

Lecture Open Source / Enterprise 2.0

11/8

- CEO Social Text Eugene Lee
- were classmates at Harvard + MIT w/ Eric
- formed during 'bomb' (after .com crash)
- saw web.2.0 patterns, first enterprise 2.0
- first enterprise wiki
- needed to do other stuff to get venture style returns
- microblogging
- blog
- social text people
- social calc
- cloud and appliances
 - integrate w/ their apps + authentication
- now Socialtext connect w/ share point

Q: Need incentives?

Macro ~~and~~ trend: consumer tech in biz

- in organic way
- middle + ~~large~~ management
- in last year + two
- people joining fb to see friends -
then use it themselves

(2)

biggest change: comfort w/ sharing

- ~~sharing~~ transparency: creating culture w/ candor
- ↑ value of this
- from leadership

(I think I do this - w/o knowing name - good biz - bad research)

They start w/ biz problem

experiments good

All SAAS

- renewals important

They had really bad churn rates 50%

- now in 80%

Prospects: intranet static, hard to find, not social

- inside lots of details on cultural transformation

Q: Open Source

- huge fan
- use it in production LAMP
- could not be as efficient w/o it
- can't do SAAS and open source unless you are all in
- so ditched the open source
- for tech

3

Conditions

- 1. Complete commitment on model
- 2. Critical mass community that innovates
- 3. Distribution leverage; best is tools for technologists

Start at cust and work backward

Would they like to purchase

Q: Have you measured impact?

- Different for everybody
- Have to have measured start
 - They are too small + busy
- Value they set is diff from what they thought

Q: Pushback from legal -> info from subpoena

- biggest concern; will info leak out of company
- lots of compliance who can see what
 - groups, workspaces private
 - inherit privacy
- law firms are customers

9

Q: How build value proposition to adapt their solutions?

- ~~first~~
- Usually qualitative
- degree depends on self-edv^{of} prospect
- please tell me Ent. 2.0
- or large team w/ a RFP
- most in middle
- identify executive sponsors
- what are their problems
- sometimes quick + dirty prototype
- WebEx demo
- or auto sign up for 30 day trial
- will do some lightweight ~~setting~~ training for evaluators

Q: Why SAAS good?

- most is in cloud
- o but not biggest econ advantage
- forces vendor to align w/ cust
- they need to renew
- must renew to be profitable
- less revenue ~~as~~ pass at front
- no shelf ware - sold but not used

9

and then sell service contract 22%/year

SaaS must book revenue later

- only recognize 1 month of revenue ce month

Can't do huge growth fast

but renewal cost is very low

lower cost of sales for same revenue

Very diff. software dev process

- need big ass release every 18 months

- actually 7 month of developing

Constantly small releases

every 2-4 weeks

agile to cust need, competitive pressure, trends

a year faster

service team can see usage + 'instrumentation'

Q: Closing advice

1. Get Crisp - communications for manager - being influential, convincing

2. Get connected - alumni network - and always invest in networking

3. Get social - embrace sharing, but appropriately - esp not concentric w/ your acquaintances

4. Get aligned - w/ personal passions - joy and fulfillment - rolodex of their friends

interesting articles
links conversation patterns

friends + family

- vision

- don't hide

over

⑥
Debrief

US reality high level of trust in US

Will social norms change

Linux - open source

- Ballmer can't trust your company

- ~~Raymond~~ Raymond: Community

faster, lower cost

for use vs for sale software

more robust:

(did not write a lot)

in movies - at bottom lots of work w/o paid

Team presentations: Korean Search Market

Daum - 2nd largest web portal in S.K.
like Yahoo

Search + display ads

2 sided market users + advertisers

More value for advertisers if site was free (duh)

Strategy focus differed

Naver ~~is~~ surpassed in search

①

Naver profit margin higher
trailing ~~the~~ Naver (Naver dominated)

Traffic similar

Naver bigger in rev/user

Daum also does better in some spaces

Strategy { Mobile
Kiosk - have 1000 of them
IPTV - capabilities of computer on TV

Rainbow ~~search~~ ^{ad} platform - all the items
- bundle ad types

(I don't like how they focus on class concepts)

looked at long tail of advertising

Q: could naver do same thing?

- they focused on local search list

Q: How they decide on strategy

- getting into search market

- looked for new areas for growth

8

Pricing digital text books

- predicting 18%/market in 5 years
- needs to be priced right
- harvested pricing data
 - normalized prices
- kindle higher than used in textbooks
 - much less variability

50-60% of textbooks are 2nd hand

find WTP of rental

- 30% of the list price

(they did a survey)

People expect to resell

94% of people resell

50% people keep

They just sell at 20% of list + lock to device

44% want to resell

2nd hand market large

enable resell to help market grow

(yeah how is used + res different)

9

Publishers broker resale

Control 2nd hand market

have a graph of what resale fee should be

(I'm highly skeptical)

~~17~~ "People value digital goods at 0 b/c no resale"

really like that

people don't know if they want to keep

15.567 Reading Guide and Assignment

November 16: Experimentation, Replication and Innovation

The mission of the MIT Sloan School is to develop principled, innovative leaders. How can you use the most important business technology of our era to lead innovation?

Readings

Required:

The 4 Ways IT is Driving Innovation: An Interview with Erik Brynjolfsson
MIT Sloan Management Review, Spring, 2010.

