# 2014年互联网趋势报告

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May 28, 2014

kpcb.com/InternetTrends



KLEINER PERKINS CAUFIELD BYERS





- 1) Key Internet Trends
- 2) Status Update Tech Stocks / Education / Healthcare
- 3) Re-Imagining Continues
- 4) Screen + Video Growth = Still Early Innings
- 5) China's Epic Share Gains
- 6) Public Company Trends
- 7) One More Thing(s)
- 8) Ran Outta Time Thoughts / Appendix









## 互联网主要趋势

# 高级用户趋势

· 互联网用户

增幅小于10%,印度、印尼和尼日利亚等发展中市场增长迅速, 但难以商业化。

• 智能手机用户

增20%,增速快但正在放缓。

• 平板电脑

增52%,处于早期快速增长阶段。

移动数据

增81%,加速增长,视频驱动力很强。







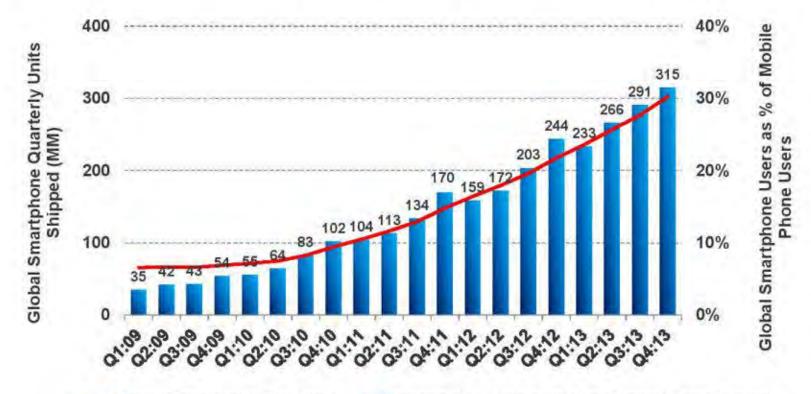


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# 移动增长非常迅速

#### 智能手机用户 仅占52亿移动用户的30%,还有很大空间

Global Smartphone Quarterly Unit Shipments & Smartphone Users as % of Mobile Phone Users, 2009 – 2013



Smartphone Units Shipped

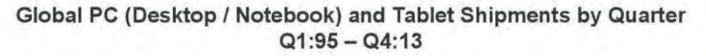
—Smartphone Users as % of Mobile Phone Users

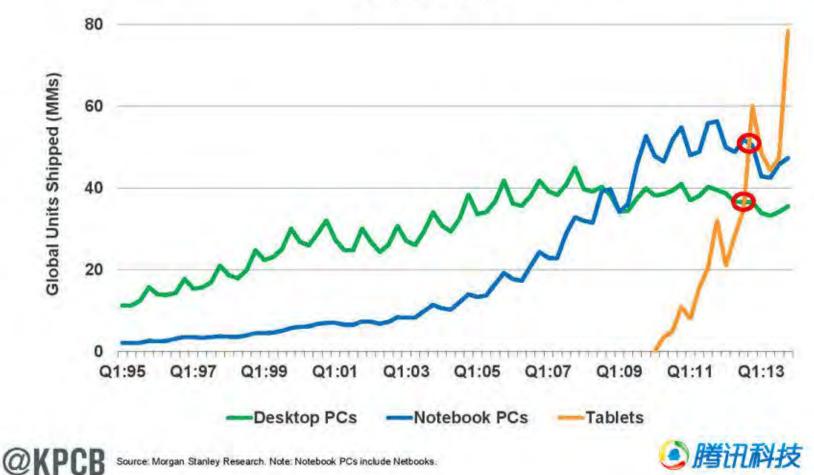
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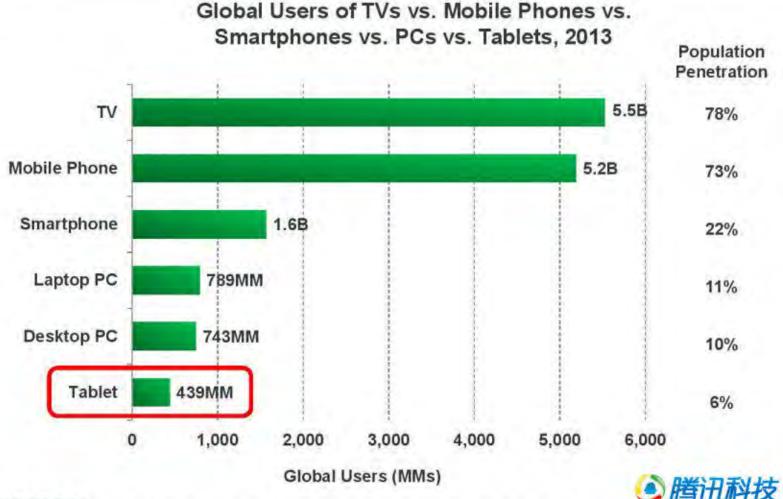
Source: Smartphone shipments per Morgan Stanley Research. User base per KPCB estimates based on Morgan Stanley Research and ITU data. Smartphone users & mobile phone users represent unique individuals owning mobile devices, as noted on slide 8; Mobile Subscribers based on number of connections & may therefore overstate number of mobile users.

