

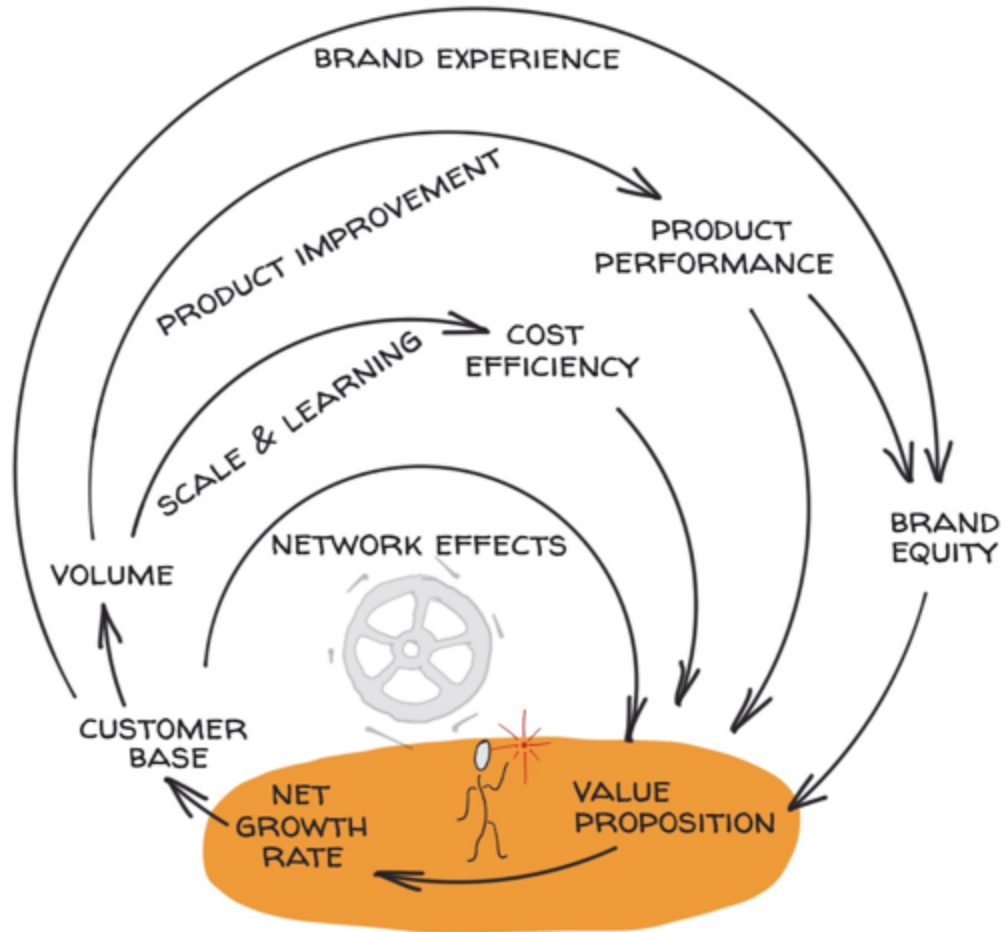


# Product Management – Growth

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# Five Flywheels





# Metallic Epoxy Flooring: Everything You Need To Know

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3w

# Growth Hacking?

“Working on a [tech] problem in a different, presumably more creative way than what’s outlined in the instruction manual.”

ANNALS OF TECHNOLOGY

## A SHORT HISTORY OF “HACK”

By Ben Yagoda

March 6, 2014

THE  
NEW YORKER

It was at M.I.T. that “hack” first came to mean fussing with machines. The minutes of an April, 1955, meeting of the Tech Model Railroad Club state that “Mr. Eccles requests that anyone working or hacking on the electrical system turn the power off to avoid fuse blowing.” The lexicographer Jesse Sheidlower, the president of the American Dialect Society, who has been tracking the recent iterations of “hack” and “hacker” for years, told me that the earliest examples share a relatively benign sense of “working on” a tech problem in a different, presumably more creative way than what’s outlined in an instruction manual.

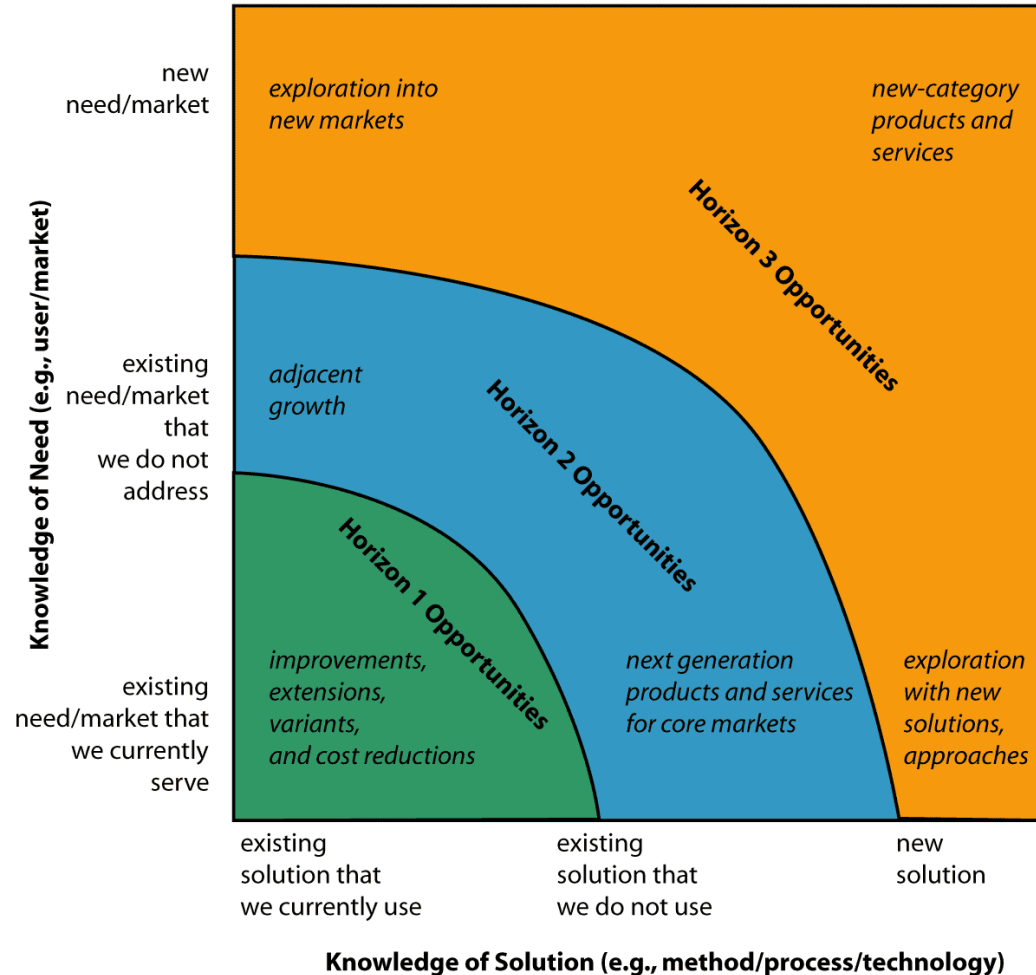
<https://www.newyorker.com/tech/annals-of-technology/a-short-history-of-hack>