Ron Kohavi, Roger Longbotham, and Toby Walker, "Online Experiments: Practical Lessons" *IEEE Computer* 2010 (in press)

Brynjolfsson, Erik and Schrage, Michael "The New, Faster Face of Innovation: Thanks to Technology, Change Has Never Been So Easy-or So Cheap" *Wall Street Journal and Sloan Management Review* (August 17, 2009)

Optional:

Ron Kohavi, Roger Longbotham, Dan Sommerfield, and Randal M. Henne, Controlled Experiments on the Web: Survey and Practical Guide, *Data Mining and Knowledge Discovery journal*, Vol 18(1), p. 140-181, 2009. DOI.

Study Questions

Please think about the following questions as you do the readings.

- 1) What are some of the ways that IT is now being used to support innovation, or increase the pace of innovation?
- 2) How does careful measurement foster innovation? What are the advantages and disadvantages of controlled experiments as opposed to simply analyzing data generated through the normal course of business?
- 3) Did any of the organizations where you have worked in the past run formal business experiments? How well did they work?
- 4) Did any of the organizations where you worked use IT to systematically replicate innovations in other locations?
- 5) Where do you see the biggest opportunities for IT-enabled innovation in the next 3-5 years? How, if at all, will this change the nature of business and competition?

Required Assignment "One Pager" on Experimentation

Please post a one page memo (max 300 words) analysis) by 9pm on Monday, November 15 (the day BEFORE class) on the Stellar Website in the appropriate folder. Please submit either a PDF or MS Word file, with your name, date and assignment title at the top.

Question: Based on the readings for the class and your one personal experience at an organization where you worked or would like to work, describe a practical business experiment that would provide valuable business insight. Be specific about the hypotheses tested, the methods used, the data gathered and the potential results.

MS Stats Article

11/14

Should do some sort of stats class

Recognize half of what talking about

- some tech terms

- lots of the stats

And why really care about all this?

Horvath

I'd do this data driven thing by accident

- I feel its overblown -

- how much actual value is there

- what is statistically significant?

Aspirational thing is sneaky but it works

Need actual uses of db

- not just having it

Don't just copy case study

- what lots of bias do

I like this very planned, comprehensive approach to cost service

In service hitting budget at expense of service = bad

Assignment

1/14

Based on readings + personal experience describe a practical biz experiment that would generate valuable biz insight

- DB T+T

- GridView

- old standby of advertising position CTR

- Amazon was testing headers the other day

- DB try 1st class upgrade button

(didn't fully realize the cost of their flexibility)

- Elacarte seems to be all about that

- SocialSaver was all about that

- Now need to try + pick 1

DB T+T 1st class upgrade based on train capacity
free drinks - Or auto day of upgrades

(Challenge is to keep relevant w/o being expected)

Need to pick one

- like the auto upgrade - random issue

track travel over
next month

See presentation slides

Team Presentation: FunMobility

- market leader pre-iPhone era
- carriers had control
- only 5 companies could really do this
- need 400 phones for QA
- need sales rep
- app store: competing against 50,000 apps
- made Fun Mail for the apps
 - places word over image
 - below 100 in Utility

(like GridView - can go past any time)

1. No long tail to exploit
2. Challenging profitability model
3. Network effects insufficient

②

Smartphone long tail narrower + less gradual

- low discoverability

- no recommendation engines around niche apps

1.26% of users installed app ranked #1,000

- no nice downloading

Mobile ad scenario challenging

- 40k to buy top spot

\$2 eCPM

300,000 new users

15 months to earn back your 40k

No incentive to download app

- make it required to create network effect

Prof: Interesting

How to turn around?

- more of lifestyle biz

- will ride that out

- tried to make 2 big investments -

Angre Birds does good b/c focus

10% is it good/viable

(I implied - better to ~~say~~ say)

③

Been some change

About that category

Very hard to get into top 1,000

- have to get very up there

App mill strategy

- can help

Revenue just much lower w/ Apple

15.567 Reading Guide

November 18: Digital Advantage

The increased power of IT has led to complementary changes in business processes, organizational capital and other types of intangible assets. To a growing extent, understanding these changes is the key to gaining competitive advantage. For instance, in the first class this semester, we discussed how digital information could be replicated and the economic implications of that fact. However, technology has recently been used to help replicate not only information, but also business processes. The implications may be profound, for productivity, competition, structure and strategy.

Readings

Required:

Brynjolfsson and Hitt, "Beyond Computation" *J. of Economic Perspectives*, Fall, 2000.

Optional:

Brynjolfsson and Saunders, *Wired for Innovation*, Ch 3 and 4.

Brynjolfsson, McAfee, Sorell and Zhu "Scale without Mass: Business Process Replication and Industry Dynamics", Center for Digital Business Working Paper, 2006.

McAfee and Brynjolfsson "Investing in the IT that Makes a Competitive Difference", *Harvard Business Review*, July-August 2008.

Study Questions

Please think about the following questions as you do the readings.

- 1) For most firms, how valuable are business processes and other intangibles compared to physical assets? How should management and financial accounting treat such assets?
- 2) Identify one or more examples from your experience in which technology facilitated the replication of business processes. How did that affect the organization of work? What were the measurable results?
- 3) What are the limits to technology-enabled business process replication? (That phrase just rolls off the tongue, doesn't it?) Where will it have the greatest effects?
- 4) If process replication becomes more widespread, what business and management strategies would you recommend?