## 平板出货量去年增长52%,超过PC所有年份的增长率





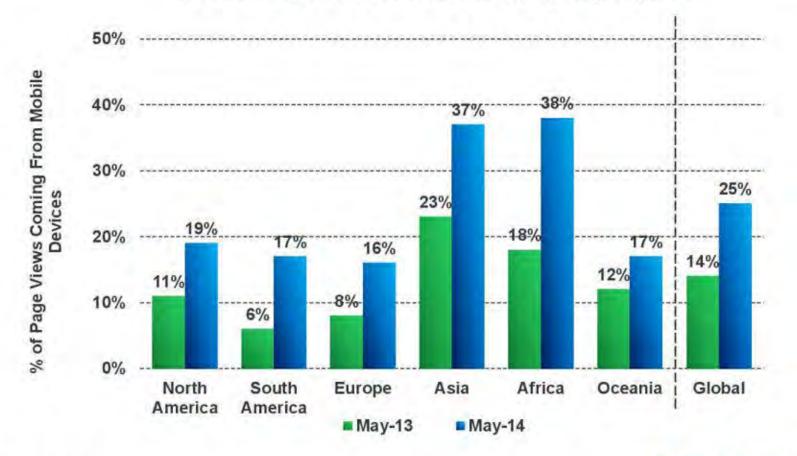
#### 平板用户仅为笔记本的56%,智能手机的28%, 电视机的8%,还有很大增长空间





#### 移动互联网使用量持续增长,占整体互联网的25%, 去年这一数据为14%

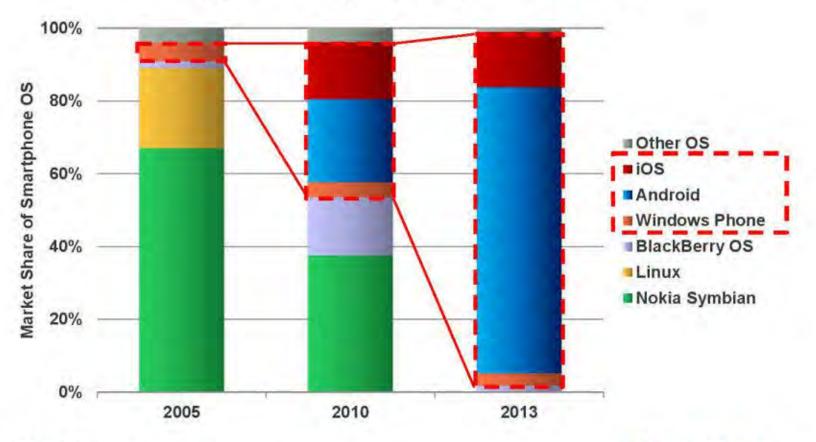
Mobile Usage as % of Web Usage, by Region, 5/14





#### "美国制造"的智能手机操作系统占全球份额97%, 8年前仅占5%

Global Smartphone Operating System Market Share (by Units Shipped), 2005 vs. 2010 vs. 2013



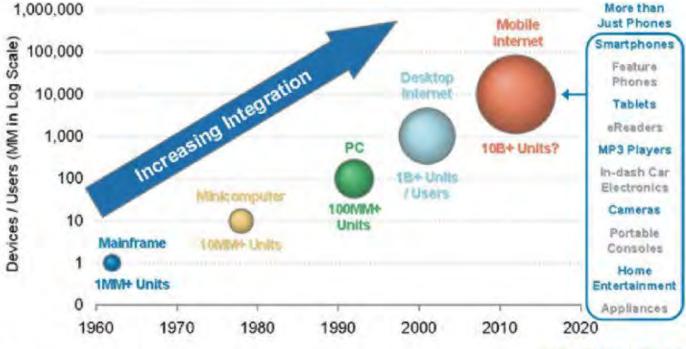




## 新兴计算设备的用户数比上一代大十倍, 移动互联网或出现百亿以上用户

#### Exhibit 29 Each new computing cycle typically generates around 10x the installed base of the previous cycle

Devices or users in millions; logarithmic scale





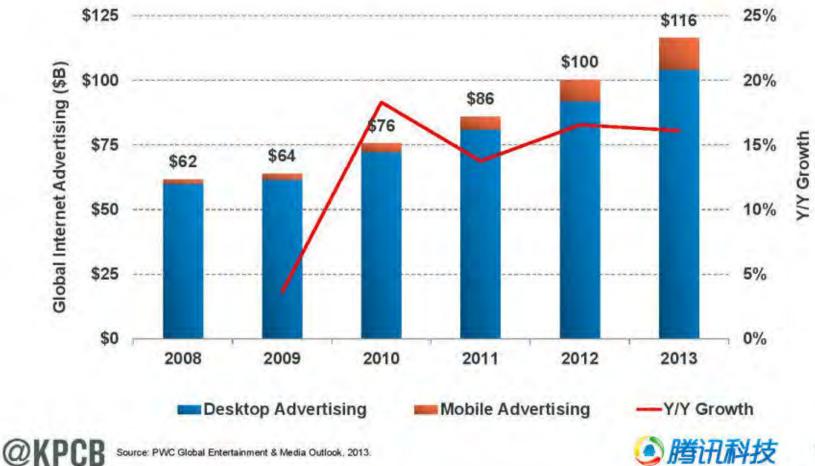
## 移动互联网广告和盈利前景光明





#### 互联网广告2013年增16%,移动广告增长47%, 在互联网广告中占比增至11%

Global Internet Advertising, 2008 – 2013



#### 谷歌ARPU(每用户平均收入)是Facebook的6倍, Facebook的ARPU是Twitter的两倍

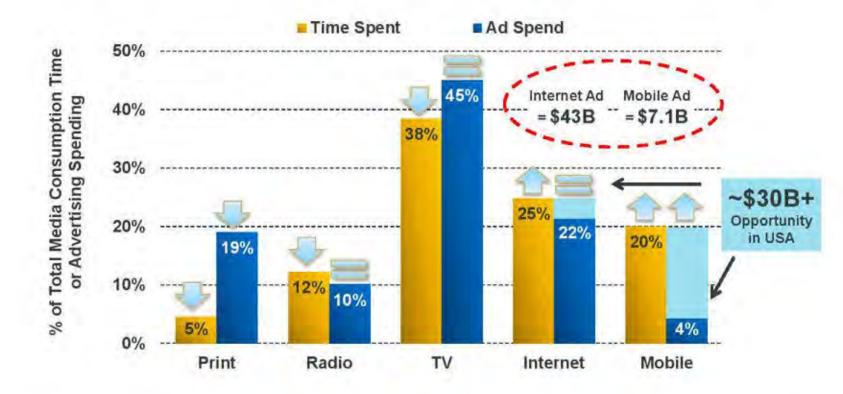
Annualized Ad ARPU (\$) & Mobile % of MAU

