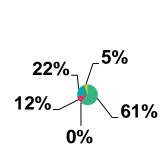
# INTERNET TRENDS – TWO-THIRDS OF A GENERATION IN... TWO-THIRDS OF NEXT GENERATION OUT...

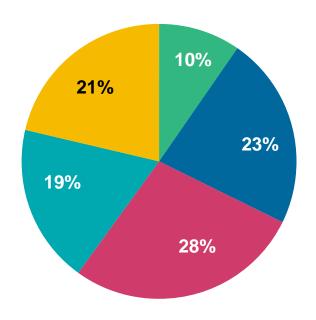
### Internet Users – 1995 → 2014... <1% to 39% Population Penetration Globally

1995 35MM+ Internet Users

0.6% Population Penetration

2014
2.8B Internet Users
39% Population Penetration





■ USA ■ China ■ Asia (ex. China) ■ Europe ■ Rest of World

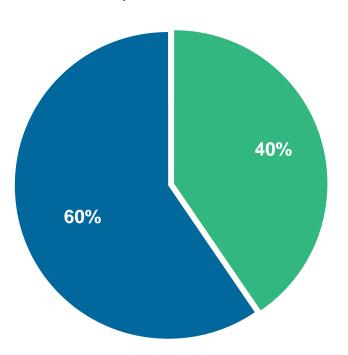
### Mobile Phone Users – 1995 → 2014... 1% to 73% Population Penetration Globally

1995 80MM+ Mobile Phone Users

1% Population Penetration

2014 5.2B Mobile Phone Users

73% Population Penetration



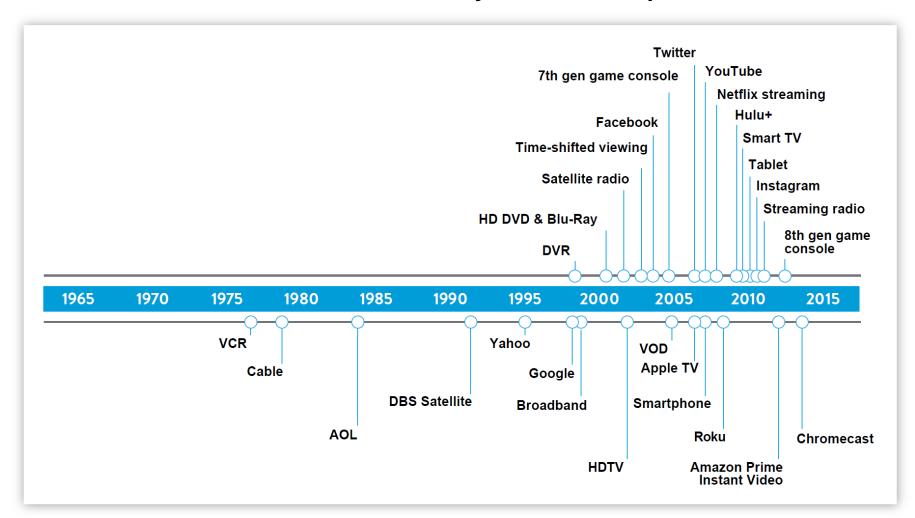
Smartphone

**■** Feature Phone



### User Control of Content Up Significantly – 1995 → 2015

#### **Evolution of Content Discovery, 1975 – 2015, per Nielsen**



### Impact of Internet Has Been Extraordinary & Broad... But – in Many Ways – It's Just Beginning

Sector of Economy / Society, USA	Internet Impact, to Date
Consumer	
Business	
Security / Safety / Warfare	
Education	
Healthcare	
Government / Regulation / Policy Thinking	



### **KEY INTERNET TRENDS**

### Global Internet User + Smartphone Subscription Growth = Good, But Growth Rate Continues to Slow\*

Internet User Growth = Solid, But Slowing

@ 2.8B, +8% in 2014 vs. +10% in 2013, +11% in 2012

Net New User Additions = ~Flat @ ~200MM in 2014 / 2013 / 2012

China Users = +7%, USA = +2%, India = +33%, Japan = Flat, Brazil = +4%

- Smartphone Subscription Growth = Strong, But Slowing
  - @ 2.1B, +23% in 2014 vs. +27% in 2013, +65% in 2012

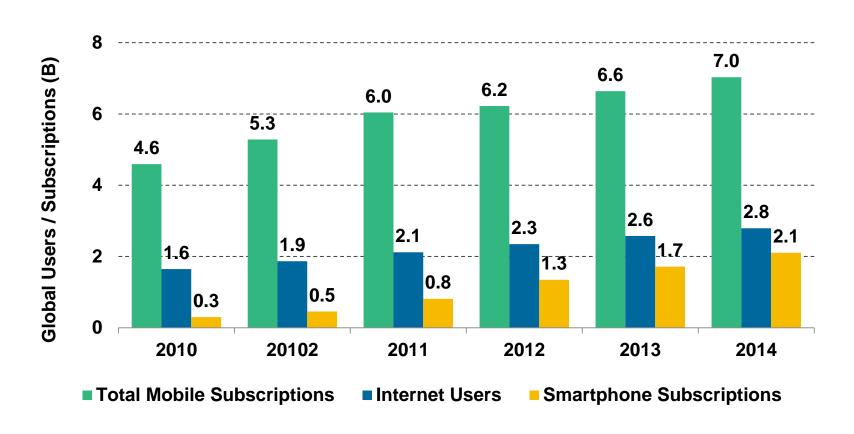
Net New Sub Additions = ~Flat @ ~370MM+ in 2014 / 2013

China Subs = +21%, USA = +9%, India = +55%, Japan = +5%, Brazil = +28%

### Incremental Internet + Smartphone *Users* = Harder to Garner Owing to Phase in Adoption Cycles...

#### **Global Smartphone Subscriptions @**

76% Penetration of Internet Users 30% Penetration of Mobile Subscriptions





### ...Incremental Internet + Smartphone *Users* = Harder to Garner Owing to Dependence on Developing Markets

# Developing Markets Tend to Have Lower GDP per Capita / Spending Power / Infrastructure

\$44K = Average GDP Per Capita...

In 5 Countries with >50MM Population & ~ / >50% Smartphone Sub Penetration...

USA / Japan / Germany / UK / France

\$13K = Average GDP Per Capita...

In 16 Countries\* with >50MM Population & ~ / < 50% Smartphone Sub Penetration...

China / India / Brazil / Indonesia / Russia / Mexico / Philippines / Thailand / Italy / Turkey / Nigeria / Vietnam / Egypt / Iran / Pakistan / Myanmar

### Global Internet *Usage* (Data Traffic) Growth Strong = +21% Y/Y Aided by Mobile + Video

#### **Consumer Internet Traffic, Global =**

+21% in 2014 vs. +24% in 2013, +31% in 2012

#### **Consumer Internet Video Traffic, Global =**

64% of consumer traffic in 2014 vs. 62% in 2013, 57% in 2012

#### **Mobile Data Traffic, Global =**

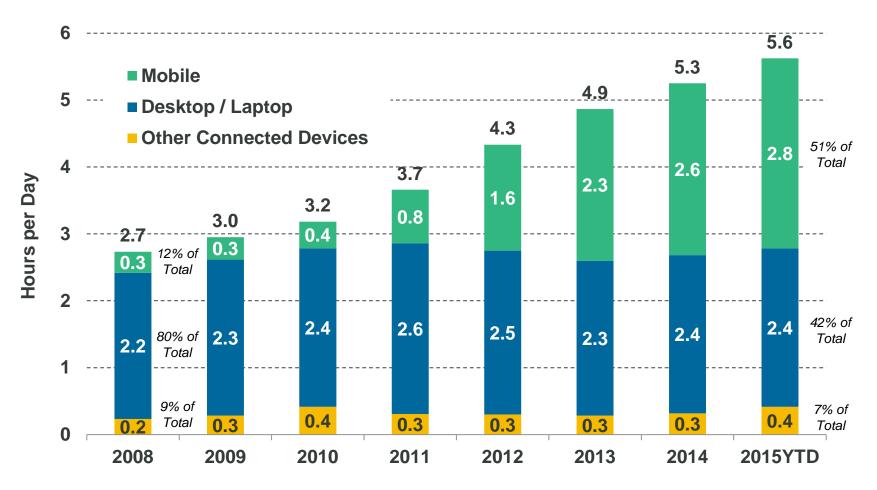
+69% in 2014 vs. +81% in 2013, +70% in 2012

#### Mobile *Video* Traffic, Global =

55% of mobile traffic vs. 52% in 2013, 50% in 2012

#### Internet *Usage* (Engagement) Growth Solid +11% Y/Y = Mobile @ 3 Hours / Day per User vs. <1 Five Years Ago, USA

### Time Spent per Adult User per Day with Digital Media, USA, 2008 – 2015YTD



### **RE-IMAGINING CONTINUES**

### Re-Imagining Enterprise Computing =

# Changing Business Process One Segment at a Time



#### Tweet from Aaron Levie...





# While Consumer Internet Entrepreneurs Often Pursue Personal Passion...

'Enterprise' Internet Entrepreneurs Often Pursue Prior Company Pain Points



### Business Communications... Slack – Stewart Butterfield

#### **THEN**

Email / Semi-Inflexible Messaging Tools



### **NOW**

Slack



Can reduce internal email traffic materially

# Offline Payments... Square – Jack Dorsey / Jim McKelvey

**THEN** 

Difficult to Set Up / Process Offline Payments



### **NOW**

Square





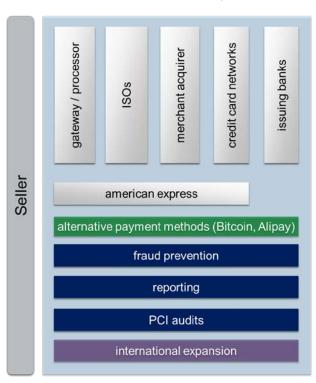


Allows merchants to accept credit card payments via their existing smartphone or tablet & run a sophisticated point of sale system

# Online Payments... Stripe – Patrick Collison / John Collison

#### **THEN**

Difficult to Set Up / Process Online Payments

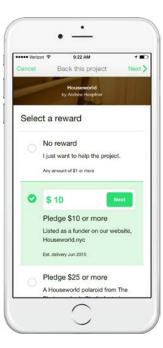


#### **NOW**

Stripe







Kickstarter payment flow

Can dramatically reduce payment integration time for developers and allow them to take advantage of modern APIs, compared with time required to deploy traditional merchant account

## Business Analytics... Domo – Josh James

### **THEN**

Data Overload Without Easy Access for Execs



### NOW

Domo



Improved access to real-time data can help users save time & improve decision making