Garmin

- GPS systems
 - 800 million
 - they are pretending they are ^{the} new management
 - Smartphones
 - still have lots of assets
 - installed base
 - places
 - emergency infrastructure
 - brand
-) kinda disagree

- "can see the future"

1. App maker
2. B2B location based service
3. Ad supported revenue model.

1. App Maker
 ↳ free/mum

2. Competing w/ On-Star

- connects w/ car data system ← very smart
- connects to driver's cell phone (I would do separate cell modem)
- support/concierge

②

partner w/ car companies to be built in

they recommend free, ad' supported

3. Advertising

Onstar - 1 billion

2 sided network

national brand

"CPC will inflate"

400 million

from local newspapers

My Qv

- Only 4% are internet connected (GPS devices)

4 Sq. → only where people are, not where want to be

NASA

- non compliance system

- 19 billion

- very complex to built fuel tank

- millions of parts

- is about 20,000 problems per tank

- are b/w 5-2000 pages

- very rare for documents to move through review chain

③

Of course paper nightmare
departments highly segregated

no incentives
was 90s

choice: just scan

or try to innovate

↳ in house or out source

↑
Chose b/c

Complexity

↑ security very important

Functionality kinda undefined

Started in 1998

→ took 10 years

50% rolled out in 2002

then Colombia disaster + Katrina = wiped out computers

↑ gov reviewers actually liked the system

Why not work?

Upper management loved it

factory worker - harder to use

older people did not like

④

Non intuitive - tried to directly replicate paper training spratic

Now considered an absolute success

lessons learned
↓ on ↓
Simply replicate old paper
Conduct user research
(create incentives)

never got people involved
- all very high level

during roll out may have took 10x longer

production started in 70s - ^{product} has not changed

15.567 Reading Guide

November 23: Social Networks

Facebook now has the most page views of any site on the web, making it an apt symbol of the ubiquity and relevance of social computing. The digitization of social networks is not only creating new opportunities to do business on the web, but also providing management researchers with unprecedented insights in to phenomena like social “contagion”. We’ll learn a bit about these insights in today’s class.

Please note that 1) the 1 page assignment for this session is cancelled and 2) I have added a new required reading, and several optional readings, all available via SSRN.

Readings

Required:

Lazer, D et al. (2009) "Computational Social Science" *Science*, Feb. 6, 2009.

Aral, Sinan, Brynjolfsson, Erik and Van Alstyne, Marshall W., “Harnessing the Digital Lens to Measure and Manage Information Work” Forthcoming in the *Communications of the ACM* (November 16, 2010). **Please download the paper from SSRN:**

<http://ssrn.com/abstract=1709943>

Optional:

Aral, Sinan, Brynjolfsson, Erik and Van Alstyne, Marshall W., Information, Technology and Information Worker Productivity. Available at SSRN:
<http://ssrn.com/abstract=942310>

Van Alstyne, Marshall W. and Brynjolfsson, Erik, Global Village or CyberBalkans: Modeling and Measuring the Integration of Electronic Communities. *Management Science*, Forthcoming. Available at SSRN: <http://ssrn.com/abstract=756445>

Aral, Sinan and Walker, Dylan, Creating Social Contagion Through Viral Product Design: A Randomized Trial of Peer Influence in Networks (July 30, 2010). Available at SSRN: <http://ssrn.com/abstract=1564856>

Study Questions

Please think about the following questions as you do the readings.

- 1) Do you spend much time using social networks? How has social networks changed your personal life? How about your professional life?

- 2) Advertising rates on social networks like Facebook remain very low. Why do you think this is? Is it an inherent characteristic, or can it be changed?
- 3) What are the three biggest business opportunities created by social networking?
- 4) Do you think digitization of social networks and improvements in search and filtering technologies are more likely to lead to a “global village”, cyberbalkans”, both, neither or something entirely different? Why?

One Page Assignment: CANCELLED: ENJOY THE FREE TIME!

Why FB low revenue?

- On google looking for a product
- FB can't target ads
 - Beacon
- main thing that influences purchases: friends
 - should be gold mine
- Can very deep targeting
 - Used to be 1
 - now 20
 - can back out data from that
 - not much awareness?
- trust issue
 - people associate w/ friends
 - not facebook.com
 - large biz want to avoid?
- Other features:
 - like button
- ads compete w/ content
 - its not what you are on site for
 - people don't recall in survey

2

about half + half or will fb always be lower CPM than google

No; Have lots of info, ~~more~~ targeting

- two things better match win-win

price discrimination lose - win
 ↑ ↑
 Consumer Seller

So together can't tell

Parallel b/w ecommerce + FB

- will think its natural to have targeted ads

slides →

Privacy Social Network

11/23

EU ~~passing~~ passing new regs

Online advertising

- have privacy affected ads?
- study looking at ad effectiveness
- went $\sim 30-40\%$ \downarrow from not being targeted
- less content being produced
- so more obtusive

(could have very fine grain privacy control)

- what bits available to what person at a time

Groups Presentations

1/23

Location Based Social Commerce

- ~~helps~~ w/ collective buying power
- impact on local biz
- helped info diffuse more quickly
- Groupon; Residence based ← focus on
- 4 Sq ÷ Real Time

Groupon growing exponential growth

- fastest growing company in history
- scarcity
 - want to spread word
 - smart phones
- downturn more price sensitive
- ↓ search cross
- lots of companies want to compete
- Yipit aggregator of "deals"
- showcases long-tail biz

(2)

Groupon very good at monetization

Better than free ads?