Annualized Ad ARPU (\$)	Q1:12	Q2:12	Q3:12	Q4:12	Q1:13	Q2:13	Q3:13	Q4:13	Q1:14
Google (\$)	\$37	\$37	\$38	\$43	\$42	\$41	\$41	\$46	\$45
Y/Y Growth	9%	6%	6%	14%	14%	11%	10%	8%	8%
Facebook (\$)	\$4.00	\$4.28	\$4.43	\$5.15	\$4.60	\$5.65	\$6.14	\$7.76	\$7.24
Y/Y Growth	1%	(2%)	7%	12%	15%	32%	39%	51%	57%
Mobile % of MAU	54%	57%	60%	64%	68%	71%	74%	77%	79%
Twitter (\$)	\$1.29	\$1.50	\$1.64	\$2.15	\$1.97	\$2.22	\$2.65	\$3.65	\$3.55
Y/Y Growth	90%	134%	108%	93%	52%	48%	61%	69%	80%
Mobile % of MAU	44				44	75%	76%	76%	78%



## 移动广告增长乐观,纸媒面临严重衰退

% of Time Spent in Media vs. % of Advertising Spending, USA 2013

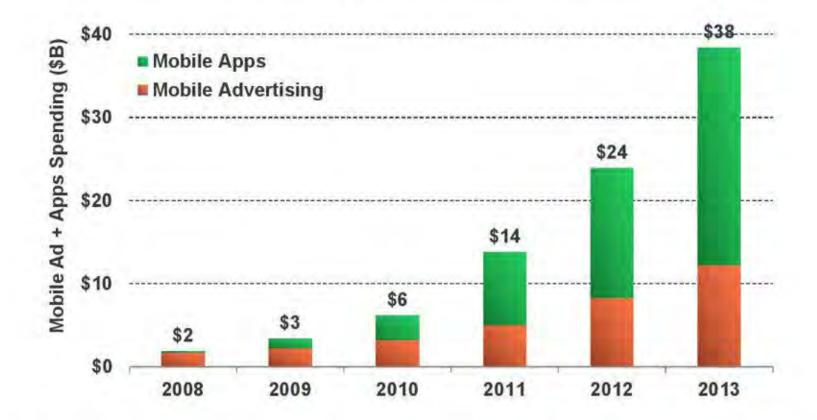




Source: Advertising spend based on IAB data for full year 2013. Print includes newspaper and magazine. \$30B+ opportunity calculated assuming Internet and Mobile ad spend share equal their respective time spent share. Time spent share data based on eMarketer 7/13 (adjusted to exclude outdoors / classified media spend). Arrows denote Y/Y shift in percent share.

## 移动应用营收占移动收入的68%,远高于广告

#### Global Mobile App + Advertising Revenue, 2008 - 2013



@KPCB

Source: Global Mobile App revenue per Strategy Analytics; comprises virtual goods, in-app advertising, subscription, & download revenue. Global Mobile Advertising revenue per PWC; comprises browser, search & classified advertising revenue.

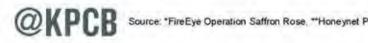
# 网络安全威胁增强





## 威胁网络安全的活跃组织超过300个,较2011年增4倍, 95%的网站有安全漏洞,移动平台增长,网络攻击也将相应增长

- 1) # of Active Threat Groups Rising Rapidly = 300 (+4x since 2011) per Mandiant tracking
- 2) Increased Nation-State Activities\*
- 3) Vulnerable Systems Placed on Internet Compromised in <15 Minutes\*\*</p>
- 4) +95% of Networks Compromised in Some Way
- 5) As Mobile Platforms Grow, Directed Attacks Will Rise





# 行业状态更新-科技股/教育/医疗





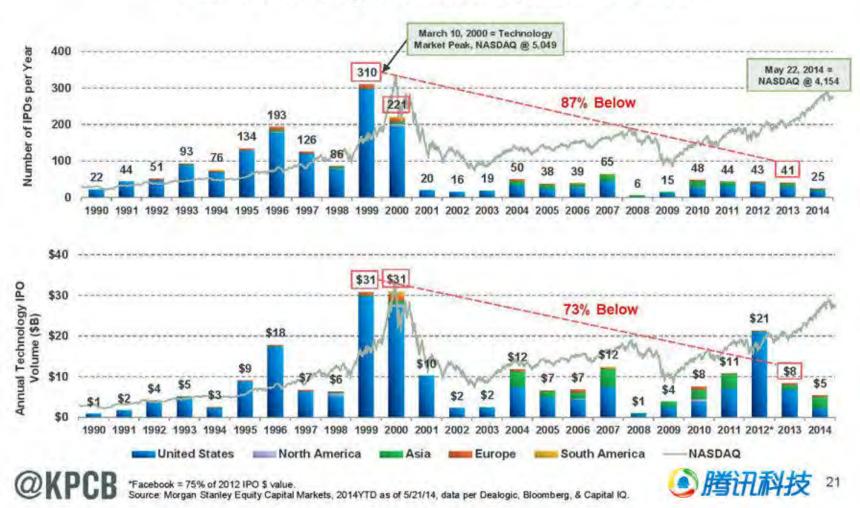
# 科技公司被高估? 部分成立 我们来看看其中的模式





#### 2013年科技公司IPO比1999年少73%, 纳斯达克指数比1999年低18%

#### Global Technology IPO Issuance, 1990 - 2014YTD



#### 2013年风投数额比2000年历史峰值低77%

USA Technology Venture Capital Financing, 1989 – 2013



OKPCB Source: Thomson ONE. Funding per Finan

Source: Thomson ONE. Funding per Financing (SMM) calculated as total venture financing per year divided by number of deals.

