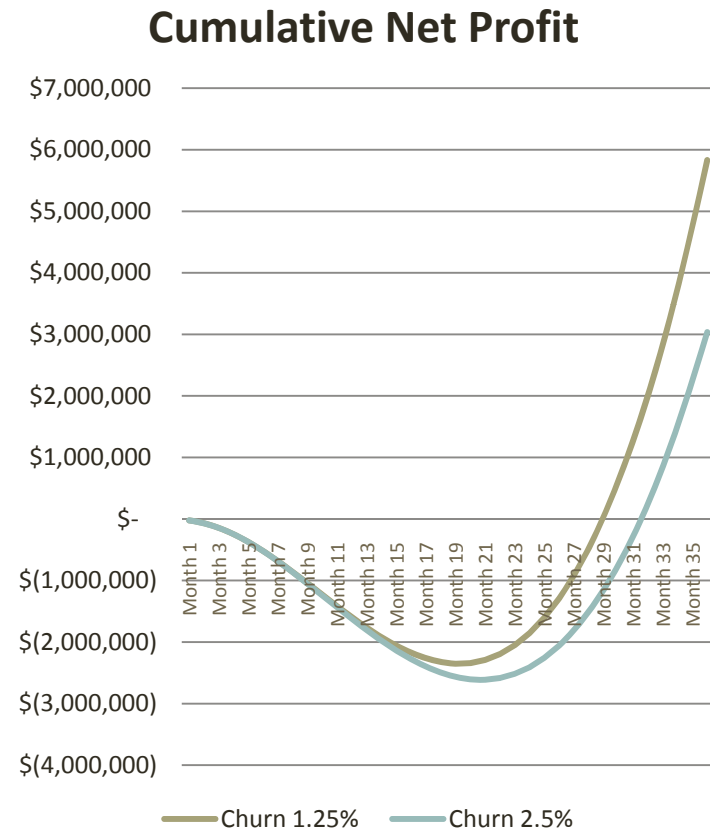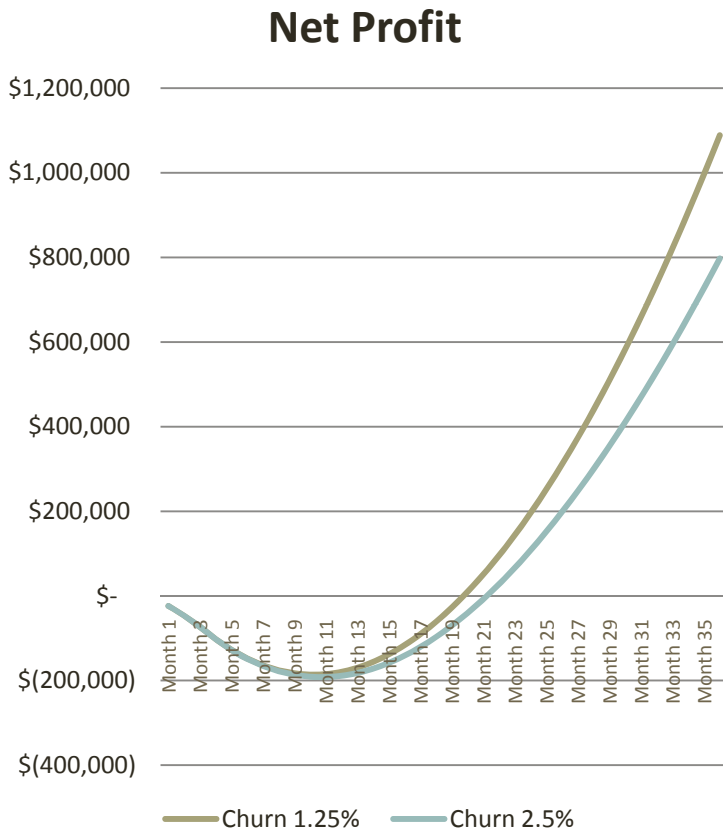Legend: Cumulative Net Profit — Cumulative Net Cash Flows

Lesson Learned

- Look for ways to get customers to pay in advance
  - Depending on the cost of your capital, this can be worth fairly large discounts

Impact of lowering Churn

Net Profit

| | Churn 1.25% | Churn 2.5% |

Cumulative Net Profit

| | Churn 1.25% | Churn 2.5% |

- Impact of lower churn rate is felt more heavily in the later years, as expected
- It has a significant impact on the long term profitability of the business