# The "Instruction Manual" First

## Five Key Contextual Factors

1. New category? (e.g., "General Magic")
2. How network-y?
3. Cash constraints / budget
4. Customer Lifetime Value
5. Zero-to-one or scaling/tuning?

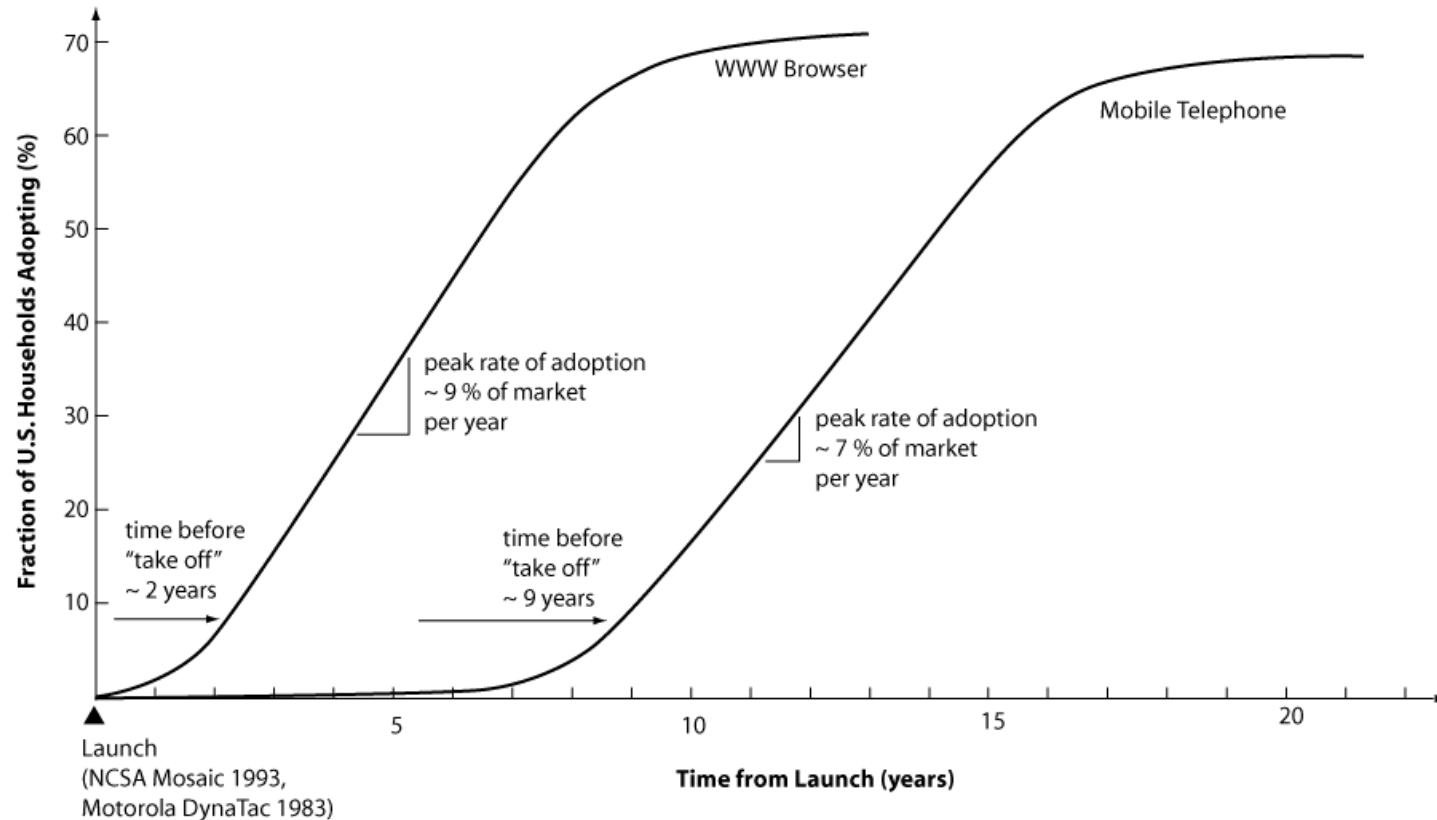
# 1. New Category?