## Document Signing / Transaction Management... DocuSign – Tom Gonser

**THEN** 

Paper-Based Signatures



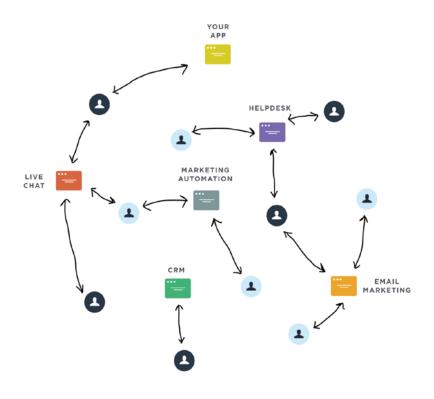
### **NOW**DocuSign



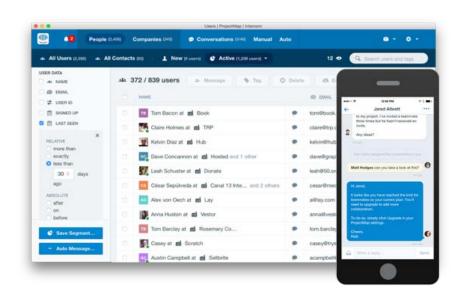
Can reduce transaction costs & improve transaction times

## Customer Communication... Intercom – Eoghan McCabe

**THEN**Disconnected Point Solutions



### **NOW** Intercom



In-app messages can be more engaging (based on reply rates) than traditional email marketing products

# Customer Success... Gainsight – Nick Mehta

### **THEN**

Transactional Sales
Process with High Churn



### **NOW**Gainsight



Typically improves net revenue retention

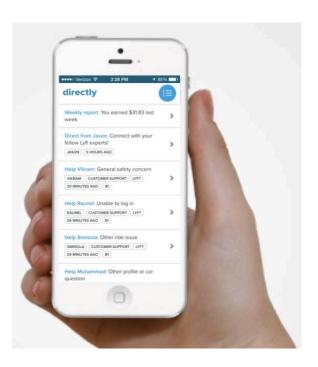
# Customer Service... Directly – Antony Brydon

**THEN** 

In-House Support Center



### **NOW** Directly



Can reduce customer response times & improve customer satisfaction

### Human Resources... Zenefits – Parker Conrad

#### **THEN**

Paper Files & Insurance Brokers



#### **NOW**

Zenefits

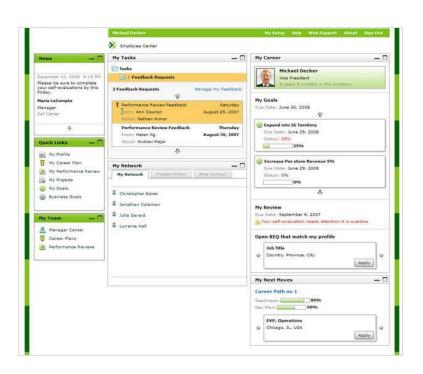


Manages \$700MM+ in annual benefits premiums across 10K customers in 48 states vs. traditional brokers which typically work within a single state

### Recruiting... Greenhouse – Daniel Chait

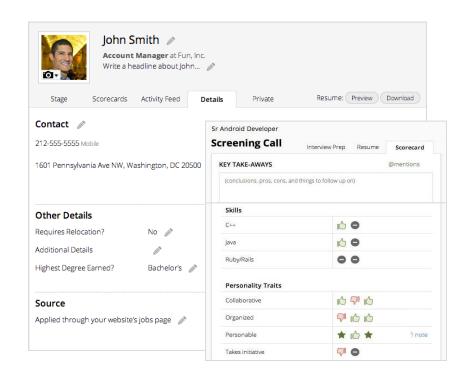
#### **THEN**

Reactive / Complex...
Only Used by Recruiters



#### **NOW**

#### Greenhouse



Can improve time-to-hire & decrease overall hiring costs

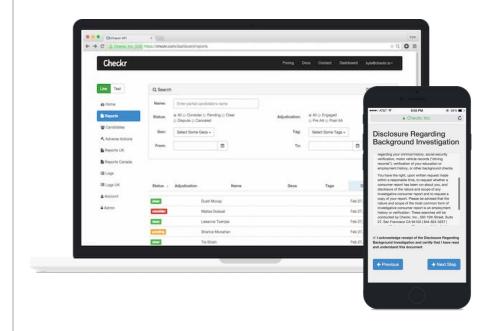
### Background Checks... Checkr – Daniel Yanisse

#### **THEN**

Manual / Time Consuming Background Screenings



### **NOW** Checkr



Typically reduces background check turnaround times

## Employee Knowledge / Training... GuideSpark – Keith Kitani

**THEN**Static Hardcopy Manuals



**NOW** GuideSpark



Can reduce Human Resource support time & increase employee benefits plan participation

### Visitor Management... Envoy – Larry Gadea

**THEN**Sign-In Sheets



### **NOW** Envoy



Over 1MM visitors checked-in across 1,000 companies worldwide since May 2013

### Ten Years from Now, When We Look Back at How This Era of Big Data Evolved...

### We Will Be Stunned at How Uninformed We Used to Be When We Made Decisions

Billy Bosworth, DataStax CEO (2015)



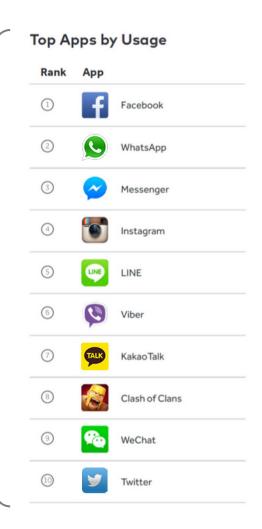
# Re-Imagining Messaging...

### With Lots of Improvements / Change / Growth Ahead



### Messaging Apps = Top Global Apps in Usage + Sessions

6+ of Top 10 most used apps globally = Messaging Apps



Rank	Арр		Sessions
1	TALK	KakaoTalk	55
2	C	WhatsApp	37
3	<b>%</b>	WeChat	29
4	W	VK	29
5	LINE	LINE	26
6		Viber	20
7	f	Facebook	20
8	13	Clash of Clans	16
9		Instagram	12
10		Messenger	8

Top Apps By Number of Sessions

Messaging
Apps →
significant app
sessions

### Communicating via Mobile Messaging = A Beautiful Thing

### Asynchronous yet Instant



Expressive yet Fast



Engaging yet User Controlled



Casual yet Professional



Easy yet Productive



Personal yet Mainstream



Mobile yet Distributed



Secure

**Instant yet** 



Real-Time yet Replayable\*



Current yet Evergreen



Accessible yet Global



Simple yet 24x7



## Messaging Leaders = Growing Fast... Building Expansive Platforms + Moats

#### **Selected Global Messaging Leaders**



#### WhatsApp (launched 2009)

- Fast messaging
- MAU = **800MM**, +60% Y/Y, Q1:15
- Messages Sent / Day = **30B**



#### Facebook Messenger (launched 2011)

- Messaging platform
- MAU = **600MM**, +200% Y/Y, Q1:15



#### Snapchat (launched 2011)

- Ephemeral messages, pictures and videos
- DAU = **100MM**, 5/15
- Story Views / Day = 2B



#### WeChat (launched 2011, China)

- Messaging platform
- MAU = 549MM, Q1:15, +39% Y/Y



#### **LINE** (launched 2011, Japan)

- Messaging platform
- MAU = 205MM, Q1:15
- Messages Sent / Day = 13B, +30% Y/Y
- Revenue = **\$922MM**, +70% Y/Y



#### KakaoTalk (launched 2010, Korea)

- Messaging platform
- MAU = 48MM, Q1:15
- Messages Sent / Day = 5.2B
- Revenue\* = \$853MM, +19% Y/Y

# ...Messaging Platforms – Global Leaders = Implementing Playbooks & More





Name	Facebook Messenger	Snapchat	
Launch	August 2011	September 2011	
Primary Country	Global	Global	
Messaging	Separate messaging app (2014)	Chat (2014)	
Group Messaging	✓	×	
Voice Calls	VoIP voice calls in US (2013)	×	
Video Calls / Chat	Free VoIP video calls (2015)	Video Chat (2014)	
Payments	Messenger Payments (2015)	Snapcash (2014)	
Stickers	Sticker support (2013)	×	
Games	×	*	
Commerce	Businesses on Messenger (2015)	×	
Media	×	Discover (2015)	
QR Codes	×	QR Codes to add friends (2015)	
Food Delivery	×	×	
Taxi Services	*	*	
User Stories / Moments	×	Shared Stories (2013)	
Developer Platform	Messenger Platform (2015)	*	

### Notifications = Growing Rapidly & Increasingly Interactive... Driving New Touch Points with Messaging Platforms + Other Apps

Direct Interaction on Notification Panel – without users interrupting what they're doing...





...More Up Close & Personal – as notifications appear on more & more mobile devices











### Re-Imagining Content...

# It's Increasingly User-Generated / Curated & Surprising



# User-Generated Video from Millions of Creators... Curated by Snapchat = Growing Rapidly with Live Stories

#### Music



Coachella 4/15

**40MM**Viewers Over 3 Days

Holidays

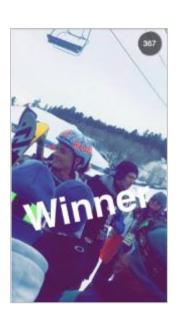


Birds eye view

New Year's Eve 12/14

**37MM**Viewers in 24 Hours

**Sports** 



Winter X-Games 1/15

**30MM** Viewers in 24 Hours

# User-Generated / Curated Audio Content (including Remixes) = @ 10MM Creators (+2x) Over 2 Years on SoundCloud

**100MM Tracks** +33% Y/Y

Majority of content comes from creators not associated with known rights-holders

Hear the tracks you've liked



TURN DOWN FOR WHA...



Yellow Claw - Amsterd... Yellow Claw



♥ Twonk Team Mixtape V...



Wasted ft. Matthew Ko...



Zedd - Clarity feat. Fox...



▼ Kaskade Atmosphere L..

Kaskade



Skrillex and Diplo - Wh... lack Ü



Jack Ü - Take Ü There ...



Carnage presents: Incr...
Di Carnage



Infinite Daps - Baauer ...
RL Grime



Avicii 'Levels' Skrillex ...
Skrillex



■ Nelly - Ride Wit Me (Vi...