## 科技公司占标普500市值的19%,低于2000年的35%



**逐腾讯科技** 

Source: Morgan Stanley, Bloomberg, CapIQ, 2014YTD as of 5/21/14.

## 教育行业可能来到了拐点





## 美国教育费用昂贵,收效却不尽人意

Education is Important - Getting education right is crucial for future success

#### Education is Expensive

- Secondary School Costs USA ranks 4<sup>th</sup> globally in expenditure per student among 34 OECD countries\*
- Higher Education Costs 71% of 4-year college grads = \$30K average student loan debt. All in, this \$1T+ exceeds credit card & auto loan debt

#### Education Results Often Subpar

- Public Schools Rank 27<sup>th</sup> globally in math / 20<sup>th</sup> in science / 17<sup>th</sup> in reading
- College Job Prep 1/3 of four-year college graduates feel their education did not prepare them well for employment



\*USA ranks behind Luxembourg / Switzerland / Norway. Source: OECD Programme for International Student Assessment, 2011 & 2012. The Institute for College Access & Success, 2014. Consumer Financial Protection Bureau. "Voice of the Graduate," McKinsey / Chegg.

#### 教育行业前景乐观:人们重视教育,个性化教育蓬勃发展, 受教育的渠道在增加,教育创业公司成本在下降

- People Care About Education 8 in 10 Americans say education issue is extremely / very important to them
- Personalized Education Ramping People learn in different ways and Internet offers many options – on own terms and at low cost – to many, with real-time feedback
- Distribution Expanding & Education Start Up Costs Declining Direct to consumer / teacher allows education products to receive rapid mass adoption productization / distribution costs falling



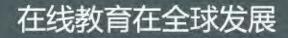


## 美国高中毕业率增加,更多人在接受简单有趣的外语教育,师生与 家长用短信频繁沟通,在线教育渠道帮助人们获取更多教育机会

- Graduation Rates Rising 81% of high school freshman graduated in 2012, up from 74% five years ago
- Language Learning Easier / Fun 25MM+ people (+14x Y/Y) use Duolingo app to learn new language
- Communication Easier 12MM+ teachers / students / parents (+15x Y/Y) use Remind101 to send 500MM+ messages
- Behavior Feedback Easier 35MM+ teachers / students / parents using ClassDojo to help improve student behavior through real-time feedback
- Online Courses Can Help Learning Process (for Teachers + Students)
  - 430MM+ views (+69% Y/Y) on Khan Academy YouTube channel, 10MM MAUs
  - 65MM+ courses (+59% Y/Y) from iTunes U Open University downloaded
  - 7MM+ students (+ >2x Y/Y) enrolled in Coursera courses

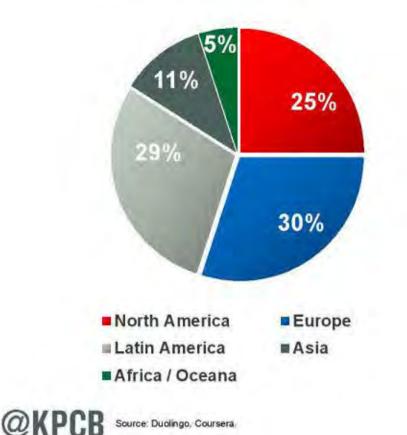




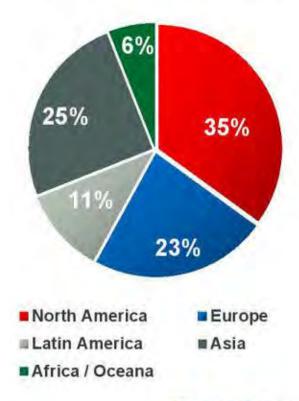


#### Duolingo (25MM Users)

Traffic Distribution, 4/14



Coursera (7MM Users) Student Distribution, 3/14





Source: Duolingo, Coursera

## 医疗健康业或面临拐点





#### 美国医疗费用占GDP的17%,其中27%的费用被浪费,雇员的医疗负担很重, 个人医疗费用增长迅速,大部分疾病由不健康的生活方式引起

- Costs Up to 17% of GDP @ \$2.8T in 2012, +2x as percent of GDP in 35 years
- Waste = 27% of Spend \$765B of healthcare spend estimated from excess costs: \$210B = unnecessary services; \$190B = excess administrative; \$55B = missed prevention opportunities; \$310B = inefficient delivery of care / fraud / inflated prices (2009)
- Employers Carry Big Burden \$620B spend by employers for 150MM Americans (2014E) costs up 28% vs. 5 years ago 67% CFOs indicate healthcare costs = leading economic concern
- Individual Costs Rising >25% of family income likely to go to healthcare spending in 2015E vs. 18% in 2005...top 5% healthcare consumers (most with multiple chronic illnesses) spent 50% of healthcare dollars (2009) >50% of personal bankruptcies driven by healthcare costs
- Chronic Conditions = +75% of Spend Most costly = cancer / diabetes / heart disease / hypertension / stroke 1 in 2 Americans has at least 1 chronic condition, 1 in 4 has 2+ 32% of Americans obese in 2008, up from 15% in 1990
- Behavior = Root Cause of Many Health Problems Health risk behaviors cause chronic diseases. 52% of adults did not meet recommendations of physical activity (2011) 50% of those with chronic conditions not complaint with taking medicine to manage disease = \$100B on avoidable hospitalizations (2010)



Source: Beth Seidenberg, KPCB General Partner, Lynne Chou, KPCB Partner, Sources: Healthcare costs per Center for Medicaid and Medicare Services (CMS). Healthcare waste data per Institute of Medicine. Employers' healthcare costs per CMS, Kaiser Family Foundation, BAML CFO Outlook Report, Towers Watson. Individual healthcare costs per ChartPack, Leerink & Kaiser, Chronic conditions data per CMS, The New England Journal of Medicine. Behavior data per Centers for Disease Control & New England Journal of Medicine.