**Source:**  
Terwiesch and Ulrich. 2009.  
*Innovation Tournaments.*



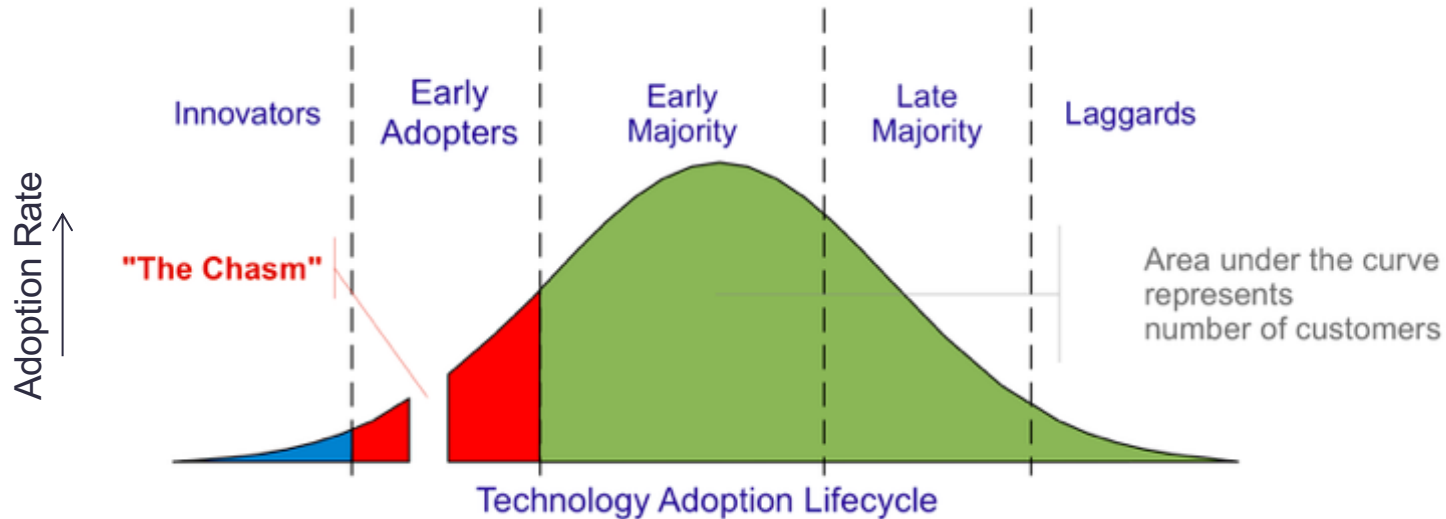
# For New Categories (e.g., H3), Diffusion is the Critical Underlying Process



**Source:** Terwiesch and Ulrich, Innovation Tournaments, Chapter 8.



# Rogers and Moore Adopter Categories

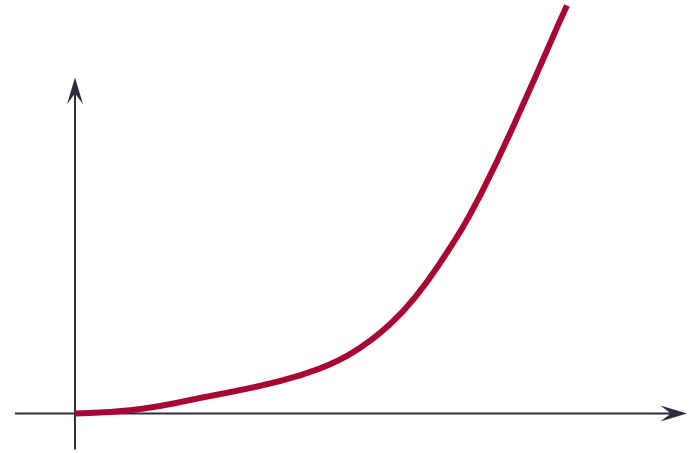


**Source:** Image from Wikipedia, based on categories of Everett Rogers, with addition of “chasm” by Geoffrey Moore.

# Explaining Diffusion Rates

Rogers' Five Factors (Intrinsic Attributes of Innovation)

1. Relative advantage
2. Visibility
3. Trial-ability
4. Simplicity
5. Compatibility



**Source:** Everett M. Rogers, *Diffusion of Innovations*, Fourth Edition, Free Press, New York, 1995.

# New Category Growth

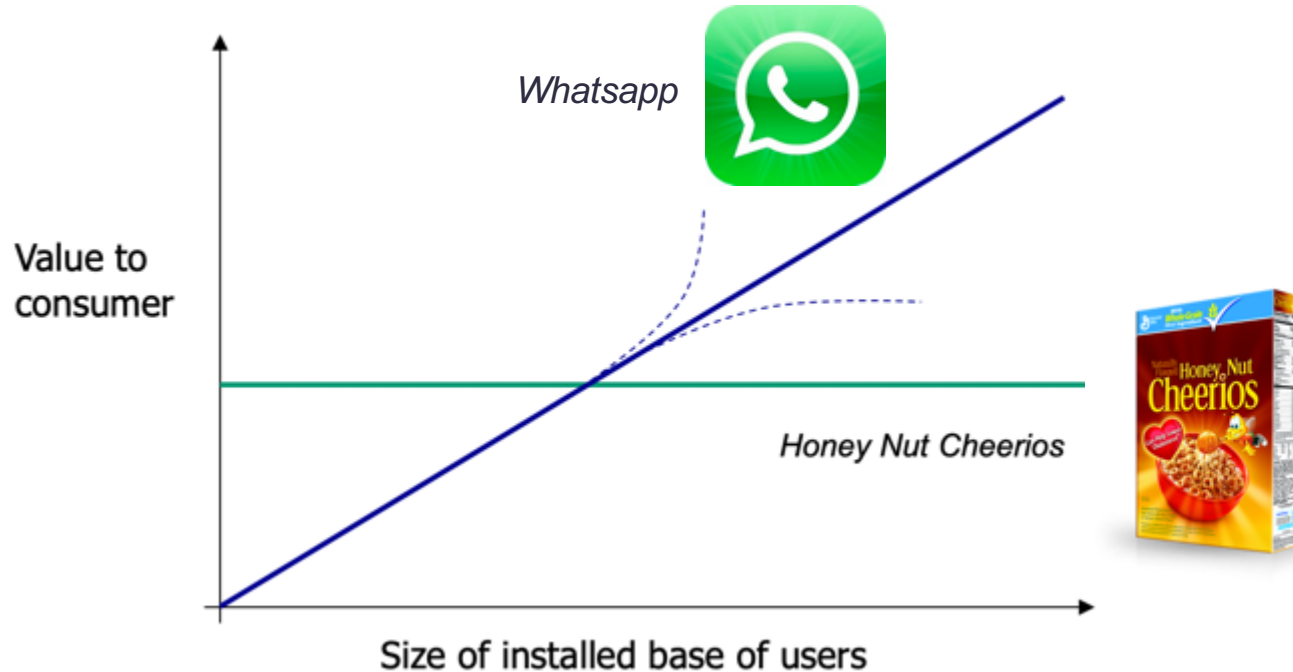
1. It will be slow.
2. Enhance Rogers' five factors where possible (e.g., trialability).
3. Focus on high-need, high-willingness-to-pay segments first.