VICEROY



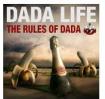
Dirty Vibe with Diplo, G...
Skrillex



KANYE ft. SirenXX
The Chainsmokers



♥ Calvin Harris - Summer... Calvinharris

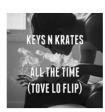


Dada Life - Rolling Sto...
Dada Life



Gold Ft. Yuna

Adventure Club



■ ALL THE TIME (TOVE ...
Keys N Krates

# User-Generated Written Content / Stories = +140% Y/Y to 125MM Cumulative Stories on Wattpad

## **40MM Monthly Unique Visitors**

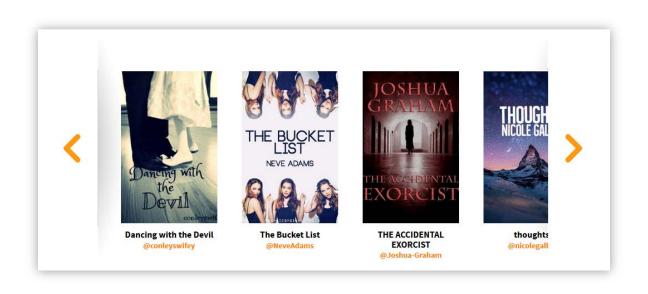
+48% Y/Y

#### 11B Minutes Spent per Month +83% Y/Y

Average engagement time = 30 minutes / user / session

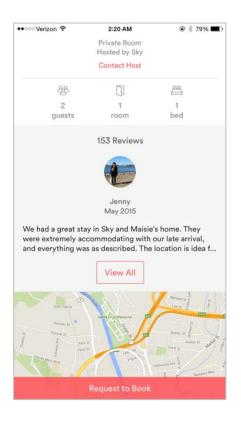
#### 90% Mobile Traffic

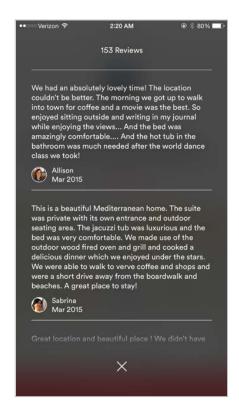
Every minute, >24 hours of reading material is posted on Wattpad

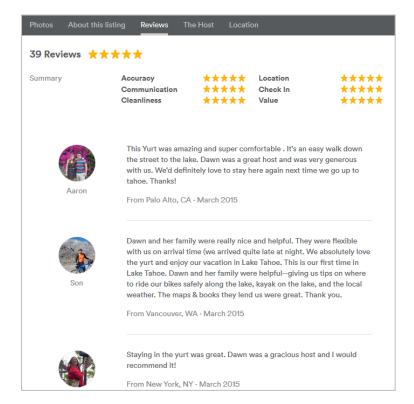




# User-Generated Reviews / Feedback (Reputation) = +140% Y/Y @ 14MM New Reviews on Airbnb, Last 12 Months





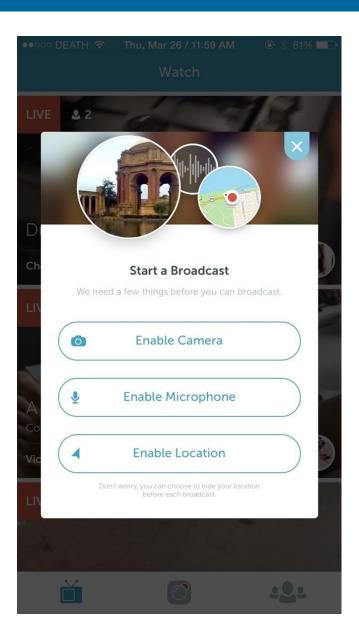


## Imagine That...

# Users Generating Their Content Are Recreating Their Internet



# Smartphone → A Very Smart Phone... Re-Imagining Presence = All Visual...All the Time





# Re-Imagining Getting What You Want... When You Want It



### ... 'Just in Time' Products + Services = Enabled by Mobiles + Sensors + Humans

#### **Selected On-Demand Company Fulfillment Time Estimates**

Transportation		Food		Delivery		
<b>♦</b> LUXE	~10 min	Caviar	<20 min	***** POSTMATES	Typically within 1 hour	
<b>ly</b> R	Within minutes	DOORDASH delightful delivery	Typically within 1 hour	shyp	~20 min	
UBER	Within minutes	MUNCHERY	Typically within 20-40 minutes		Travel	
Dining				∕ airbnb	Instant	
OpenTable <sup>-</sup>	Instant booking	sprige	15 min	W dilplip	booking	
				Hotel Tonight	Instant booking	
Entertainment		Groceries				
SeatGeek	Instant booking	Instacart	Typically within 1-2 hours			

## Re-Imagining Consumer Spending



## Consumer Spending Category Rankings = 1) Housing 2) Transportation 3) Food 4) Insurance / Pensions 5) Healthcare...

#### Average Annual Expenditure of USA Household, 2013 – 2014

	Total (\$)		% of Total		Y/Y
Spend Category	2013	2014	2013	2014	Growth (%)
Housing	\$17,041	\$17,377	33%	33%	2%
Transportation	8,999	9,104	18%	18%	1%
Food	7,047	7,115	14%	14%	1%
Personal Insurance / Pensions	5,573	5,551	11%	11%	(0%)
Healthcare	3,520	3,919	7%	8%	11%
Entertainment	2,586	2,560	5%	5%	(1%)
Cash Contributions	1,949	1,790	4%	3%	(8%)
Apparel and Services	1,706	1,674	3%	3%	(2%)
Education	1,212	1,143	2%	2%	(6%)
Miscellaneous / Other	1,776	1,701	3%	3%	(4%)
Total	\$51,409	\$51,934	100%	100%	1%



# Lots of Innovation in Biggest Consumer Spending Categories...

## Especially in Top 3 Areas

- 1) Housing
- 2) Transportation
- 3) Food

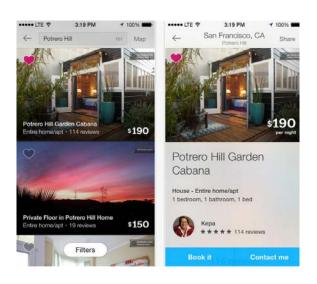


#### Innovation in High Spend Markets...

#### Average Annual USA Household Spending...

#### Housing = \$17K

33% of total spend



#### Transportation = \$9K

18% of total spend



#### Food = \$7K

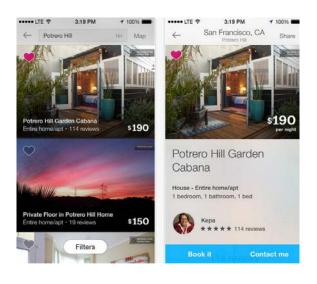
14% of total spend \$4K on food consumed in home... 8% of spend



#### ...Innovation in High Engagement Markets...

#### Average USA Individual...

#### Needs Shelter Every Day

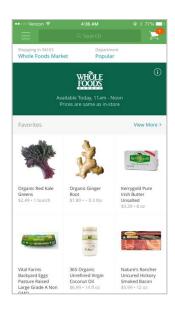


## Drives ~37 Miles per Day



## Visits Grocery Store 2x / Week...

41 minutes each trip



### ...Innovation in Weak User Experience Markets



airbnb















Instacart





## Re-Imagining Birds-Eye View...

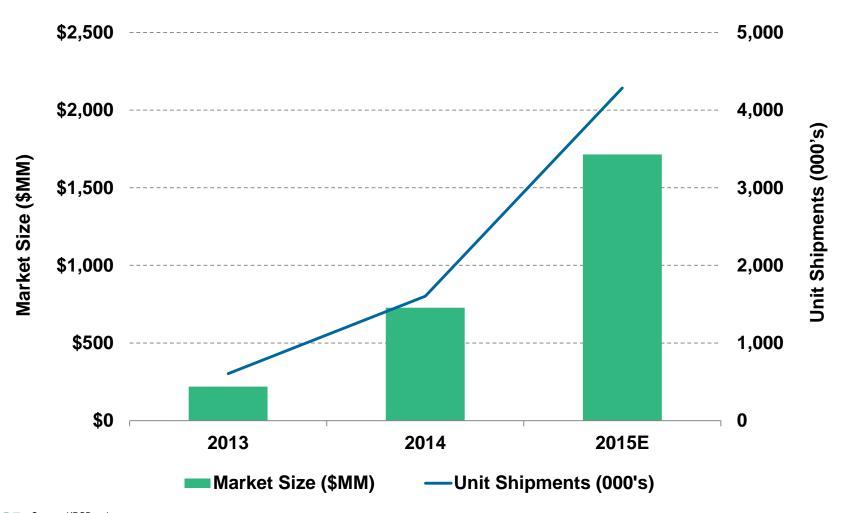
Drone Growth =
 Uniquely
 Fast / Global...

Consumer / Commercial...
& Regulators Engaged



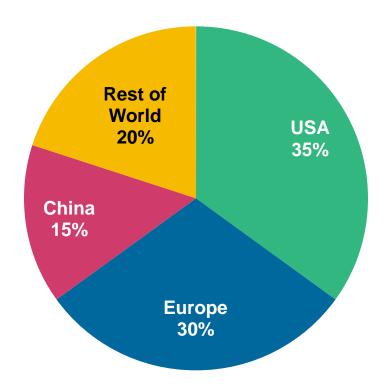
# Consumer Drone Shipments = Rising Rapidly... @ 4.3MM Units in 2015E, + 167% Y/Y, Revenue to \$1.7B

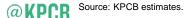
#### Global Consumer Drones – Revenue & Unit Shipments, 2013 – 2015E



### Consumer Drone Use = Global... USA = 35%... Europe = 30%... China = 15%... ASP = \$700

#### Global Consumer Drones – Revenue by Region, 2014





# Commercial Drone Use = Very Broad... Operational Improvements / Resource Management / Public Safety

#### **Precision Agriculture**

Golden Prairie uses drones to capture soil & growth information on 10K+ acres of organic millet crops in high plains of eastern Colorado, USA



#### **Infrastructure Inspection**

San Diego Gas & Electric testing drones for electric & gas line inspections



#### **Mining & Quarrying**

Barrick Gold / Imerys / Rio Tinto using drones for pit surveys / stockpile management / road analysis



#### **Disaster Response**

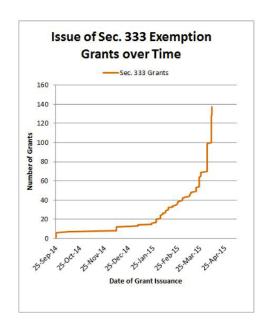
Drones used to assess damage & for relief efforts in Nepal & Haiti after earthquakes

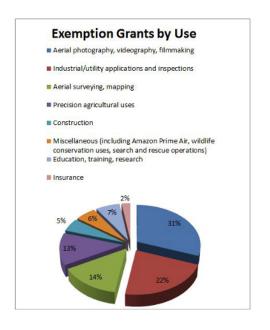


#### USA = Previously Held Back by Regulation...Opening for Business = >400 American Companies Approved to Commercially Operate Drones

#### **Countries Ranked by Government Accommodation for Drones**

- France & United Kingdom
- Canada
- Australia
- Japan
- USA
- China





#### **Transportation**



Oil & Gas



#### Construction





#### **Precision Farming**



#### **Electric Grid**



#### Insurance











# Commercial Drone Market Future Potential = Bigger + More Constructive than Many Believe, Though With Risks



Cyber Attacks = Growing in Size / Complexity / Risk



#### Cyber Attacks = Growing Bigger / Faster...

#### Insider Misuse = Significant Cause of Breaches

>20% of breaches come directly from insiders with malicious intent. In most breaches, attackers have foothold within internal networks & spread / steal data through privilege abuse / credential misuse.

#### Mobile Devices = Increasingly Used to Harvest Data

Adware grew 136% to 410,000 apps between 2013 and first three quarters of 2014, giving attackers access to personal information such as contacts, which can subsequently be used to launch phishing attacks.

#### Mobile Device Management = Critical in Preventing Breaches

22% of breaches reported by network security decision makers involve lost / stolen devices.

#### ...Cyber Attacks = Growing Bigger / Faster

#### Human Focus = Critical in Preventing / Remediating Attacks

Despite abundance of security products, breach response typically takes months. ~4 of 5 organizations don't update their breach response plans to account for changing threat landscape and corporate processes. With proper technology, threat intelligence & expertise, detection to response times has been reduced by >90%.