#### 数字技术将改变落后的医疗系统,政府正在推进医疗领域的技术革新, 大部分人希望用网络寻找好的医生和医院,医疗行业消费化不可避免

- Digital Technology Enables Change Healthcare system has relied on antiquated systems
- Government Enabled Change Pushes Technology
  - HITECH Act \$35B administered by Office of the National Coordinator for Electronic Health Records (EHR) + health information technology in 2013 penalties exist for noncompliance
  - Affordable Care Act Coverage expansion in works
- Consumerization of Healthcare Majority (52%) of consumers want to access tools / websites rankings for quality / satisfaction / patients reviews of doctors + hospitals

## 医疗行业正在数字化,人们在追求医疗服务的质量, 病人使用互联网技术参与疾病管理收效显著

#### Digitization of Healthcare Happening

- Providers Using Fully Functioning EHR 84% of Hospitals / Academic / Institutional practices 51% (& rising) of office-based practices
- Consumers Happy to Communicate via Email 62% for healthcare concerns
- Digital Health Venture Investments Rising +39% Y/Y to \$1.9B (2013, USA)

#### Quality Over Quantity Incentives Being Implemented

- Payers Incentivized to Engage Patients / Improve Care / Outcomes / Reduce Costs
- Providers Shifting to Value-Based from Fee-for-Service Payments
- Employers Lowering Costs by Offering Services to Improve Engagement / Choices / Care – 46% of employers will enact participatory / outcomes based incentives (like weight loss / cholesterol levels) By 2015, 60% will offer price transparency tools from health plans

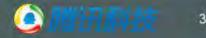
#### Patient Engagement Rising & Yielding Results

- Redbrick Health employer engagement platform = 4:1 ROI savings per participant
- Teladoc employer focused telemedicine platform = \$798 savings per consultation vs. office visit & ER over 30 days
- Mango Health adherence app = 84% Statin adherence vs. 52% market average
- WellDoc chronic disease platform = diabetes app prescription with reimbursement



# 重塑 (Re-imagining) 正在继续发生





# 重塑 消息与通信应用





Yammer CEO在Twitter上说, WhatsApp和Secret 代表了电话簿,优于好友图谱,这就是未来。



# Both WhatsApp and Secret represent the ascendency of the phone book over the friend graph. It's back to the future.

\* Reply 13 Retweet \* Favorite \*\*\* More

3:17 PM - 19 Feb 2014





## 全球OTT消息服务在5年内积累超过10亿用户

#### Global Messaging Ecosystem – Select Players, 2013



WhatsApp (USA), 4+ Years

MAUs = 400MM, +100% Y/Y Messages / Day = 50B, +178% Y/Y



Tencent WeChat (China), 3+ Years

MAUs = 355MM, +125% Y/Y



Line (Japan), 2+ Years

MAUs = 280MM Messages / Day = 10B Revenue = \$388MM, +5x Y/Y (Q4:13)