*Established in 1987. Some people still don't have it.*

## 2. How Network-y?

Products with network effects increase in value to the individual consumer as the installed base of users increases.



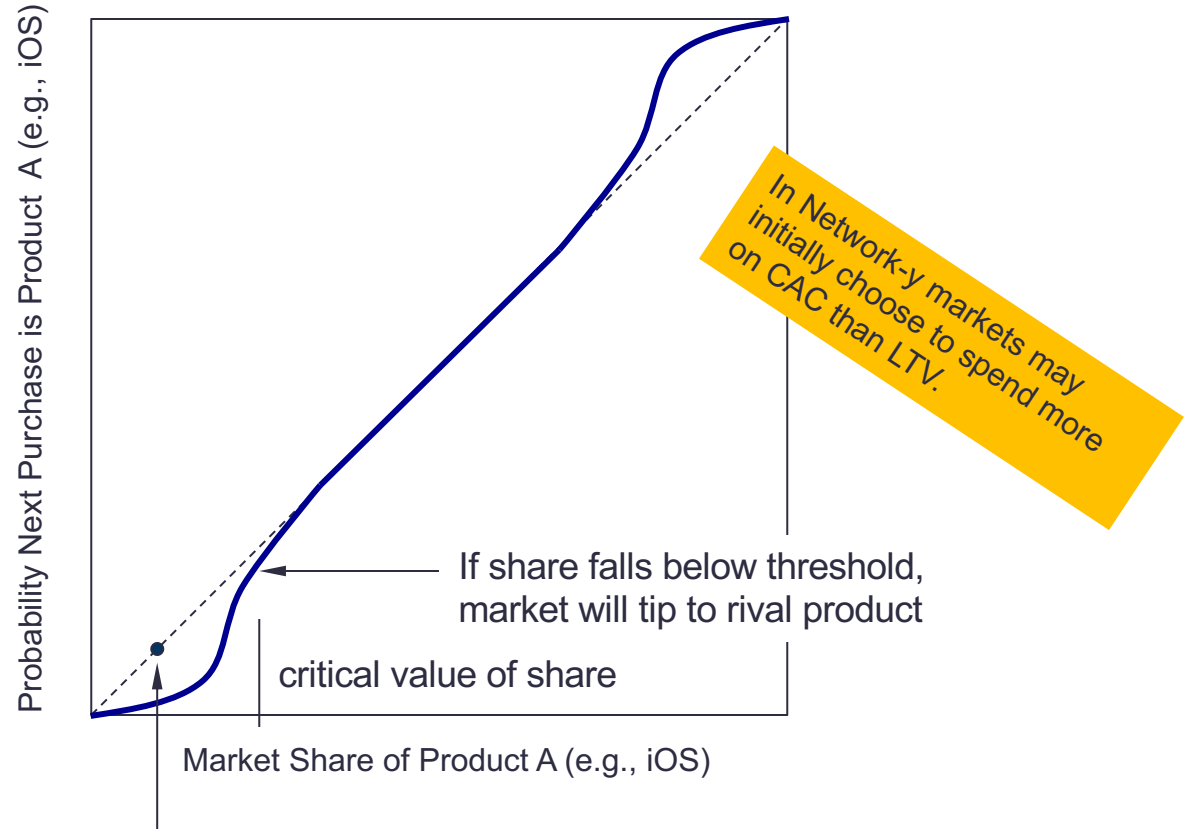
Network Value is driven by both **direct** network effects (e.g., ability to reach a friend on Whatsapp) and **indirect** network effects, such as the value of complements (e.g., choice of application software on a platform).

# Tipping Dynamics and “Lock In” in “High Network” Markets

Competitors falling below a critical threshold of market share will die off; above a threshold will win all.

“We have incurred net losses in each year since inception, and we may not be able to achieve profitability.”

Airbnb SEC Filing



(By comparison, Honey Nut Cheerios can comfortably stay at 8% market share.)

### 3. Cash Constraints and Budgets

Cash constraints shouldn't exist with perfect financial markets.

i.e., if marketing investments have positive NPV, should be able to do them.

But, availability of cash is a critical constraint for most companies, especially new ventures.

Why?

- Owner-managers prefer not to spend time/resources on raising capital and managing investors.
- Owner-managers prefer to retain control.
- Capital market failures – or at least differences in beliefs between principals and potential investors.

Thus, what Microsoft can do with OneNote is very different from what Sachin and Ada (founders) can do with Notejoy.



## 4. Customer Lifetime Value (LTV, CLV) and Customer Acquisition Cost (CAC)

### CLV (customer lifetime value)

NPV of average customer lifetime value (e.g., 20,000 USD/customer), usually in terms of gross margin contribution.