#### Security Skills = Biggest Gap in Enterprise Security Programs

Despite large investments in security technologies, lack of skilled experts continues to result in breaches. At least 30% of organizations cite a 'problematic shortage' of each of following: 1) cloud computing and server virtualization security skills; 2) endpoint security skills; 3) network security skills; 4) data security skills; 5) security analytics / forensic skills.

#### • Disclosures of Breaches = Coming from Outside Sources

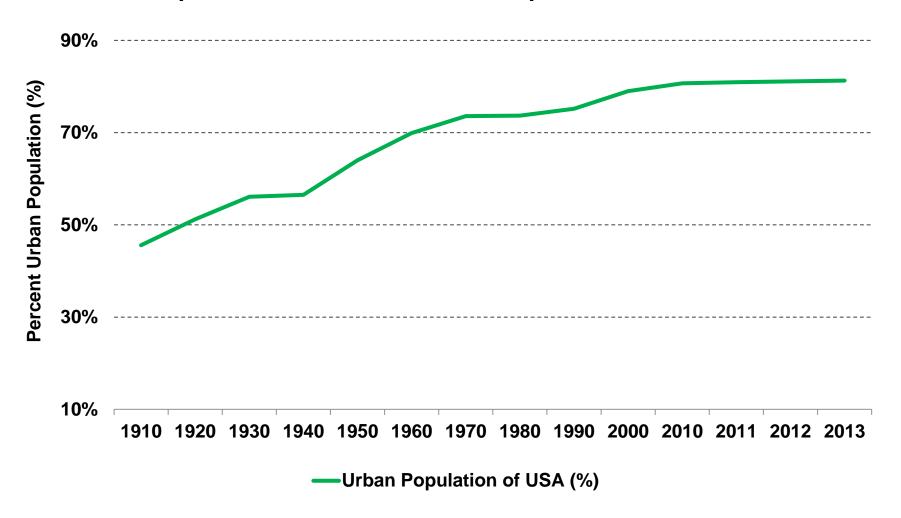
In 69% of breaches, victim did not detect attack on own – they were notified by third party (like the press, law enforcement, etc.). This is forcing victims to disclose breaches outside their preferred terms / timing.



## PEOPLE HAVE CHANGED

## Urban Dwellers Have Risen = @ 81% of Population vs. 70% Fifty Years Ago, 46% a Century Ago

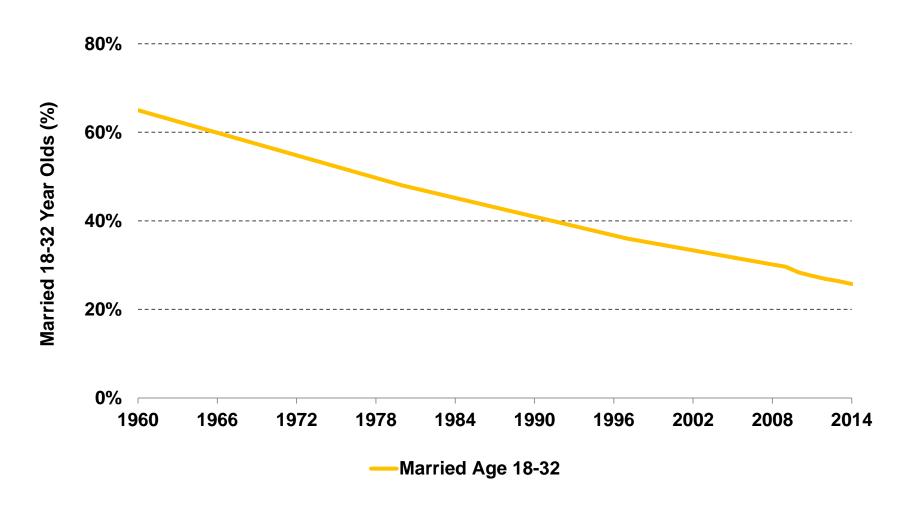
#### **Urban Population as Percent of Total Population, USA, 1910 – 2013**





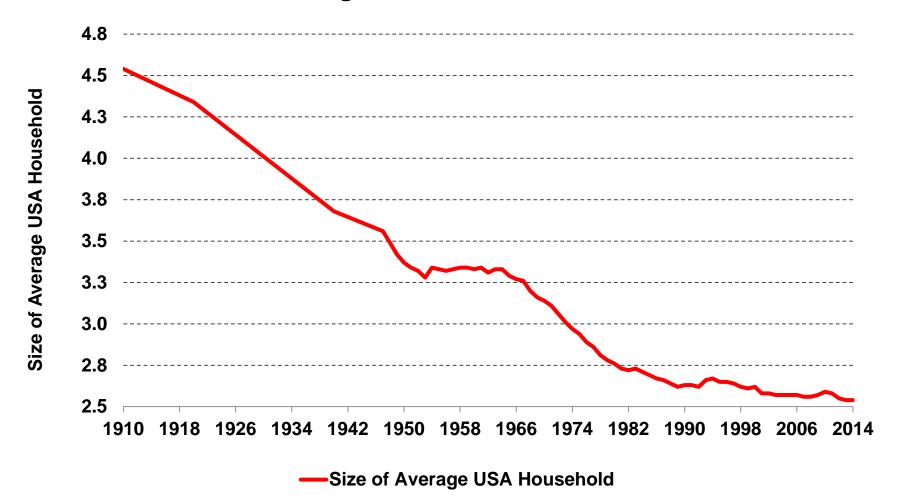
# 18-32 Year Olds Marriage Rates Declining = @ 26% vs. 65% Fifty Years Ago

#### Percent of Married 18-32 Year Old Population, USA, 1960 – 2014



# Household Sizes Declining = @ 2.5 People vs. 3+ Fifty Years Ago, 4+ a Century Ago

#### Size of Average Household, USA, 1910 – 2014

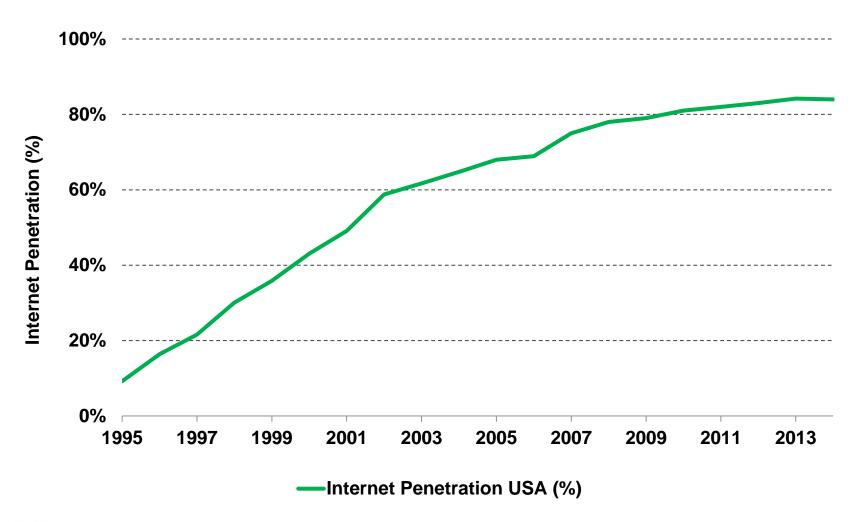




## **CONNECTIVITY HAS CHANGED**

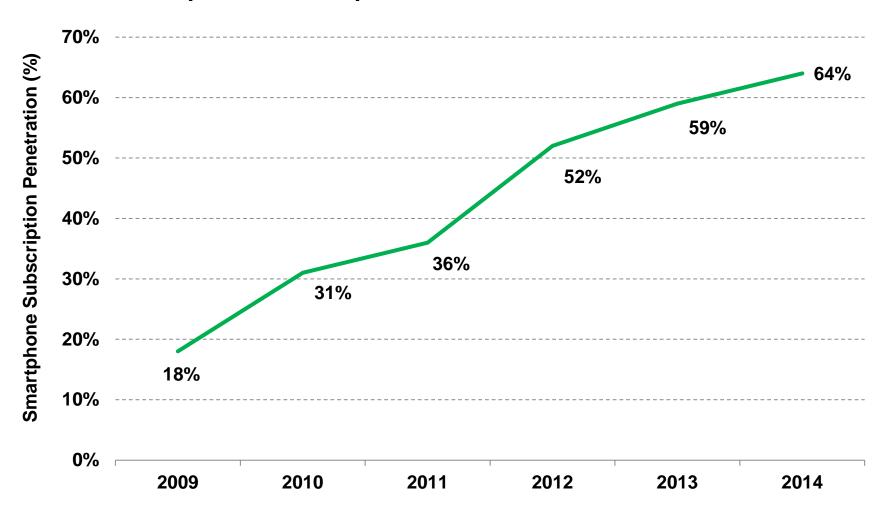
# Connectivity (Via Internet) Up Dramatically = @ 84% of Population vs. 9% in 1995...

#### Percent of Population with Internet Access, USA, 1995 – 2014



# ...Connectivity (via Mobile Smartphones) Up Dramatically = @ 64% of Population vs. 18% in 2009

#### **Smartphone Subscription Penetration, USA, 2009 – 2014**



## The Big 20-Year Change =

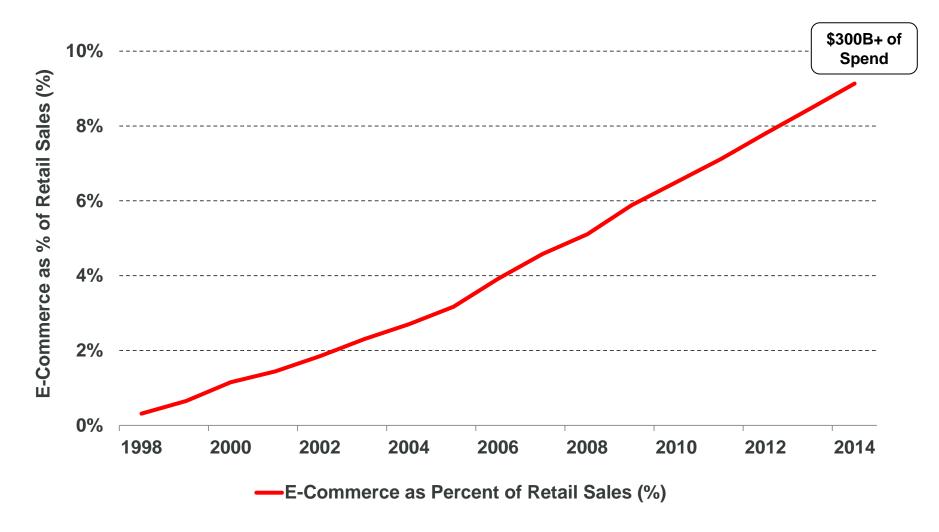
People Connected 24/7 with Mobile Devices