KakaoTalk (Korea), 3+ Years

Messages / Day = 5.2B, +24% Y/Y Revenue = \$203MM, +4xY/Y



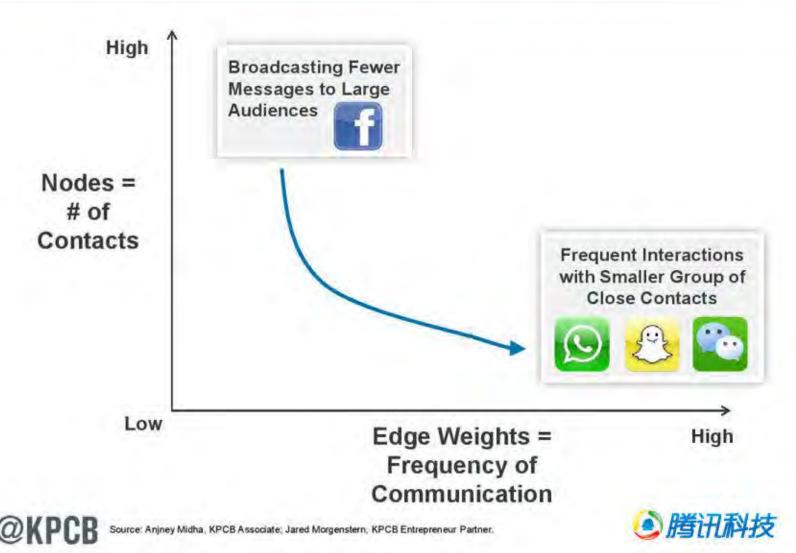


Viber (Israel), 3+ Years

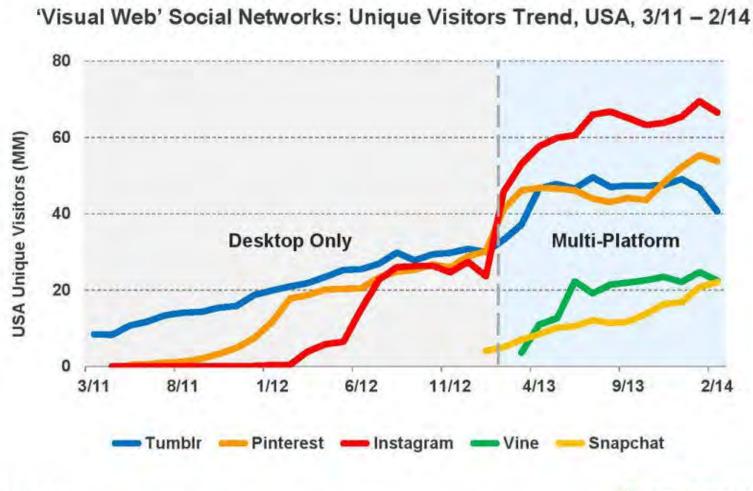
MAUs = 100MM



## 消息应用的进化:高频率沟通优于多联络人沟通



## 通讯的进化:图片和视频共享猛增











# 重塑 APP

## App进化路线:功能细分, 从多功能网页应用到多功能移动应用到单功能移动应用

#### First, multi-purpose web apps



#### then, multi-purpose mobile apps



#### now, single-purpose = 'there's an app for that '







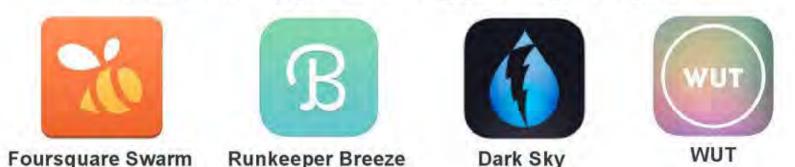




Source: Megan Quinn, KPCB Partner.

## 隐形应用崛起,有些应用你平时不用打开,它们与传感器、 地点和使用历史互动,只在必要时通知你打开

#### now some apps are disappearing altogether



We're entering the age of apps as service layers.

These are apps you have on your phone but only open when you know they explicitly have something to say to you.

They aren't for 'idle browsing,' they're purpose-built & informed by contextual signals like hardware sensors, location, history of use & predictive computation.

- Matthew Panzarino, TechCrunch, 5/15/14











## Facebook、Pinterest和Twitter是社交渠道领导者, 它们的传播速度非常快

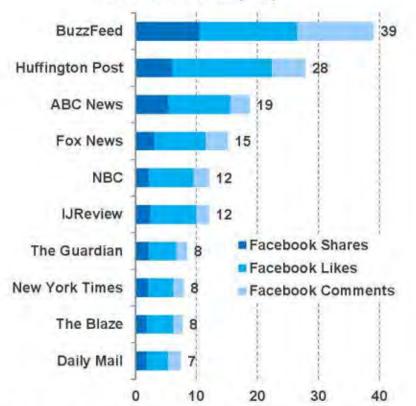
- Social Media Traffic Referral Leaders = Facebook / Pinterest / Twitter with estimated 21%, 7%, 1% of global referrals, per Shareaholic, 3/14.
- Social Distribution Happens Quickly = Average article reaches half total social referrals in 6.5 hours on Twitter, 9 hours on Facebook, per SimpleReach, 5/14.

## BuzzFeed、Huffinton Post和ABC是社会化新闻内容领导者

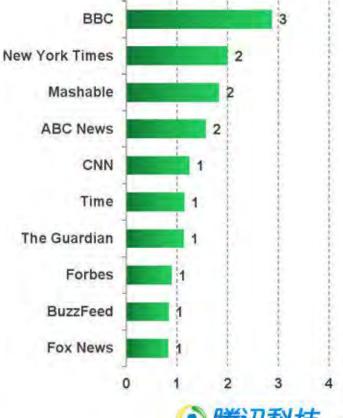
Top Facebook News Publishers, 4/14

Top Twitter News Publishers, 4/14

# of Shares (MM)



#### # of Interactions (MM)



Source: NewsWhip - Spike, 4/14.

## 重塑:内容+内容传播=BuzzFeed/测试/答疑/突发新闻/视频/移动

#### BuzzFeed

#### 130MM+ Unique Visitors +3x Y/Y (5/14) >50% Mobile, >75% Social, >50% age 18-34



15 Things You Didn't Know Your iPhone Could Do 17MM+ views



What State Do You Actually Belong In? 40MM+ views



Source: Buzzfeed, 5/14

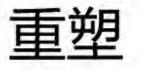
Why I Bought A House In Detroit For \$500 1.5MM+ views



Photoshopping Real Women Into Cover Models 13MM+ video views







# 日常活动





# Tinder重塑人们的约会方式

### ~70K Bars / Nightclubs, USA



### Tinder

#### 800MM Swipes per day, +21x Y/Y 11MM Matches per day, +21x Y/Y





OKPCB Source: IBIS World, 5/14. Company data.

## 重塑本地服务与商誉提升了效率

airbnb

6MM Guest Stays 550K Listings, +83% Y/Y

11x Ratio Guest Stays / Listings

Alibaba 天道Thaicon

231MM Buyers, +44% Y/Y 8MM Sellers 29x Ratio \$31K / Year Avg to Alibaba's China Retail Marketplace Sellers

grubHub

39MM Meal Orders, +74% Y/Y 29K Restaurants, +3X Y/Y 1,367x Ratio \$35K / Year Avg to Restaurants



All data for 2013. Sources: Company data, SEC filings. Airbnb Listings is total number at year-end. In 2013, Alibaba's China retail marketplaces comprised of Taobao, Tmall, and Juhuasuan, which generated Gross Merchandise Volume of \$248B from 8MM active sellers. GrubHub's average annual \$ to restaurants calculated using 2013 Gross Food Sales totaling \$1B+ across 29K restaurants on platform.