Typically a function of:

- average duration of lifetime engagement, adjusting for churn
- service fees per unit time, or orders per unit time and average value per order
- additional products and services adopted

### CAC

Customer acquisition cost (e.g., 2000 USD/customer)

Usually average cost to acquire a customer, because that's what can be measured.

(But, would be better to understand the marginal cost of acquiring a customer for each acquisition approach.)

### For sustainability, $CLV > CAC$

Rule of Thumb: Target  $CLV / CAC > 3$

(Somewhat arbitrary and illogical rule, but a high ratio accounts for marginal vs. average costs, errors in estimation, and excessive optimism.)

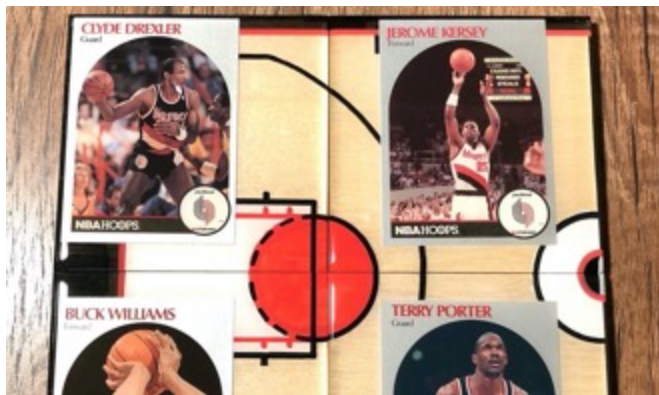




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the right materials, at the right size, at the right time



**DTM** (Small Business)  
Sasha Price (Acrylic)

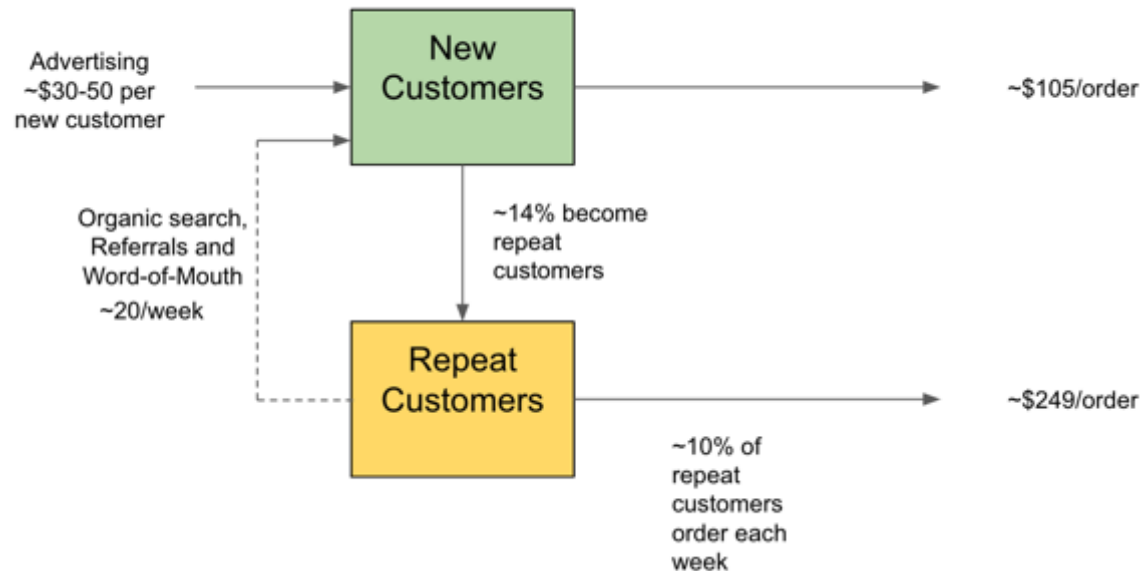


**DTM** (Small Business, Classic Court Tiles on Etsy)  
Travis Tarpo (Baltic Birch)



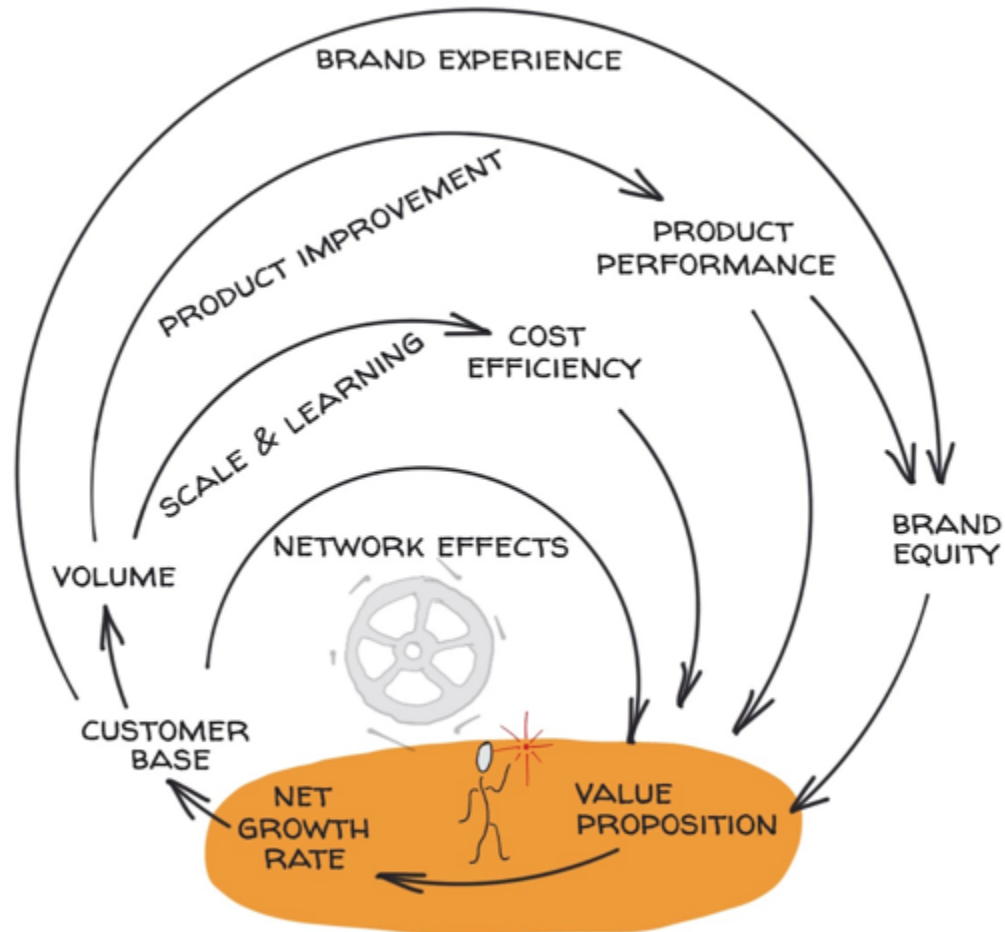
**DTM** (Hobbyist/Maker)  
John Kauk (Baltic Birch)