# NEW FORMS OF COMMERCE TRANSFORMING HOW PEOPLE CAN GET PRODUCTS + SERVICES

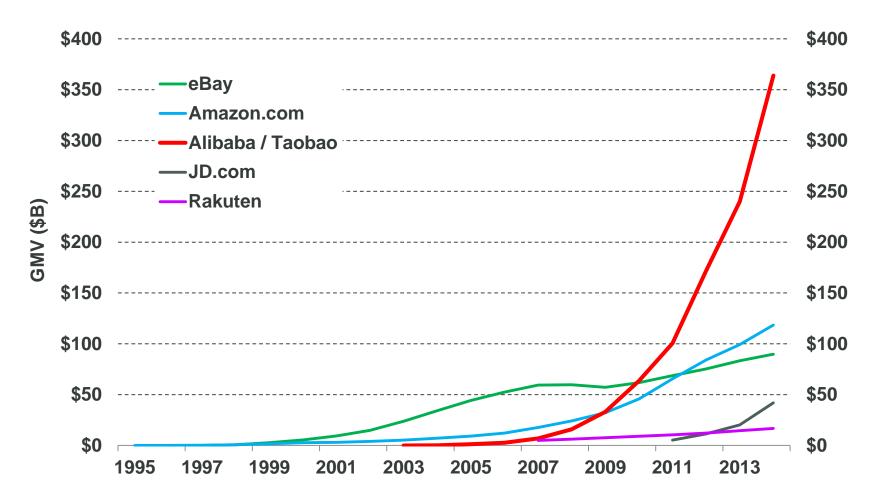
## Commerce via Internet Up Dramatically = @ 9% of Retail Sales vs. <1% in 1998

#### E-Commerce as % of Total Retail Sales, USA, 1998 – 2014



## 1st Generation 'Online Platforms / Marketplaces for <u>Products</u> Rising = Optimized for Desktop Internet + Traditional Shipping Delivery

## Gross Merchandise Value (GMV), 2014... Measured by Top 5 Global Public E-Commerce Companies





# Consumers' Expectation That They Can Get What They Want With Ease & Speed Will Continue to Rise...

This Changes Fundamental
Underpinnings of Business & Can
Create Rising Demand for Flexible Workers



# CHANGES IN CONNECTIVITY + COMMERCE = IMPACT CONSUMPTION & WAYS PEOPLE CAN WORK... STILL EARLY INNINGS

## More People Working in Flexible / Supplemental Jobs



### Freelancers = Significant & Growing Portion of Workers @ 53MM People, 34% of USA Workforce

### Freelancer Categories\*

Independent Contractors	<ul><li>21MM People</li><li>40% of Freelancers</li></ul>	<ul> <li>Don't have employerdo freelance, temporary, or supplemental work on a project-by-project basis</li> </ul>
Moonlighters	<ul><li>14MM People</li><li>27% of Freelancers</li></ul>	<ul> <li>Professionals with a primary, traditional job who also moonlight doing freelance work</li> </ul>
Diversified Workers	<ul><li>9MM People</li><li>18% of Freelancers</li></ul>	<ul> <li>Multiple sources of income; mix of traditional and freelance work</li> </ul>
Temporary Workers	<ul><li>6MM People</li><li>10% of Freelancers</li></ul>	<ul> <li>Single employer, client, job, or contract project where employment is temporary</li> </ul>
Business Owners who Consider Themselves Freelancers	<ul><li> 3MM People</li><li> 5% of Freelancers</li></ul>	Business owners with 1-5 employees



### Freelancers Use Internet to Get / Do Business

### Freelancers\* Say...

69% = Social networking has 'drastically changed dynamics of networking'

**65%** = Internet makes it easier to find work

**42%** = Have done online freelance project

**31%** = Can find a gig online in <24 hours

### Internet Enabling Commerce in Increasingly Efficient Ways



eBay SMBs = 95% engage in export vs. <5% of USA businesses

Setting up export businesses historically required significant investment.



Etsy sellers = 35% started business without much capital investment, compared to 21% for small business owners.



Only a smartphone needed to set up a listing and become an Airbnb host. Hosts can get set up in minutes.



Ability for businesses to access talent quickly – time to hire averages 3 days on Upwork vs. longer time for traditional hiring.



Car + smartphone + quick onboarding to be UberX driver-partner vs. materially more to purchase medallion (or equivalent) to be a Taxi driver.



SoundCloud Creators can use mobile devices to record / distribute audio content within minutes.

#### Thumbtack

Thumbtack professionals pay \$3-15 per introduction to services leads they are interested in vs. buying ads in directories monthly or yearly.



Stripe Connect powers most marketplace businesses and enables coordination of transactions between buyers and sellers.



# Rise of Connectivity + Online Marketplaces / Platforms =

Helping People
Earn Income &
Work on Own Terms



### Online Platforms Enabling Steady Growth in <a href="Product">Product</a> Commerce & Enabling Rapid Growth in <a href="Service">Service</a> Commerce

#### **Product Commerce**



8.5MM+ Sellers



2MM+ Third-Party Sellers



25MM+ Sellers



1.4MM+ Active Sellers +26% Y/Y

#### Service Commerce



35MM Total Guests All-Time

– nearly 25MM in Last Year



~1MM+ Driver-Partners +6x Y/Y



10MM+ Freelancers +63% 5-Year CAGR

# People Typically Use Online Platforms to Find Extra Income & Flexibility



### Many People = Use Online Platforms / Marketplaces to Supplement Income

#### Select Online Platforms – Personal Impact



- 72% = NYC hosts depend on Airbnb earnings to pay rent / mortgage...50%+ = NYC hosts are freelancers or other non-traditional workers supplementing income...
- 80-90% = Global Airbnb hosts occasionally rent out their own home to supplement income



- 82% = Sellers are part-time (ie: have jobs outside of Etsy)
- 26% = Sellers have full-time jobs (outside of Etsy)...48% = independent / part-time / temporary workers
- 36% = Use Etsy earnings to cover household expenses...24% for discretionary spend

#### **Thumbtack**

• 37% = Pros are part-time with income supplemented by other sources



- 74% = Drive to maintain steady income as other income sources unstable / unpredictable
- 61% = Have another job...31% = full-time on another job; 30% = part-time job apart from Uber; 38% = no other job



- 68% = People who said earning extra money is a motivation for freelancing
- 80% = Non-freelancers willing to do work outside primary job to make more money
- 60%+ = Freelancers provide at least 1/2 household income

Source: "An Analysis of the Labor Market for Uber's Driver-Partners in the United States," Uber, 1/15. Note Uber data are USA only. "The Tremendous Impact of Airbnb in New York," Airbnb, 5/15. Additional data are from Airbnb.

"Redefining Entrepreneurship: Etsy Sellers' Economic Impact", 11/13. Published by Etsy. Survey measured 5,500 USA-based sellers on Etsy's marketplace. Note Etsy data is USA only. Upwork (formerly Elance-oDesk) Annual Impact Report, 2014.

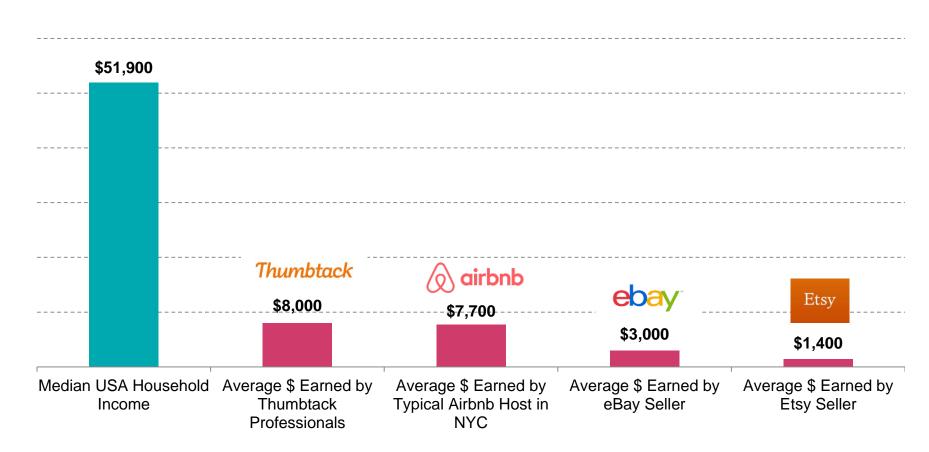
"Freelancing in America," Survey of 5,000 Working Americans commissioned by Freelancer's Union and Upwork (formerly Elance-oDesk), 9/14. USA. Thumbtack, 2015.

Thumbtack, 2015.

Note percentages may not add up to 100% owing to rounding.

### Online Platform / Marketplace Income = Material for Many People

### **Average Annual Earnings – Selected Online Platforms**





### Many People = Use Online Platforms / Marketplaces to Find Flexibility

#### Select Online Platforms – Views on Flexibility



 55% = Sellers motivated to set up shop for greater flexibility (for self / family)



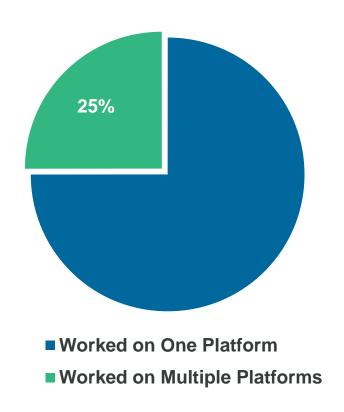
 87% = Driver-partners like Uber because they can be own boss / set own schedule



- #2 = Rank of flexibility among motivations for freelancing
- **92%** = Freelancers who agree they have more freedom to work wherever

### 25% of 'On-Demand' Workers = Use Multiple Platforms

### Percent of 'On-Demand' Workers Who Use Multiple Platforms, USA, 2014





### Growth in Online Platforms / Marketplaces =

Creates Benefits & Challenges



### Online Platforms / Marketplaces = Benefits & Challenges for Consumers

### **Benefits**

Choice / Access – product depth + breadth...availability of goods / services / experiences previously hard to find / reach

**Time Savings** – can offset incremental costs, if any

**Transparency** – ability to research / set expectations / track process

**Personalized** – can get items / services on own schedule

Online Reputation & Trust Systems
Often in Place – ability to read & write
reviews / ratings for merchants & service
providers

### Challenges

**Time / Cost Tradeoff** – Products with rapid delivery may be more expensive

**Quality** – unable to test products / services...reliant on feedback from peers / reviews

**Trust** – new marketplaces must prove trustworthiness to consumers

Time / Convenience Tradeoff – Convenience of delivery to home / work may mean delaying gratification of getting product immediately

### Online Platforms / Marketplaces = Benefits & Challenges for Workers

### **Benefits**

**Financial** – ability to earn supplemental / primary income

**Flexibility** – choose own schedule / task, location / income goals-targets

**Skill Set Match** – can often effectively match skills with needed services

**Feedback / Communication** – often real-time / direct

**Data** – customer location + data can allow workers to provide more informed / efficient service

Customer Base – marketplaces can aggregate demand that may be fragmented / far-reaching (global)

**Growth** – rising sector demand for services should boost opportunities / competition for workers

### **Challenges**

**Incumbent Displacement** – creates change / uncertainty

**Financial** – lack of predictable income possible

**Uncertainty** – lack of clarity related to demand / work / reporting possible

**Benefits Clarity** – insurance / vacation / sick leave / pension...

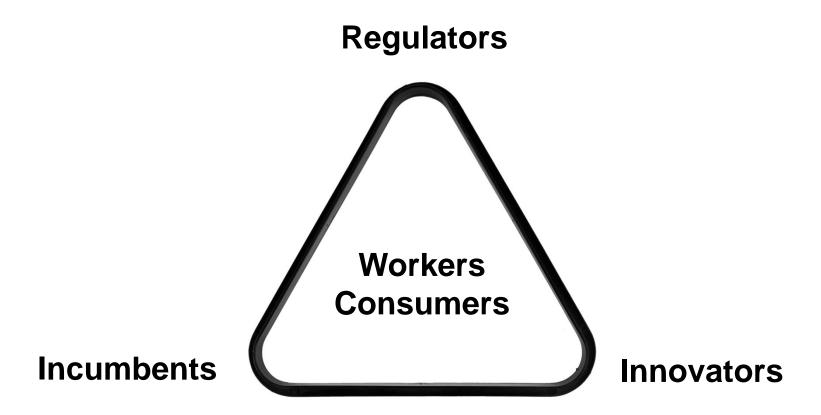
**Asset Use** – potential job requirement to use personal items (cars / phones...)