95% New Customer rate

20% Return rate

) of people who buy Groupons

Get the \$ upfront

Potential to upsell

40% unused coupon rate - already paid!

Groupon req. 50% off list

Then Groupon takes half of coupon cost

Can redo deal later w/o Groupon

Direct what they want - not like other forms of ads

lots of deals unprofitable for companies

40% would do again

~~manpower~~ manpower challenge

(really good presentation)

now service providers competing on price

big loser: newspaper ads

③

Q: Could Groupon go ~~big~~ hyperlocal

Groupon trying to get FB data to get more about you
to target deals more for you

Q:

low switching costs b/w deal sites

Continued price wars

or some sort of points

Q: Do local biz get cust data?

~~Can estimate~~ Can collect email address later

Can stimulate extra info

Get revenue from ~~the~~ unredeemed purchases

Works if low MC

And can put lots of restrictions

Social Media changing Recruiting Landscape

Search costs in finding jobs

~~high~~ can ↓ unemployment if ↓ search costs

9

Networking + internet always important in getting jobs
also low search costs

recruiters moving to Linked In - less job boards
- more effective
- cheaper too!

Social networks primary way of doing direct recruiting

Linked In taking over from Monster.com

also Linked In ~~is~~ does not signal you want a new job

Monster + Career Builder will struggle

See job boards will become more niche
Predict

Prof: Weak ties better for getting a job than strong

In down time, when not many jobs, just do social network
Go through "network brokers"

Prof: Strong have same info ya do

1 People willing to pay a lot

15.567 Reading Guide

30 November 3: Information Analytics – Gary Loveman

This session will look more closely at how better information analytics are changing management, marketing and customer relationship management. Our guest speaker will be Gary Loveman, CEO of Harrah's, an MIT PhD in economics and former HBS professor.

If we have time, we will also take a deeper look at how Lynn Wu and I used Google searches to predict housing prices and quantities, and discuss how similar techniques can be used to make inferences and predictions in other markets.

Readings

Required:

Gary Loveman, "Diamonds in the Data Mine" *Harvard Business Review*, 2003

Lynn Wu, Erik Brynjolfsson "The Future of Prediction: How Google Searches Foreshadow Housing Prices and Sales" *NBER Conference Technological Progress & Productivity Measurement*, 2009; *WISE*, 2009; *ICIS*, 2009.

Optional:

Anderson, Chris "The End of Theory: The Data Deluge Makes the Scientific Method Obsolete" *Wired*, 16.07

http://www.wired.com/science/discoveries/magazine/16-07/pb_theory

Davenport, "Competing on Analytics" *Harvard Business Review*, January, 2006.

Brynjolfsson and Schrage "The New Faster Pace of Innovation" *Wall Street Journal and Sloan Management Review*, August, 2010.

URLs:

<http://www.harrahs.com/>

http://en.wikipedia.org/wiki/Gary_Loveman

<http://investing.businessweek.com/businessweek/research/stocks/people/person.asp?personId=298182&ticker=HET:CN>

Study Questions

Please think about the following questions as you do the reading.

- 1) What was real value of the Total Gold program for Harrah's?
- 2) Why did Harrah's focus on customer satisfaction instead of financial results when rewarding employees?

- 3) How can the lessons from Harrah's be applied to other organizations?
- 4) What questions do you have for Gary Loveman, Harrah's CEO?
- 5) What markets are most likely to be effectively predicted by Google (or Bing or Yahoo) search data? What are the implications?

Marrahs's CEO in person

- were phd students together,
- was prof at Marrahs
- admired for data + analytics

Challenge: had 2nd ~~tier~~ tier facilities

- poorly located
- dissimilar
- could not compete on product
 - had to do something else

Hard to sell bad products

Can't change casino operations fast + Capital constrained

~~Marrahs~~ Change how they think about buying

Loyalty card → observe what they like

Give back ~15% - transactional

Intimacy + predictive

Lots of data

- grocery cards
- bad ads
- good cust kept waiting

(2)

Shift loyalty to them → to reward them

43 million Total Reward cards

- local

- women

- \$10 slots - Serious gamblers

- 60 year olds

Young people

- poor

- not much time

- good for nightclubs

- not gambling

Need rich people w/ time

Need to gamble for a while

Market on predicted worth, not observed worth

- great cust, but not yet great cust of other

- must match offer from competitor

+ market to bridge gap

Argument is general

- Coach board

- great business - no politicians

- high margins

- addicted

③

Each ~~m~~ does same
- but does poorly
- improving

For Best Buy

- rather sell scarce product to good ^{loyal} customers
- not to those who ~~work~~ overnight
wait

Each cust not =

20% cust 80% profit

better service to them

Will observe difference

- ~~a~~ so you will consolidate business w/ him
- clear cut ladder of activity

Lots of granularity in diagnostics

AC Market Share fallen

↓ visitation

People much less likely to return if do very bad

- will return if do mean

- but if far loser - bad time

If volatility in service level

- if feeling bad → give a little extra

④

- Market to those cost differently
- New casino
- Long/short visits
- Coming for offers
- Win/lose last time

Can go specifically to those people

QnA

Long Tail?