# MakerStock Acquisition Model



LTV ~ \$187 (if we assume repeat customers stay for 2 years and gross margin is 40%, ignoring discounting)  
(CLV = 40% x (\$105 + 14% x 2 x 52 x 10% x \$249) = \$187)

## 5. Zero-to-one or Scaling/Sustaining



# The Cold-Start Problem for Platforms

- Network-y products and 2-sided markets (aka “platforms”)
- Product is not very valuable until...
  - ...there are a lot of other consumers on the **network** (e.g., WhatsApp)
  - ...there are a lot of suppliers on the **platform** (e.g., AirBNB)
    - [complementary challenge for attracting suppliers, but consumer side is harder.]



## Strategies

1. Focus on a small segment and get density there, then expand (e.g., geographic focus).
2. For platforms, “buy” the supply side with capital.

# Summary Contextual Factors (MakerStock Example)

## How do we grow the DTM business?

- Existing category.
- No significant network effects.
- Relatively low intrinsic virality.
- Estimated LTV for DTM Segments ~\$187
- Target average CAC \$30-50
- Part-time product manager
- \$1000s not \$10,000s to run experiments.
- Budget available to scale what works.
- At this point not really a cold start.

The screenshot shows the MakerStock website interface. At the top, there's a navigation bar with links: HOME, BUY WOOD, BUY ACRYLIC, OTHER MATERIALS, SCHOOLS/WHOLESALE, and ABOUT US. The main header features the MakerStock logo with the tagline "the right materials, at the right size, at the right time". To the right of the logo, there's a search bar and a shopping cart icon. Below the navigation bar, the breadcrumb trail reads: Home > Wood > Baltic Birch Plywoods - FULL SHEET WITH... The product title is "Baltic Birch Plywoods - FULL SHEET WITH 3 CUTS" with a price of \$44.85. The product image shows a large sheet of plywood with dimensions L1, L2, W, and L1 labeled, and a "cut" line. Below the image, there's a description: "W, L1, and L2 must all be between 14 and 46 in. W, L1, and L2 tolerances -0.00 / +0.125 in. Other dimension tolerances +0.00 / -0.250 in. Outside edges are standard mill cuts." To the right of the image, there's a "Thickness" dropdown menu set to "12mm (1/2in nominal)" and a "Quantity" input field set to "1". Below these is a green "ADD TO CART" button. At the bottom right, there's a paragraph of text: "Ever tried buying a sheet of baltic birch plywood from Lowes or Home Depot? Not going to happen. It's also tough buying on line, because the panel size exceeds the standard ground shipping dimensions for UPS and FedEx. We feel your pain and have come up with a solution. If you choose just three dimensions [W, L1, and L2], we will make the three cuts next thin to our standard dimensions. See the illustration."

## “Jobs-ian” Launch Demos

Can work for very loyal customer base and celebrity CEOs.



[Example \(...and how it can go wrong\)](#)



## WEALTH MATTERS

*The Secret to Buying the Perfect Diamond*

- Is your category newsworthy?
- Are you, the company or individual, newsworthy?
- Do you have an angle that is newsworthy?
- Are you willing to do media outreach yourself and/or do you have budget for PR?



Tom and Stephanie Taira at their home in Lafayette, Calif. Mr. Taira searched assiduously to compare

Despite different budgets, Mr. Taira and Mr. Fennerty shared a trait: fear of getting ripped off in the notoriously opaque diamond market. Both turned to [Rare Carat](#), a two-year-old website that uses an algorithm to value different diamonds based on their qualities — size, cut or clarity, for example.

**Read Dr. Seim's Pricing Analysis**

Katja Seim, professor of business economics and public policy at the Wharton School at the University of Pennsylvania, found that on average the price for the same diamond can be 12 to 21 percent higher on those platforms than at smaller retailers.

**Diamond Cross-Listing Analysis**

3 pages, 0.09 MB

In a separate report, the consulting firm KPMG found similar results: The price difference was 12 to 20 percent for the same diamond on these three sites.

**Read KPMG's Diamond Price Study**

The consulting firm KPMG found that the price difference for the same diamond was 12 to 20 percent among three online diamond retailers.



6 pages, 0.14 MB

<https://www.nytimes.com/2018/12/07/your-money/diamond-comparison-shopping.html>



Free shipping on orders \$99+ / Easy Returns

Free Medal with Questival Ticket purchase.

Questival  
ADVENTURE RACE

# WHAT IS QUESTIVAL

Questival means getting out there and exploring the world around you.  
Here's how it works.