**Training / Development** – potentially limited training / development / supervision

**Workplace Culture** – people often dispersed

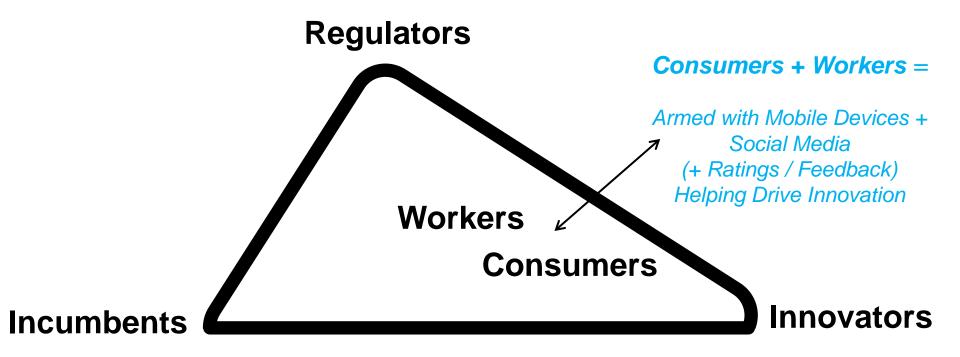
## ONLINE MARKETPLACE / PLATFORMS = REGULATORY FOCUS EVOLVING

### <u>Traditional</u> Challenge / Opportunity = Incumbents ⇔ Regulators ⇔ Innovators...





### ... <u>Evolving</u> Challenge / Opportunity = Incumbents $\Leftrightarrow$ Regulators $\Leftrightarrow$ Innovators





### Innovative Online Platform / Marketplace Business Models = Capturing Attention of Incumbents + Regulators + Policy Makers + Plaintiffs Lawyers

- Airbnb Emerges Victorious as New York City Regulators Overturn Host's \$2,400 Fine The Verge, 9/13
- Artist Sued for 'Subletting' Loft on Airbnb
  - New York Post, 6/14
- Sharing Economy Faces Patchwork of Guidelines in European Countries NY Times. 9/14
- State Regulator Says Uber meets Florida Insurance Requirement

   Tampa Bay Times, 10/14
- Handy.com Housecleaners' Lawsuit Could Rock On-Demand Companies
   SF Gate, 11/14
- Uber, Lyft Lawsuits Could Spell Trouble For the On-Demand Economy CNN, 3/15



### Uber, Lyft... = Facing Confusion in Regulatory Environment Related to Worker Classification System

California law defines whether workers are employees or independent contractors, and there's a test, but the test and classification system are woefully outdated...

...It seems to me, as a matter of common sense, that Lyft drivers don't fall into the traditional understanding of [the two classifications]. They seem to fall into a third category....

The jury in this case will be handed a square peg and asked to choose between two round holes. The test the California courts have developed over the 20th Century for classifying workers isn't very helpful in addressing this 21st Century problem...

- Judge Vince Chhabria, U.S. District Judge Presiding Over Cotter vs. Lyft Inc., et al

\*Note that Lyft was eventually denied motion for summary judgement & case will need to be decided by a jury.

### Airbnb = Facing Confusion in Regulatory Environment Related to Myriad of Local Laws on Hotels / Short-Term Rentals

...this is amazing, but it's also complicated because there are laws that were written many decades ago – sometimes a century ago – that said,

'There are laws for people and there are laws for business.' What happens when a person becomes a business?

Suddenly these laws feel a little bit outdated. They're really 20th-century laws, and we're in a 21st-century economy.

- Brian Chesky, Co-founder and CEO of Airbnb, 11/14

### StubHub = Faced Confusion in Regulatory Environment & Proved Marketplaces Can Be Regulators' Allies

#### Original Intent of Anti-Scalping Laws (passed in 1920s) = Protect Consumers...

...the law 'merely prohibits' scalpers and ticket brokers from charging excessive prices and thereby 'end[s] the extortion' of the public...

#### StubHub When Founded in 2000 = Faced Many Anti-Scalping Law Barriers...

>20 states prohibited some form of ticket resale...for example, Alabama / Massachusetts require licenses...in Indiana, one couldn't sell tickets to boxing matches...

#### StubHub in 2015 = Legal in Nearly All States & Has Helped Provide...

- Marketplace Liquidity = Can help prevent excessive pricing ('extortion of public')
- Trust & Safety / Transparency = Likes of ratings / feedback systems can help find / remove bad actors

With passage of time (& collaboration), StubHub has helped regulators do their jobs – effectively regulate what they had intended to regulate all along.

PEOPLE + SYSTEMS + REGULATIONS /
POLICIES =
NEED TO EVOLVE / ADAPT TO MORE
CONNECTED SOCIETY

### High-Level Summary...

- Job Market Has been more difficult & work has been harder to find for many
- Benefits Traditional employer-provided benefits like health insurance & retirement plans falling...Recipients of government benefits rising
- Millennials Have different expectations for work than previous generations, for now...Shaped, in part, by Great Recession
- Connectivity Has created efficiencies & changed work for many
- Work Alternative work arrangements (including freelancing) increasing...Competition for workers may rise with demand



### ...High-Level Summary

- Online Platforms / Marketplaces Growing Rapidly Creating new work opportunities & challenges for individuals...These will continue to rise, similar to trends / impact from first-generation Internet companies, potentially faster / broader
- Need to Shape Direction & Evolve Policies & Laws Industry
  participants (workers / businesses / governments) need to work together
  to be more aligned with rapidly emerging ways of doing business &
  creating work & recognize that emerging technologies / marketplaces can
  help solve for consumer & worker welfare
- Innovative Online Platforms / Marketplaces Stand to Continue to Benefit Consumers – As evinced by strong demand for their products & services...
- Impact of Social Media (+ Feedback / Ratings) Should Not be
   Underestimated Empowered consumers increasingly in effect take elements of consumer protection into their own hands



### **BIG INTERNET MARKETS =**

- CHINA = #1 IN SHEER MASS...
- INDIA = #1 IN NEW USER ADDITIONS

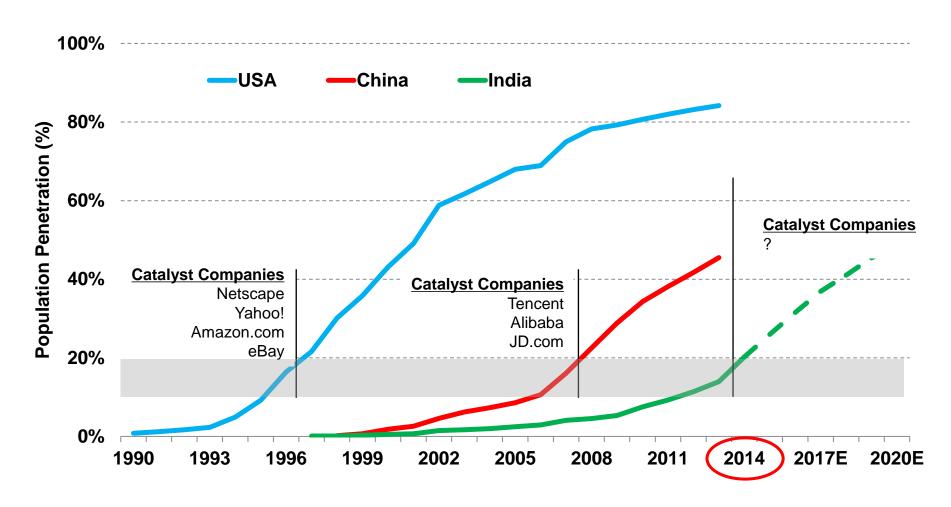
### Large Scale Internet Adoption History =

USA → China...
India Next?



### India = Appears to Be @ Internet Penetration Growth Inflection

#### Internet User Penetration Curve, USA / China / India, 1990 – 2020E



# India = 232MM Internet Users (+37% Y/Y)... 3<sup>rd</sup> Largest Market

Top Country in New Internet User Adds per Year (+63MM in 2014)



### India = Often #1 or #2 MAU Market for Global Internet Leaders



#### **Facebook**

India = 2nd Largest Market @ 112MM MAUs, 8% of Global MAUs, 9/14

USA & Canada = Largest Markets @ 210MM MAUs, 3/15



#### WhatsApp

India = Largest Market @ 70MM...10% of Global MAUs, 11/14...

Global MAUs = 800MM, 3/15



#### YouTube

70MM Users in India, ~7% of Global Users



#### LinkedIn

India = 2nd Largest Market @ 24MM MAUs, 8% of Members, 2/14

USA = Largest Market @ 100MM Members, 4/14



#### **Twitter**

India = Fastest Growing User Market, 3/15



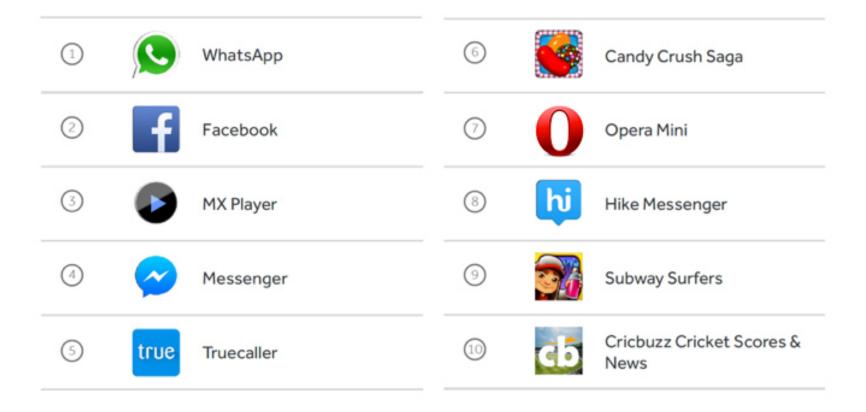
#### **Amazon**

"Amazon Announces Additional \$2 Billion Investment in India," 7/14

### Top India Android Apps =

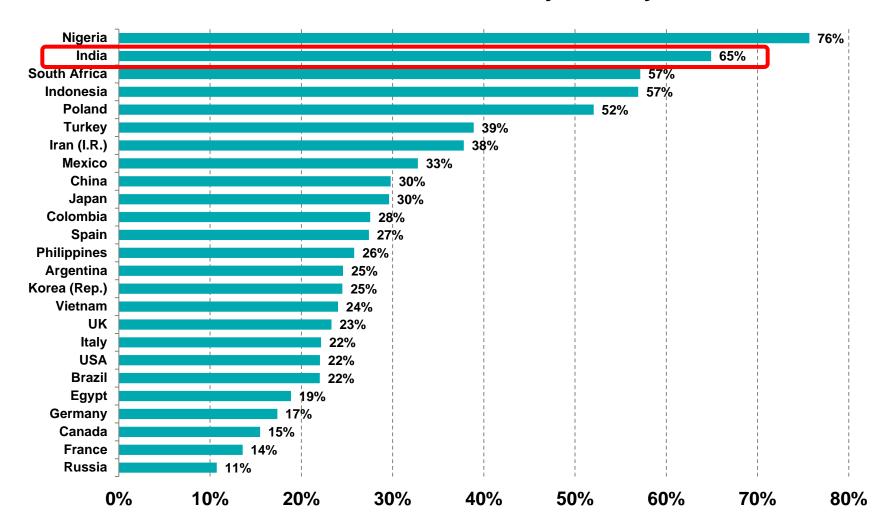
1) WhatsApp 2) Facebook 3) MX Video Player 4) Facebook Messenger 5) Truecaller