- look at those whose play movable
- as time ↑ income ↑, tendency to ↑ play
- Only 35% of people visit a casino
- Strategies at every stage

Inter ^{Harahs} casino competition

9 casinos in LV
 UN as 1 institution
 market entire holdings

Promote LV to other companies

- resident of hotel top
- decreases after that

5

Q: Network externalities

- deal poorly
- really try hard if people complain
 - try to contact them personally
 - really dig in
- can screw up many ways

Q: How you know you are answering right qv

- finding causality
- ~~test~~ control + test
- do run these tests
 - placebo is current offering
 - control gets better offer
- assess over freq winds
- then implement finding across company
- finding the people to do marketing is hard

Q: Competitors doing ?

\$15 billion capital into Las Vegas
much more focused on building buildings
all very successful

few companies w/ very different priorities
Sheldon has 3, Wynn has 2

⑥

He has 54

Good that competitors differentiating

Q: How know what want

- Most for top
- Some people spend several million \$
- Few biz w/ this much attention to customer
- Analytics for 43 million other costs
 - Learn what like
 - Ie Las Vegas only ~~through~~ during Jewelry ~~store~~ show
 - only Vegas view
 - 3 spa appointments
- If spend lot of \$
 - will do package
- Computer show bad
 - worst gamblers
- Franchise, car salesmen good

Q: Others so slow why?

- Getting there
- Out back Stakehorse
- Systems bad
- People don't do this

①

Best Buy doing a lot of it

But when you walk in door don't know

They do everything to self identify

Q: What % of excess

- all say should do
- but others driven by other things
- hard work to execute this
 - get the people to do this

Q: Transfer blw properties

- always constant negotiations
- better cust locally if help out elsewhere
- settle accounts
- also blw biz in each

Q: Diamond Cust not predictive

- Some programmatic benefits
- also go after predictive
- 1st time cust
 - want them to win
 - can't do that
 - go over to them
 - can give \$

⑧

- Or dinner
 - hold machine if you want
- tickets
- have done test + control
- repeat visits went way up
- Could do in ski biz
 - by a lesson
 - record if you like a lesson
- Q: Have you captured the value
 - more than halfway along
 - problems month
 - geo not as good
 - non gaming not good
 - more bid'ias currency
 - win/loss
 - more places to earn/redeem

Q: IT in other biz

- not nearly as well
- like on employees
- Employee health care
 - ~~an~~ incentives + analytics
 - except w/ privacy

9

Q: How centralized?

- Decentralized
- People in each market
- Corp people too

Q: How find people?

- people self select in this
- Some people much more analytically
- people interest + competence
- around other people who do this
- lot of people like gaming
 - lots of data
 - most of offline biz

~~Q: How~~

Person calls to reserve

- Member #
- Current Capacity
- Competitors
- Late arriving demand
 - gamblers don't make reservations
- Run big op research for 25,000 rooms
- Diff price to each

Q

- Monitor in Expedia

+ People know CEO cares about this

Q: Lifetime value very long term

- need to compare vs current customers

- must give them access

- edu bets

- In AC moved lots of hotels to cash customers

- now pushing back to gamblers

Q

- Other biz

Grocery stores give better service to those buying fewer items

Q: Employee measurement

- Cust service scores

- People who rate "A" vs week year ago

- Big improvement → points in Total Service

- mech, cash, airline

- 150 million \$

- Ins premiums

Q: Why non fin ~~metrics~~ metrics?

- Casino ^{patrons} visit freq

- choose based on service

(11)

Improve service sat revenue ↑ 17%

Very clear needed to improve ~~all~~ satisfaction

His bonus as CEO 25% is cust service

Fin → all backward looking

(cust →) forward looking

Q: What keeps you awake?

- Politicians
- 13 states
- World wide very small
- Can't grow anywhere

Also on ~~the~~ board on FedEx

Q: How monitor the valet guy?

- most people are tipped
- lots of motivation
- high level cust → more tips
- try to get good schedule
- meritocratic process
- go through best cust in pre shift meeting

(12)

Q: How start as CEO? Resistance?

- decide those who can move
- can't move → get rid
- he got rid of a lot of people
- decide quickly + got over it
- Put metrics to show what is working
 - people moved to it

Q: Any closing advice

- focus is greatest friend
 - most people take on too much
 - to a few things really well
 - must be important
 - stop people doing stuff that does not matter
 - website sucks → Ok
- go after talented people
 - only best students come here
 - turned over management team several times
 - best, not adequate
- bring lots of energy
 - confidence that CEO knows what he is doing

(13)

I - Concier Team Project

- new platform of digital concept delivery
- alert when concert tickets + last train is
- "Behavior Assistance Service"
- Tracking user
 - Past behavior, location, Pref, transactions
 - Info storage
 - extracting patterns
 - recommendation engine
- Less search costs + higher optimal markups
- So more price discrimination, less ~~can~~ consumer surplus
- More long tail transactions
- Cost 210 yen/month
- Now
 - last train
 - local bargain
 - local restaurant
 - bingo halls

Student Presentation

12/3

Listening Platform

- cost complains fb/twitter
- what consumers are saying about them
- companies losing control of brand
- Use in Marketing
 - 37%
 - Market research 25%
 - PR 18%
 - Analytics 10%
 - Other 10%
- mitigate issues w/ cost service