# Master Menu of DTC Acquisition Tools

## Awareness

### Virality

- Word of Mouth – sharing substance
  - Referral incentives
- Sharing entertainment (e.g., [Harper-Wilde video](#))
- Visibility of brand in use (e.g., JUMP red bikes)

### Third-Party Media

- Newsworthy activity, product (e.g., Boom XB-1)
- Stunts (e.g., half.com Oregon)
- Founder personalities (e.g., Elon CyberTruck)



### Display Advertising

- Targeted sites, properties, locations (e.g. Facebook, Twitter, Instagram, Quora)
- Podcasts

### Attachment to Complementary Products / Services / Experiences

- Your own (when complement is easier to promote than focal product)
  - Value-add content (e.g., educational videos), Conferences, events (e.g., Cotopaxi Questival)
- Partners
  - Bundling, add-ons, sponsorships (e.g., AirBNB Olympics Deal)

### Search

- Organic search
  - Search engine optimization (relatively slow)
  - Inbound links from high-domain authority sites
  - Excellent content
- Paid search (Google, Facebook, Twitter)
  - Pay per click (ppc), e.g., Adwords
  - Retargeting



## Trial

- Free trial period
- Freemium
- Samples
- Bricks and mortar presence
- Kiosks, pop-ups

## Repeat



- Great product experience
- Great service experience
- Loyalty programs
- Follow-up communications
- On-going value-add engagement
  - Community
  - Brand identity
  - Information
- Via...
  - Twitter
  - Instagram
  - Facebook
  - Newsletters
  - Postal mail



- Home
- Orders 38
- Orders
- Drafts
- Abandoned checkouts

- Products
- Customers
- Analytics
- Marketing
- Discounts
- Apps

SALES CHANNELS



SKU: OPA-RED-125-12-20



10

Acrylic (Matte Black)

1/8" / 3mm / 12x20

SKU: MAT-BLK-125-12-20

\$13.25 × 10

\$132.50

More ▾



Paid

Discount	Barry10	- \$31.75
Subtotal	30 items	\$285.75
Shipping	FedEx Ground (38.58 lb)	\$14.21
Tax		\$0.00

Paid by customer \$299.96

Timeline

☒ Show comments

Leave a comment...



Post

Only you and other staff can see comments

SHIPPING ADDRESS

Edit

Barr



View map

BILLING ADDRESS



Conversion summary

This is their 23rd order

1st session from Google

1 session over 1 day

View conversion details

(Your best prospect is the customer you have already acquired. Don't lose them.)

Home

Customization

REPORTS

Realtime

Audience

Acquisition

Overview

All Traffic

Google Ads

Campaigns

Treemaps

Sitelinks <sup>NEW</sup>

Bid Adjustments

Keywords

Search Queries

Hour of Day

Attribution <sup>BETA</sup>

Discover

Admin

September 2020

October 2020

Primary Dimension: Google Ads: Ad Group Keyword Ad Content

Plot Rows

Secondary dimension ▾

Sort Type: Default ▾

advanced

	Google Ads: Ad Group	Acquisition					Behavior		Conversions		
		Clicks	Cost	CPC	Users	Sessions	Bounce Rate	Pages / Session	Ecommerce Conversion Rate	Transactions	Revenue
		12,280 % of Total: 37.92% (32,381)	\$5,269.31 % of Total: 33.42% (\$15,767.01)	\$0.43 Avg for View: \$0.49 (-11.88%)	11,201 % of Total: 34.31% (32,649)	12,759 % of Total: 33.03% (38,624)	1.43% Avg for View: 1.91% (-25.14%)	4.90 Avg for View: 5.98 (-18.03%)	0.71% Avg for View: 1.28% (-44.96%)	90 % of Total: 18.18% (495)	\$7,8
<input type="checkbox"/>	1. Cut-to-Size Baltic Birch Plywood	0 (0.00%)	\$0.00 (0.00%)	\$0.00	12 (0.11%)	22 (0.17%)	4.55%	6.91	9.09%	2 (2.22%)	\$116.97
<input type="checkbox"/>	2. Maker Stock Brand	137 (1.12%)	\$16.30 (0.31%)	\$0.12	116 (1.04%)	218 (1.71%)	5.05%	13.96	8.72%	19 (21.11%)	\$2,782.21
<input type="checkbox"/>	3. Acrylic for Laser	648 (5.28%)	\$327.43 (6.21%)	\$0.51	594 (5.30%)	753 (5.90%)	1.20%	9.84	2.39%	18 (20.00%)	\$1,450.76
<input type="checkbox"/>	4. Thin Plywood	2,055 (16.73%)	\$1,018.24 (19.32%)	\$0.50	1,838 (16.41%)	2,089 (16.37%)	0.81%	5.57	1.29%	27 (30.00%)	\$1,324.25
<input type="checkbox"/>	5. CNC Foam	710 (5.78%)	\$355.95 (6.76%)	\$0.50	645 (5.76%)	742 (5.82%)	0.54%	4.58	0.67%	5 (5.56%)	\$994.76
<input type="checkbox"/>	6. Fluorescent Acrylic	400 (3.26%)	\$208.55 (3.96%)	\$0.52	373 (3.33%)	443 (3.47%)	2.48%	6.07	0.45%	2 (2.22%)	\$155.48
<input type="checkbox"/>	7. Bendy Plywood	5,033 (40.99%)	\$1,916.34 (36.37%)	\$0.38	4,653 (41.53%)	5,076 (39.78%)	1.52%	3.70	0.26%	13 (14.44%)	\$734.42
<input type="checkbox"/>	8. Colored Acrylic	1,304 (10.62%)	\$672.93 (12.77%)	\$0.52	1,188 (10.60%)	1,298 (10.17%)	0.39%	5.29	0.23%	3 (3.33%)	\$212.25
<input type="checkbox"/>	9. Laser Cutting Services	1,346 (10.96%)	\$507.41 (9.63%)	\$0.38	1,179 (10.52%)	1,470 (11.52%)	2.93%	4.32	0.07%	1 (1.11%)	\$45.96
<input type="checkbox"/>	10. mm Baltic Birch	510 (4.15%)	\$174.13 (3.30%)	\$0.34	469 (4.19%)	494 (3.87%)	0.40%	3.35	0.00%	0 (0.00%)	\$0.00