### Top Android Apps by Usage, India, Q1:15



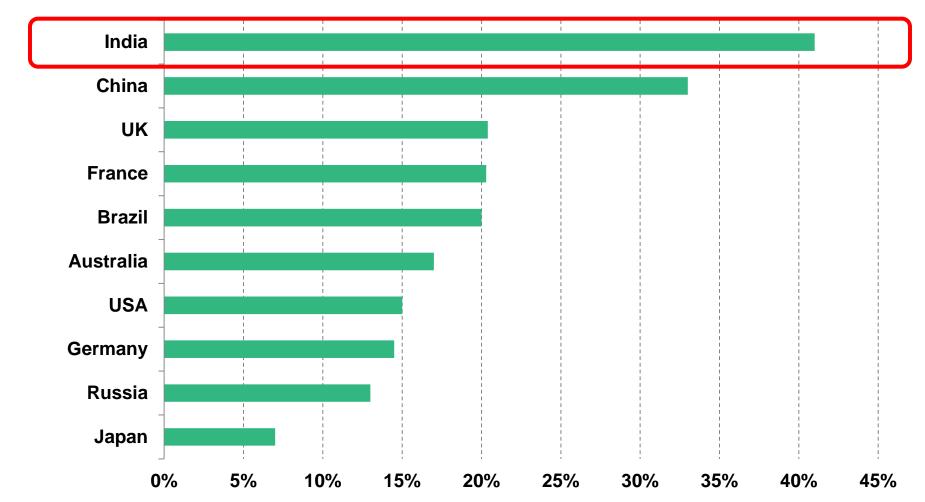
### Mobile = 65% of India Internet Traffic... More Mobilized vs. Most Other Countries

#### Mobile % of Total Internet Traffic by Country, 5/15



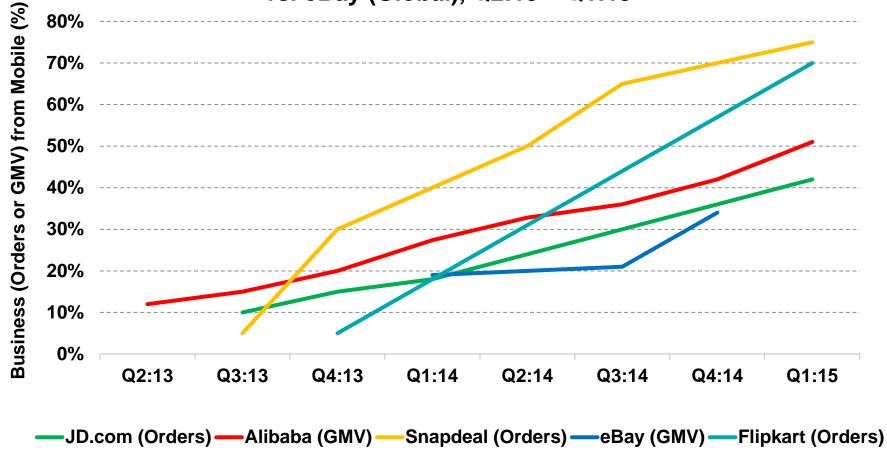
### Mobile = 41% of India E-Commerce... = More Mobilized vs. Most Other Countries\*

#### Mobile as % of Total E-Commerce Sales, 2014



### India E-Commerce Leaders = More Mobilized vs. Global Leaders

Mobile as % of E-Commerce GMV / Orders
Snapdeal (India) vs. Flipkart (India) vs. Alibaba (China) vs. JD.com (China)
vs. eBay (Global), Q2:13 – Q1:15





### **PUBLIC & PRIVATE COMPANY DATA**

### Global Internet Public Market Leaders = Apple / Google / Alibaba / Facebook / Amazon / Tencent...

Rank	Company	Region	2015 Market Value (\$B)	2014 Revenue (\$MM)
1	Apple	USA	\$764	\$199,800
2	Google	USA	373	66,001
3	Alibaba	China	233	11,417
4	Facebook	USA	226	12,466
5	Amazon	USA	199	88,988
6	Tencent	China	190	12,727
7	еВау	USA	73	17,902
8	Baidu	China	<b>72</b>	7,909
9	Priceline Group	USA	<b>63</b>	8,442
10	Salesforce.com	USA	49	5,374
11	JD.com	China	48	18,543
12	Yahoo!	USA	41	4,618
13	Netflix	USA	38	5,505
14	LinkedIn	USA	25	2,219
15	Twitter	USA	24	1,403
16	Yahoo! Japan	Japan	23	3,441
17	Rakuten	Japan	23	4,996
18	NetEase	China	19	1,889
19	Naver	Korea	17	2,527
20	Vipshop	China	15	3,774
Total			\$2,513	\$479,939

### Technology-Related Company Investing Observations

- Booms / Busts In periods of material business disruption like those brought about by the evolutions of the Internet – company creation typically goes through a boom → bust → boom-let cycle while wealth creation typically goes through a boom-let → bust → boom cycle.
- Valuations There are pockets of Internet company overvaluation but there are also pockets of undervaluation – the one rule is that very few companies will win – those that do – can win big.
- **Platforms** Race is won by those that build platforms & drive free cash flow over long-term (a decade or more).
- Free Cash Flow Value of a business, over time, is the present value of its future cash flows.



### RAN OUTTA TIME THOUGHTS

# Re-Imagining Design / User Experience



# Key Design Concepts That Have Made a Difference... per John Maeda...

#### **Google Search**

Hide complexity behind a simple door

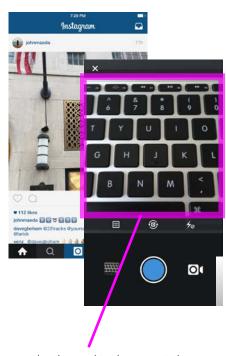


The longstanding discipline by Google to keep the homepage limited to a single search box has been key to maintaining its simplicity. Once a search term is typed into Google, it gets complex really quickly -- but you don't notice it at first.

Analogy: The Motorola Startac phone introduced a clamshell design that hid all the complexity -- to be revealed only when used.

#### Instagram

Remove choice to make things simpler

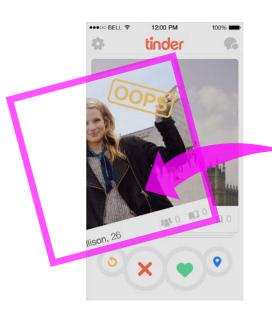


By removing the need to choose portrait versus landscape mode, Instagram made it easier for the user. Only square photos could be taken on Instagram -- which were uncommon at the time and could stand out. Instagram made things easy.

Analogy: Similar to when Steve Jobs removed the extra buttons on a mouse to have only one button. In doing so, the Mac became known for simplicity.

#### **Tinder**

Iconic gesture for choosing "thumbs up/down"



Traditional computers are grounded in the oneor two-button mouse -- which tends to promote "clicking" and minimal dragging. The touch screen introduced a new element: swiping. When supported by animation, it speaks of power.

Analogy: The "slide to unlock" feature on the Apple iPhone introduced the idea of translating an emphatic motion to a button press.



## ...Design Elements That Have Made a Difference... per John Maeda

**Snapchat** 

Start with the activity to bias towards

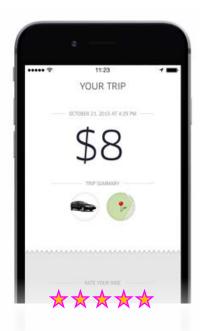


Most imaging applications asked to turn on the camera, whereas Snapchat began the interaction in live camera mode. The invitation to snap a photo was immediate; and the secretive, self-destruct feature completed the addictive loop.

Analogy: A hammer's handle invites you to grasp it. In the design world that's called an object's "affordance" — it primes how you might use it.

**Uber** 

Entirely remove a constraint with technology

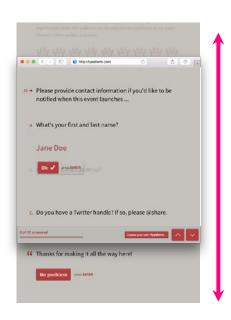


Removing cash or a card payment from a taxi transaction was a huge technical innovation that achieved a better designed outcome. It's often easy to hope that design can solve a fundamental problem — technology is what enables quantum leaps.

Analogy: When cars were rear-wheel drive, the "hump" in the back seat was a bummer. Front-wheel drive cars completely removed that constraint.

#### **Typeform**

Sustain overall context so user is aware where (s)he is



By keeping the entire interaction in view, and easily referred to within a vertical scroll, the experience of inputting information feels less like the computer is in control; and leads to completion rates of survey information with an average of 60% (vs 10%).

Analogy: The acclaimed film "Birdman" used the cinematic illusion of "the single take" to achieve a similar effect to create greater viewer immersion.