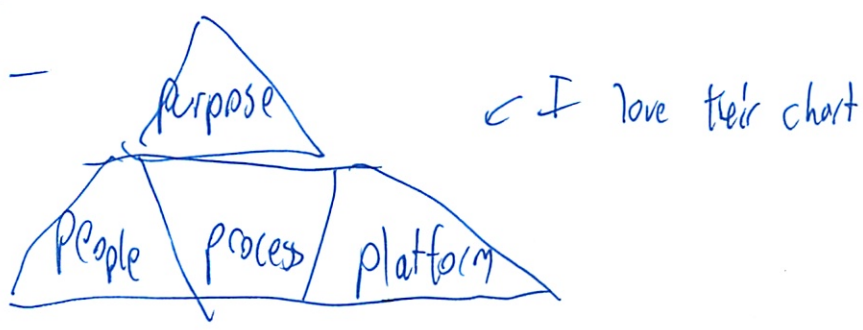
Issues

- Company culture
- lack of strategy
- what is the ROI
 - what's a FB fan worth?

3 levels of data

- engagement data
- key performance indicators
 - sentiment
 - share of voice
 - actual biz metrics

②



- Q: Who doing well
- Q: No hard \$ to back up if it works
- Prof: talk about negatives

New pricing models online music

- piracy big issue
 - was ~ 60% here said they pirate

Models

- subscription
- song sale
- ad streaming

They think music will be free

Make \$ w/

- promotions
- concerts
- merch
- etc

③

iTunes may not be free

- but pay for search, org, etc

~~The~~

Why

Free is great - much larger audience

MC is good

Use diff method

- ad

- freemium

- cross subsidy

Pandora is example of freemium

Some artists - cross subsidizing

Hulu - freemium + ads

Lots of people who think it should be free

Obstacles

- record labels

Other

- content + service providers |

4

Think pie will grow

- more incentive to make \$

~~Don't~~ Were not close w/ ASCAP & BMI

(don't seem to know what they are talking about)

Streaming

- streaming big

- everywhere

- everyone has a site

- both direct + intermediaries

- great for consumers

- low switching ~~costs~~ costs

- why so many intermediaries

- boundaries that separated them d's appearing

Differentiate

1st mover

biz model

niche content

Netflix is market leader

- rapid subscription growth

5

Already profitable

Other biz model

- Verizon Fios FlexView
- on Demand

Niche

Korean content

Bringing it to US legally

~~Want~~ he wants to do it for African content

Future

International

Q: ~~the~~ Comcast merger

- Need to have content where consumers are
- So still need to do deals
- Can't just have 1 destination
- Need to put content where the people are

Q: Google

- brand recognition
- #1 in search

(6)

Q: Pricing

- will be interesting
 - content owners need to maximize revenue
 - will be very aggressive w/ pricing
 - real growth is international
-

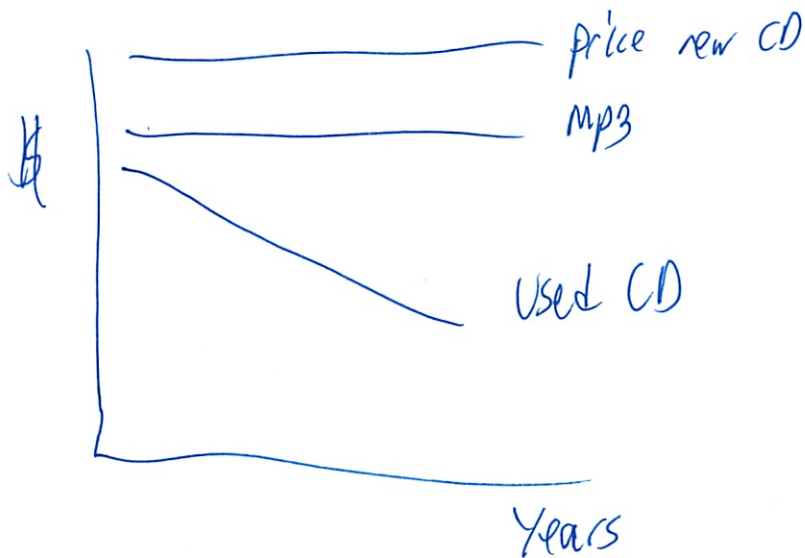
Consumer Resale

- give up right of first sale
- what makes used, used?
 - experience
 - content
- but digital is just the freshness
- legal restrictions disallow
- bopaboo tried, was sued
- people who pirate → will pirate
 - interested only in people who are willing to buy
- payment back to content producer
 - done in rest of world
- must be more attractive in rental model
- book sharing on Amazon kindle
- decrease DWL

7

Must satisfy all of the parties here

Used CD price falls over time



When have used good market more revenue later on
bidders - get more transactions

Producers

- long tail
- WOM - word of mouth
- piracy conversion
- ~~WOM~~ - w/ small resale fee

Q: Multiple resale

- assume perfect DRM

Q: Why not drop price in later years

- Marketing issue
- older buyers will get P.O.ed

8

Q: ~~B~~ Been backlash on DRM

- since can get resale value
- w/ price cut, get more restrictions

Q: Compare w/ streaming

- about ownership
- [^]right to access content
(just share rights to stream)
- you own right to access content

(I still don't think it adds up)

Display advertising

- online

3 phases

CPM untargeted banner ads + pop ups

key word search CPC + page content analysis

cookies for tracking

CPA - cost per action

Relevance - relevance

④

Future: Real Time bidding

- algorithms to target space to each person
(aren't all ads like this?)
- 2nd price ~~bidding~~ auction
- increase price, since more targeted

Issues

need critical mass of ads + publishers

~~floor price~~ 2

publishers set high (reservation price to prevent other
channel prices

lots of variation

Different Brand Genomes

- all for auto
- time of day / date of week → reaction
- Conversion rate much higher if you target your genome

But the more you target w/ params, the worse it gets
also need people who ~~are~~ might respond

- 1-2 targeting params
- not just people who will buy it anyway

10

So run experiments

- only 20% more expensive

Q: Does creative, format matter?