A way to get to negative Churn
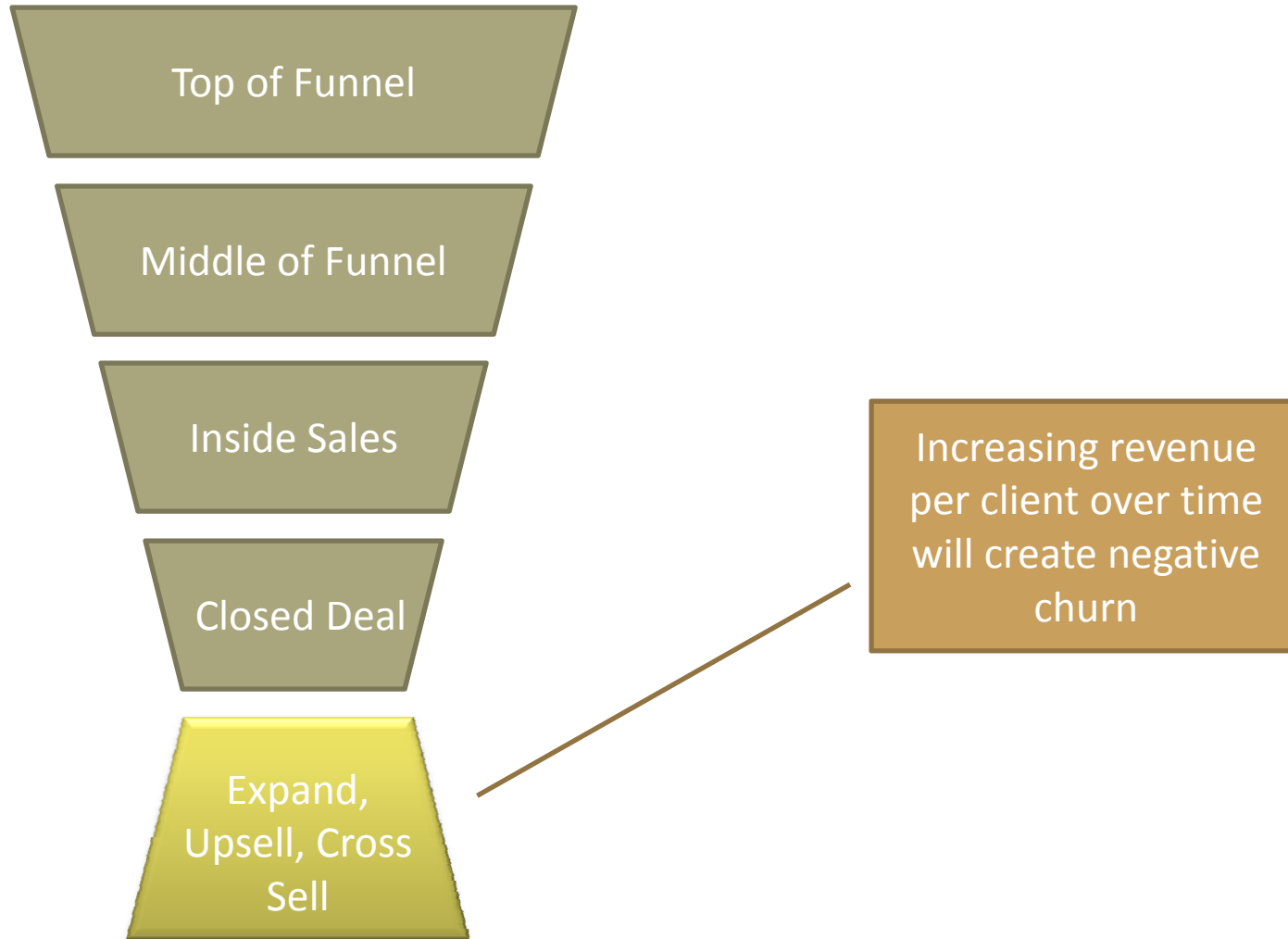
Another Key Axis for Growth

- Scale pricing for customers that are willing to pay

- Build a multi-axis pricing model
  - Product modules
  - Number of users
  - Amount of data
  - Number of Servers
  - Support response time
  - Etc.

Why is this model important?

- When you get to the point of having a repeatable, scalable sales model, you should hit the accelerator pedal
  - This model will help you show your investors and board members why that will involve a short term increase in burn rate
    - But a resultant high growth, high profit business

For More information

- Visit my blog at www.forEntrepreneurs.com

How to use the Model

- Looks complex, but actually simple to use
- There are only a few inputs
  - Those input cells are clearly marked in Orange
- Four sections
  - How a single sales person looks
  - What happens when you hire multiple sales people over time
  - What happens if you collect a years payment in advance
  - Comparison of two different hiring rates (second tab)
  - Comparison of two different churn rates (third tab)

- The slides are linked to the spreadsheet
  - Save them in the same directory then change the spreadsheet
  - The slides will update, providing prettier graphs

- Some complex calcs are hidden in rows 9 and 21

There are some important variables

- Important to play around with factors like:
  - cost per lead
  - average deal size
  - Sales force productivity (lower the monthly target)
  - etc.

  ... and see how they impact the economics

Important Note

- The figures I have used should not be taken as a default set of values for any SaaS business
  - There are going to be wide variations in funnel efficiencies that will make each individual business considerably different