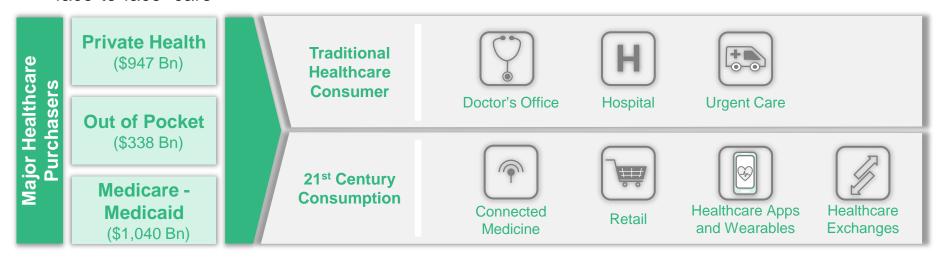
Healthcare – Continuing to Shift
Towards Consumer-Driven,
Value-Based Care =
Opportunity for Technology Solutions



#### US Healthcare in the 21<sup>st</sup> Century Purchase + Delivery Change Forever

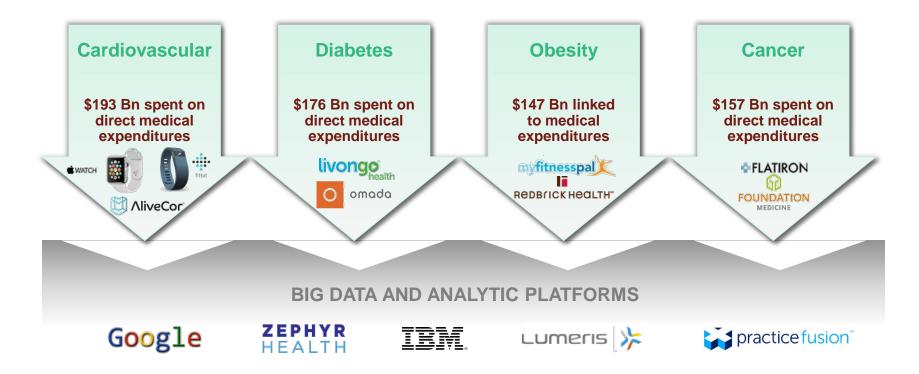
#### **ACA and Government Effects**

- With Cadillac tax coming into effect in 2018, employers are moving towards offering high deductible health benefit plans
- 72% of employers offer at least 1 consumer directed health plan
- 30% of Medicare payments will be tied to quality or value by end of 2016 and 50% by end of 2018
- Effective Jan 2015, Medicare has separate payments for chronic care management for "non-face-to-face" care



# Lower Healthcare Costs by Utilizing Technology to Help Manage and Prevent Chronic Diseases

- In 2013, the US government spent \$591 billion on Medicare. However, Medicare is projected to have insufficient funds to pay all hospital bills beginning in 2030
- Chronic disease accounts for 86% of US healthcare costs, which can be reduced by enabling the healthcare ecosystem with innovative technology



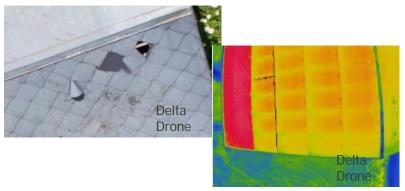
# More Drone Thoughts



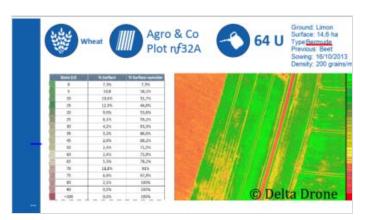
#### Drones = Driving New Wave of Big Data Collection / Analysis



Point cloud models created from aerial LiDAR surveys measure conductor tension & vegetation encroachment, reducing inspection cost & injury.



High resolution photos of rooftops aid damage assessment for insurance underwriters & thermal imaging being used for building insulation inspections.



Vegetation health maps created from multi-spectral imaging surveys help minimize use of water & pesticides & maximize crop yields.



Stockpile maps created from aerial photo surveys provide faster & more accurate volumetric calculations for mining and quarry operations.

Source: News articles, KPCB analysis.

# Consumer / Commercial Drone Development – Ranking Countries by Government Accommodation...

#### 1) France & United Kingdom

- Both countries allow Beyond Visual Line of Sight "BVLOS" commercial operations.
  - In France, users must obtain a proper pilot's license plus 100 hours of flying experience & 20 hours of drone training.
  - In United Kingdom, operator must be approved by the Civil Aviation Authority "CAA."
- France & UK both have training certifications, weight categories & relatively mature regulatory framework.

#### 2) Canada

- Early to allow commercial operations with Special Flight Operating Certificates and regulator takes holistic safety approach without requiring pilots licenses. In November 2014, Transport Canada issued blanket exemptions for drones weighing less than 2kgs, but restrictions are tight whereby UAVs 2kg or less have to avoid flying closer than 9km from build-up areas (e.g. group of buildings larger than a farmstead).
- Still lacks a comprehensive regulatory framework.

#### 3) Australia

 Australia has a mature regulatory framework, but Civil Aviation and Safety Authority "CASA" is rewriting its regulations with the concept of a micro UAS rule. Yamaha has had success in Australia with its R-MAX unmanned helicopter.

#### 4) Japan

 Led way on UAVs 20 years ago with development of the Yamaha R-MAX, but country did not develop regulatory structure, and has lost its early technical lead.

# ...Consumer / Commercial Drone Development – Ranking Countries by Government Accommodation

#### **5) USA**

- FAA is about 6 months into an exemption program that grants company-by-company exemptions (permits) for specific UAS applications. However, those permits come with restrictions & conditions that pose impediments to operators, such as pilot certification (in a real aircraft), mandatory separation from persons and structures (500 feet), a prohibition against night operations, & other parameters that are generally viewed as overly conservative & potentially not capable of being satisfied by many of the companies being granted those permits. Agency claims that statutes prohibit it from providing a more reasonable approach to UAS permits.
- FAA is trying to speed up its processes, and is now up to ~400 exemptions granted to companies. However, it still has a massive backlog with ~1,200 more pending. Additionally, the FAA is at least 18 months away from actual small UAS rules.

#### 6) China

• Military allots only 1/5 of airspace to civilian use and is very sensitive about drone usage. While there is no blanket ban on commercial drone activity, China's Civil Aviation Administration requires anyone operating a drone >7kg to have a license. For flying drones <7kg, no license is required as long as it's below 400 feet and within operator's line of sight. However, this policy has caused confusion among operators and regulators. In one example, the Beijing Police briefly detained a well-known aerial photographer for filming the Forbidden City - they confiscated his quadcopter and later returned it to the photographer at the airport on his flight out of China.</p>

#### Other countries developing UAS regulations

- Mexico recently released framework including micro UAS rule.
- New Zealand is behind but has proposed a solid risk-based set of regulations.



## **Appendix**



## Established 'Big' Internet Markets (China / USA / Japan / Brazil / Russia) = +6% Growth in 2014 vs. +7% Y/Y = Slowing, Most Well Past 50% Penetration

#### Countries with Internet Penetration >45%, 2014

		2014 Internet	2014 Internet	2013 Internet	Population	Total	Per Capita
Rank	Country	Users (MM)	User Growth	<b>User Growth</b>	Penetration	Population (MM)	GDP (\$000)
1	China	632	7%	10%	47%	1,356	\$13
2	United States	269	2	2	84	319	<b>\$</b> 55
3	Japan	110	0	9	86	127	\$37
4	Brazil	105	4	12	52	203	<b>\$16</b>
5	Russia	87	15	9	61	142	\$25
6	Germany	68	0	1	84	81	\$46
7	<b>United Kingdom</b>	57	4	1	90	64	\$40
8	France	54	-1	5	82	66	\$40
9	Iran (I.R.)	49	8	16	60	81	<b>\$17</b>
10	Egypt	43	15	13	50	87	<b>\$11</b>
11	Korea (Rep.)	42	1	1	85	49	\$35
12	Turkey	38	4	6	46	82	\$20
13	Italy	36	1	2	58	62	\$35
14	Spain	34	0	7	72	48	\$34
15	Canada	30	0	5	86	35	\$45
	Top 15	1,653	5%	7%	59%	2,800	
	World	2,793	8%	10%	39%	7,176	

## Developing 'Big' Internet Markets (India / Indonesia / Nigeria / Mexico) = +24% Growth in 2014 vs. +23% Y/Y = Still Growing Strongly

#### Countries with Internet Penetration ≤45%

		2014 Internet	2014 Internet	2013 Internet	Population	Total	Per Capita
Rank	Country	Users (MM)	User Growth	<b>User Growth</b>	Penetration	Population (MM)	GDP (\$000)
1	India	198	33%	34%	16%	1,236	\$6
2	Indonesia	83	17	13	33	254	\$11
3	Nigeria	67	18	19	38	177	<b>\$6</b>
4	Mexico	52	15	11	43	120	\$18
5	Vietnam	41	12	14	44	93	<b>\$6</b>
6	Philippines	40	4	27	37	108	<b>\$7</b>
7	Pakistan	21	11	12	11	196	<b>\$5</b>
8	Thailand	20	10	12	29	68	\$14
9	Ukraine	19	23	17	42	44	<b>\$9</b>
10	Kenya	18	24	17	39	45	\$3
11	Peru	12	4	7	39	30	\$12
12	Uzbekistan	11	6	22	38	29	<b>\$6</b>
13	Bangladesh	11	5	28	7	166	\$3
14	Sudan	8	10	13	23	35	\$4
15	Algeria	6	10	11	17	39	\$14
	Top 15	607	19%	21%	23%	2,641	
	World	2,793	8%	10%	39%	7,176	

### Established 'Big' Smartphone Markets (USA / Japan / Brazil / Germany / UK) = +13% Growth in 2014 vs. +18% in 2013 = Slowing, Most Well Past 50% Penetration

#### Markets with >45% Penetration

		2014 Smartphone	2014 Smartphone 2013 Smartphone		Population	Total	Per Capita
Rank	Country	Subs (MM)	Sub Growth	Sub Growth	Penetration	Population (MM)	GDP (\$000)
1	USA	204	9%	16%	64%	319	\$55
2	Japan	104	5	5	82	127	\$37
3	Brazil	96	28	43	47	203	<b>\$16</b>
4	Germany	52	33	30	65	81	\$46
5	<b>United Kingdom</b>	45	9	14	71	64	\$40
6	France	43	16	43	65	66	\$40
7	South Korea	39	5	15	80	49	\$35
8	Spain	26	1	19	55	48	\$34
9	Saudi Arabia	25	14	6	91	27	<b>\$52</b>
10	South Africa	23	26	48	47	48	<b>\$13</b>
11	Australia	22	1	40	100	23	\$46
12	Canada	21	16	20	60	35	\$45
13	Argentina	20	28	52	47	43	\$23
14	Malaysia	20	16	38	66	30	\$25
15	Taiwan	14	1	50	61	23	\$46
	Top 15	756	13%	21%	64%	1,186	
	World	2,107	23%	27%	29%	7,176	

## Developing 'Big' Smartphone Markets (China / India / Indonesia / Russia) = +28% Growth in 2014 vs. +29% in 2013 = Strong, Well Below 50% Penetration

#### Markets with ≤45% Penetration

		2014 Smartphone	2014 Smartphone 20	013 Smartphone	Population	Total	Per Capita
Rank	Country	Subs (MMs)	Sub Growth	Sub Growth	Penetration	Population (MMs)	GDP (\$000)
1	China	513	21%	26%	38%	1,356	\$13
2	India	140	55	19	11	1,236	\$6
3	Indonesia	64	40	36	25	254	\$11
4	Russia	57	24	95	40	142	\$25
5	Mexico	30	31	50	25	120	\$18
6	Philippines	29	39	47	27	108	\$7
7	Thailand	29	11	69	43	68	\$14
8	Italy	28	17	26	45	62	\$35
9	Turkey	23	22	42	28	82	\$20
10	Nigeria	23	58	62	13	177	\$6
11	Vietnam	21	33	39	23	93	\$6
12	Egypt	20	50	20	23	87	\$11
13	Poland	14	42	12	37	38	\$25
14	Colombia	12	41	50	26	46	\$13
15	Iran	10	42	19	12	81	\$17
	Top 15	1,014	29%	32%	26%	3,950	
	World	2,107	23%	27%	29%	7,176	