- Start randomly
- then understand where to ~~then~~ focus
- of course control

Q: Params

- day
- geo
- demographics
- purchase 'intent'?

Q: Privacy

- still do retargeting
- but each individual isn't even good data

Q: FTC - opt out law

- track w/o getting explicit on who the people are

Credo Reference

- no one knows about it
- online access to ref info
- got to talk to a lot
- 500+ ref titles
- pay content providers

① 30 emp.

build a credo page
- like a WP page

Concept map

Schools + libs buy + pay fees

Challenges think they are tech firm - not just sell content

- ~~content price~~ based on amt of content
- want to be a value ad
- worries w/ # of users

Strategies (Potential)

- low awareness now, but 25% of colleges use
- do more bundling
- differentiate consumers
- leverage marketshare to source add-on software through partnerships
- shift focus to marketing + biz dev
- public? - medical, law, etc?

Q: How deal w/ open access

- right, they don't want to be content co

Q: How big is market

- hundreds of millions
- 4,000 4-year colleges

Developing World Assignment

12/6

Advocate for a new initiative that benefits developing world

- cell phones

 - could do same thing, but w/ cell phones

- mobile payments

- mobile ordering

- checking markets

- email

 - many may not be literate

- leapfrog tech

Poor willing to pay for it

Revolutionary

Phone based service

- healthcare

15.567 Reading Guide

December 7: Emerging Electronic Markets

When we discussed search theory, we found that lower search costs could facilitate the emergence of new markets. In some cases, those opportunities will be among people who previously had little interaction with IT. Since the vast majority of world's people are in developing nations, the social and economic effects of IT can be proportionately more important there. The eChoupal case provides a closer look at one such situation.

Readings

Required:

Upton and Fuller, "The ITC eChoupal Initiative", HBS Case 604016

Optional:

Malone, Yates and Benjamin, "Electronic Markets and Electronic Hierarchies", *Communications of the ACM*, 1987.

Sachs "The Digital War on Poverty" *Project Syndicate*. <http://www.project-syndicate.org/commentary/sachs144>

URLs:

<https://www.mturk.com/mturk/welcome>

http://en.wikipedia.org/wiki/Amazon_Mechanical_Turk

Study Questions

Please think about the following questions as you do the readings.

1. What was ITC's motivation for creating the eChoupal?
2. What were the old and new physical flows and information flows in the channel?
3. What principles did it employ as it built the newly-fashioned supply chain?
4. What barriers did ITC face in embarking on this project?
5. How should ITC develop this platform for the future? Is it sustainable?
6. Are you optimistic or pessimistic about the prospects of the "Digital War on Poverty" as described by Jeffrey Sachs? Why?

Required Assignment "One Pager" for Emerging Electronic Markets Class

Please post a one page memo addressed to Jeffrey Sachs, Director, Earth Institute, (max 300 words) analysis) by 9pm on Monday, December 6 (the day BEFORE class) on the Stellar Website in the

appropriate folder. Please submit either a PDF or MS Word file, with your name, date and assignment title at the top.

Question: eChoupal uses relative simple technologies to connect poor farmers to an electronic marketplace. Similarly, Amazon has introduced the “Mechanical Turk” to create a global marketplace for simple Human Intelligence Tasks (HITs).

Based on the ITC eChoupal Initiative Case, your knowledge of Amazon’s Mechanical Turk and similar e-market and networking technologies, in class, briefly describe and advocate a new initiative that would help people in developing nations profit from the Internet or other digital technologies effect in a novel and interesting way.

CredSourcing Group Project

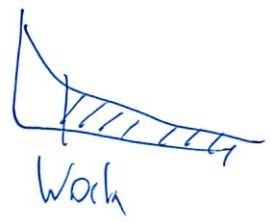
12/7

- QnA
- WP
- well their company Innocentive
 - experience
 - platform
 - 200,000 users
 - 1,044 challenges
 - partner w/ large organizations

~~QnA~~

- Cred sourcing works well in large companies
 - first mover advantage
- good ip protection for transfer
- as push things outside org - more likely to solve

↳ long tail



- now Innocentive at work
 - private platform
 - monetize

- biz model sustainable
(I still don't get)

Q: Talked to Prof Malone

②

Writing Challenge is hard

↳ expertise

Convincing ~~external~~ companies to use external research
Trustful market place

Developing World Lecture

12/7

"the long tail"

many tech → quite cheap

can reach a lot of people

Why did they do it?