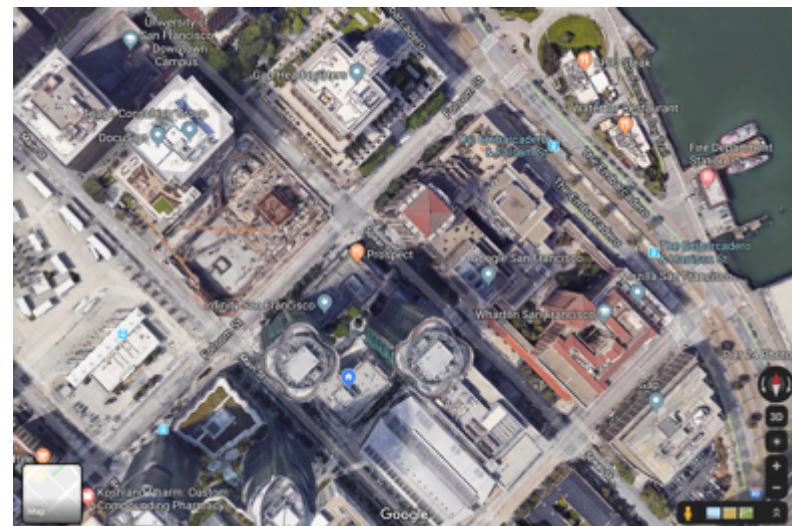
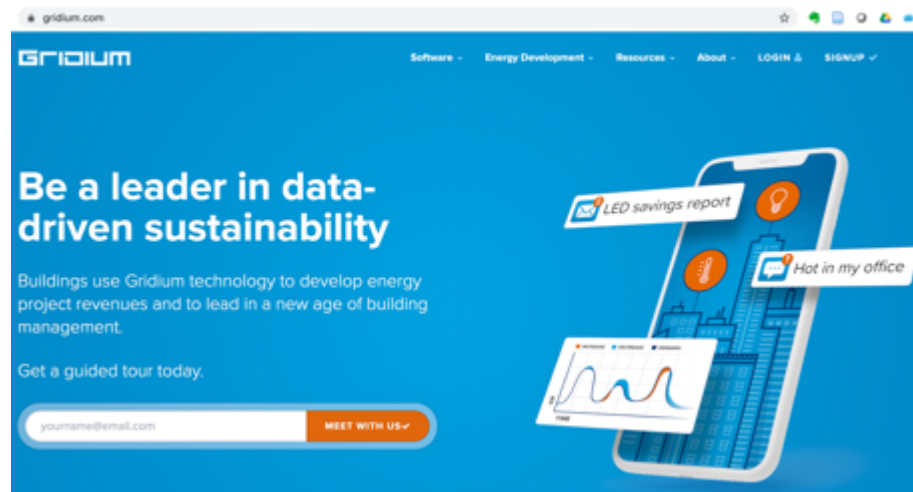
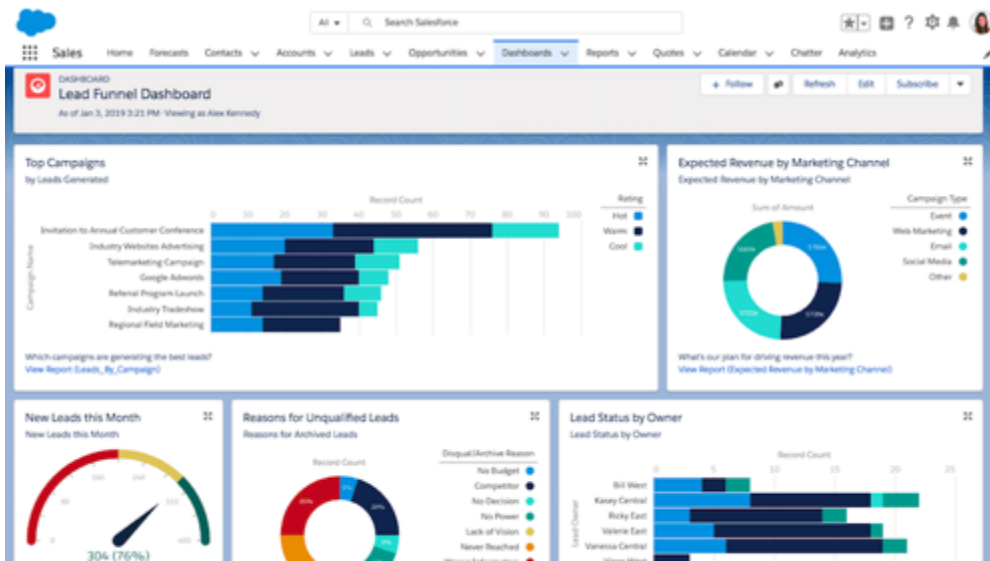
# A Few Notes on B2B

Many DTC techniques apply – but typically “sales” is the prominent function in B2B.

B2B is mostly about “pipeline management”

Getting leads into the pipeline (“mouth of funnel”) and then designing and operating an efficient conversion process.

“Lead Gen” and “Conversion”



# The "Instruction Manual" Revisited

## Five Key Contextual Factors

1. New category? (e.g., "General Magic")
2. How network-y?
3. Cash constraints / budget
4. Customer Lifetime Value
5. Zero-to-One (cold start) or scaling/tuning?

**Experiment with the items on the Growth Menu to find the handful of techniques for which  $CAC \ll CLV$ .**

**Invest in those techniques within cash constraints.**

# Triple Diamond Model of Design (Thinking)

*Growth is just another design problem – but with particular focus on solutions (third diamond)*