- cut costs

- ~~cut~~ cut middleman

- increase quality of crop

Optimize entire value chain

- branding - provider

- ISP

Nationalistic - improvement in India

Community network of farmers

1st step to social network

Platform they can use in the future

- other crops

Share info

- before info slow

- had to bring his Soybeans

- Satilight internet

②

boil testing

Setting up really white + clean stores

Chinese Minister of Commerce doing same thing

Q: How do ~~to~~ tech support

- issue

- tried to keep it low cost

- initially big underestimated tech support

- in US 'intangibles' 3-5x

What using now?

- cell phones

- mobile much way things are going

- most people use mobiles now

- the chinese example - most ~~are~~ page views mobile

Q: Biz model of mobile phones

Often these people pay 10-20-30% of income on mobiles

- denominator ~~low~~

3

Barriers

~~Many actors to get buy in from~~

lack of understanding
↳ poor info

↳ need centralized repository for info
Had to train people how to use tech
Electricity

Solar panels

Gov regulation - had to change
Trusting Chopal leaders

- training
- company logo on their homes

Losers

Mand: - use to be middle men + controlled info
- gave them new positions

Wins

lots of time savings

less uncertainty

better quality of products

Source tracking
ITC selling goods

④
Crops let more productive
takes away risk of rain

Case Examples (tlw)

Etsy

- handy crafts websites
- socks
- US centric

Do it for worldwide crafts

- buy it from your home
- Someone w/ computer + camera
- and would ship it out

Need to get the logistics worked out

Logistic Service of ordinary people

DHL did this in US

?? in developing world

Some health care not getting traction in US

- regulation
- no traction in US
- Gatekeeper effect b/c blows through value

5

Rapid disease testing

Crowdsourcing txt message

- like pic of bad/good Soy beans
- do same for health

Sensor networks

- via Wimax
- still a bottleneck

Lot of untapped ~~at~~ brain power

- captcha
- and all sorts of computer tasks
- 9 billion hours playing solitar
- google good at searching text - but not images

One local news paper streaming city hall feed to India

- who write articles on the cheap

Why are there such an income difference?

Capital freely mobile

~~Internet~~ ✗ ✗

Information " "

Can ~~be~~ unify levels of productivity

15.567 Reading Guide

December 9: The Future of the Information Economy

It's useful to understand what the future will be like. After all, we'll be spending the rest of our lives there. Fortunately, some predictions are relatively easy to make. For instance, we can be pretty confident that Moore's law will continue and not only microprocessors, but all sorts of information and communication technologies from data storage and memory, to fiber optics and wireless bandwidth, will improve by orders of magnitude in the next decade. But what are the implications for how we live and work, or even whether we live and work? Two authors, each with a pretty good track record in technology, make their best estimates. What are YOUR predictions and what advice follows from them?

Readings

Pick one:

Kurzweil, Ray "Reinventing Humanity The Future of Human-Machine Intelligence"
KurzweilAI.net Feb, 2006,
<http://www.kurzweilai.net/meme/frame.html?main=memelist.html?m=1%23664>
(originally published in *The Futurist*, March 2006) (10 breathless pages)

Joy, Bill "Why the Future Doesn't Need Us", *Wired*, 8.04
<http://www.wired.com/wired/archive/8.04/joy.html>
(19 sometimes-depressing pages)

Optional:

Brynjolfsson and Saunders, *Wired for Innovation*, MIT Press, 2009. Chapter 5.

Study Questions

Please think about the following questions as you do the reading and think back on the course.

- 1) Do you think the bold, shocking predictions made in the article(s) you read are likely to come true? If so, what are the implications for you personally? If not, what are the flaws in the authors' reasoning?
- 2) Make one bold, shocking prediction that you are ready to share with the class and be ready to explain why you think it might come true.
- 3) What do 15.567 graduates need to know to be successful as technology evolves?
- 4) How can I improve the course for next year? What specific suggestions do you have for me?

Don't forget to upload your final team project via Stellar.

Social Search Presentation

12/8

Social search

- lots of things
(too fast)
- all the ~~big~~ big companies
- New entrants
 - lots of them
- long tail
- 2 sided network
- network effect
(being - could have described challenges more)
- humanize
- biz start to get user preference
- Privacy risk
- Cyber balkanization - ~~just~~ just get an isolate community
- still evolving + new

Q: Who do you think will win

- new entrants ~~are~~ depend on big players.
- can't win

②

Big players starting to do

Need critical mass of things

No one has controls which friends to include

Look at active vs inactive social network

Regulation different by part of the world

People are getting more used to it

(they don't really seem to get)

Add randomization to get around cyber balkinization

^ Is it a good social thing?

More Predictions

12/8

- Sloan eliminated $\frac{1}{3}$ - $\frac{1}{2}$ of secretaries
- Labor demand more + more tilted
 - low end jobs doing well
- WikiLeaks will be accepted
- Privacy is dead
 - but encryption works
- So will everything be shared or lots of fine grained privacy controls
- relying too much on external aids:
 - but people were ~~obsessed~~ upset that when books invented no longer need to memorize
- attention span
 - Sloan banned laptops
 - when useful + when detrimental
 - sometimes need to turn off
- flame wars
- losing world culture
- no democracy
 - everyone will have data on everything
 - easy to manipulate people
- but info brought down Soviet Union
- Iran's

②

If something has a slightly bigger exponent - one will dominate other after a lot of years - but ~~the~~ growth looks very similar

Tech progress is given

Tie it to one of those factors

Edv in poor + emerging ~~com~~ countries

- but income inequality is getting worse in US

- Global level - no one researching