## 重塑超市购物,47%在线购物已为免费送货, 5年前这一比例仅为35%,当日送达会成为颠覆性服务

>47% of Online Transactions Use 'Free-Shipping,' vs. 35% Five Years Ago Same-Day Local Delivery = Next Big Thing



@KPCB

Instacart



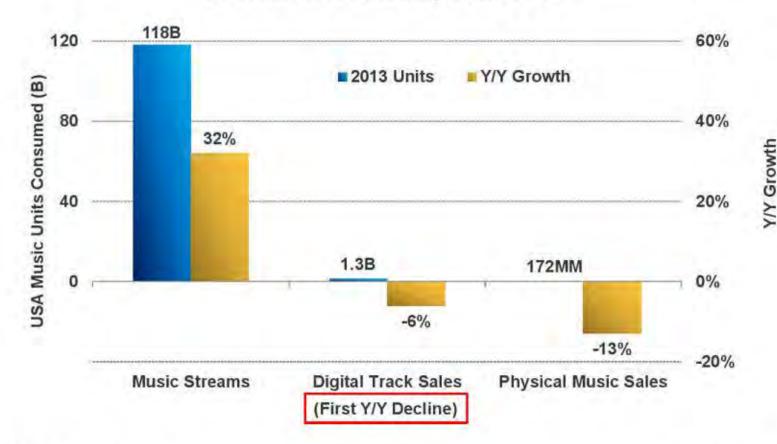
#### Amazon Fresh



Source: Comscore. Images: Indiana Public Media, Film North Florida; Kearny Hub, Wall Street Journal.

## 重塑媒体(音乐)消费,流媒体去年增长32%, 数字音乐购买下降6%。

#### USA Music Consumption, 2013



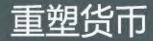
@KPCB

Source: Nielsen & Billboard 2013 US Music Report. 1/14. Note that absolute consumption comparisons are apples-and-oranges as tracks / physical sales are 50 likely played multiple times but data is illustrative as growth rate is key indicator.











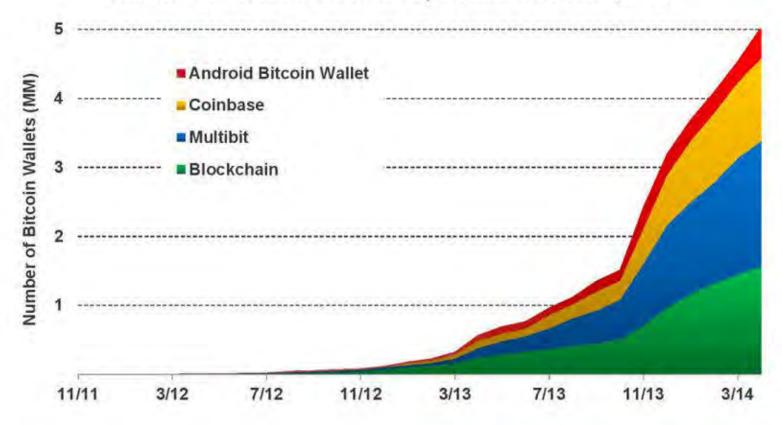




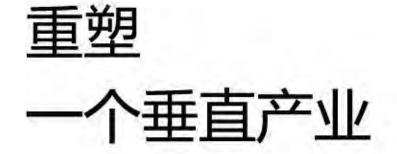


## 500万个比特币钱包这一事实证明了 消费者对互联网货币的极大兴趣

#### Number of Bitcoin Wallets by Wallet Provider, 4/14











## 互联网的三大核心=内容+社区+商务

1) 内容:

## 由消费者提供

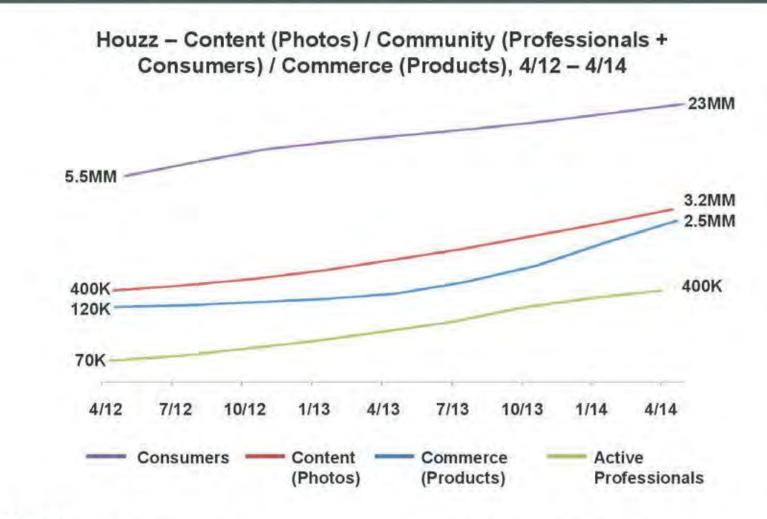
- 2) 社区:
  - 由用户创建的相关性和关联性,同时服务于用户
- 3) 商务:

# 商品购买



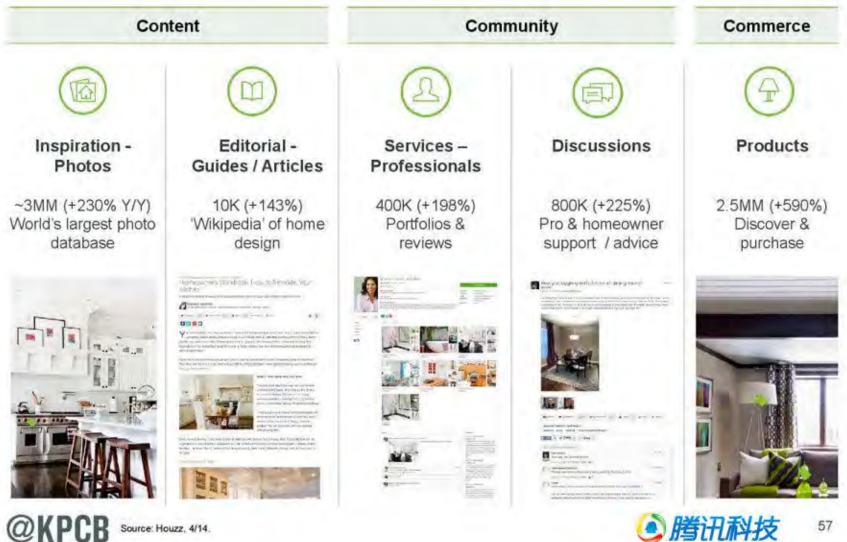


## 互联网的三大核心=内容+社区+商务





## Houzz=家庭装修与设计生态系统



# 最大的重塑= 移动设备+ 上传大量可查找、可共享数据的传感器





## 更多数据+更多透明=更多模式和更加复杂

透明:

即时共享/许多事物之间的通信可能让世界更美好/ 安全场所(但可能影响个人隐私)仍将是一个挑战。

模式:

挖掘日益增多的数据可能形成某些模式, 帮助解决一些基本/之前尚未解决的问题, 但可能带来个人权利相关的新挑战。







- 1) 可上传/可查找/可共享/实时数据增长迅速
- 2) 传感器的使用迅速普及
- 3) 处理成本迅速下滑, 云计算崛起
- 4) 美观的新用户界面有助于让数据更易用/实用
- 5) 数据挖掘/分析工具帮助寻找模式
- 6) 数据的早期出现/基于模式问题的解决





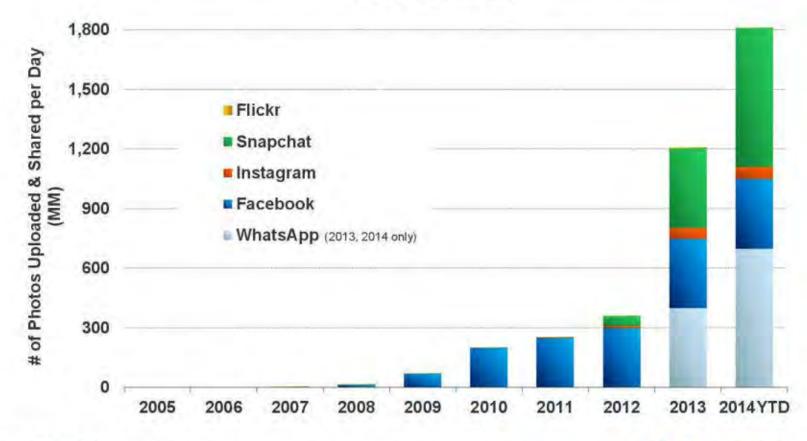
# 可上传/可查找/可共享/实时数据增长迅速





# 图片=每天上传和共享18亿张

Daily Number of Photos Uploaded & Shared on Select Platforms, 2005 – 2014YTD





Source: KPCB estimates based on publicly disclosed company data. 2014 YTD data per latest as of 5/14.



# 可上传/可查找/可共享-

#### Pinterest

- 750MM+ cumulative Boards (4/14)
- 30B+ cumulative Pins
- +50% Pin growth vs. 10/13



#### **MyFitnessPal**

- 65MM registered users (+50% Y/Y, 5/14)
- 100MM+ pounds lost by users since inception





Source: Company data

#### IMGUR

Mojo更新

- 130MM MAUs (3/14)
- · 3B page views per month
- 1.5MM images uploaded & 1.3B images viewed per day



### Eventbrite

- \$1B gross ticket sales in 2013 (+60% Y/Y)
- 58MM tickets sold (+61% Y/Y)
- 1MM events in 187 countries



#### Fitbit

 47B → 2.4T steps (2011 → 2013)... Distance = Earth to Saturn



### Github

- 13MM repositories in 2013 (+100% Y/Y)
- 10K users added per weekday



# 可上传/可共享/不可查找--

### WhatsApp

- 50B messages sent per day (2/14)
- 700MM photos per day (4/14)
- 100MM videos per day



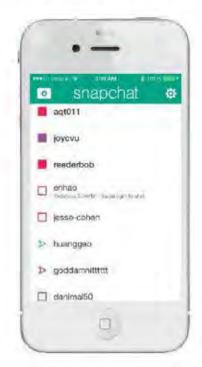
#### Snapchat

- 700MM+ snaps shared per day (4/14)
- 500MM stories viewed per day

#### Tinder

·Mojo更新

- 800MM swipes per day (+21x Y/Y, 5/14)
- 11MM matches per day (+21x Y/Y)







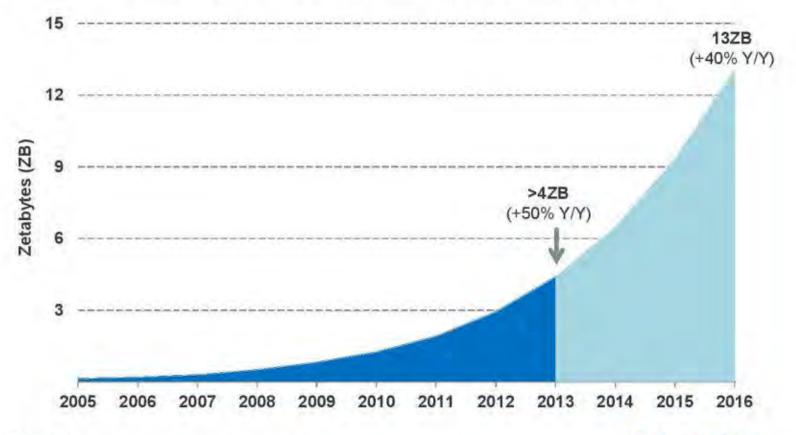
64



"Note: "Not findable" = uploaded content not searchable / publicly available Source: Company data.

## 数字通用信息增长强劲:2/3数字通用内容由消费者创建和消费, 主要为视频、社交媒体和图片共享

2/3rd's of Digital Universe Content = Consumed / Created by Consumers Video Watching, Social Media Usage, Image Sharing





Note: 1 petabyte = 1MM gigabytes, 1 zetabyte = 1MM petabytes, Source: IDC Digital Universe, data as of 5/14.

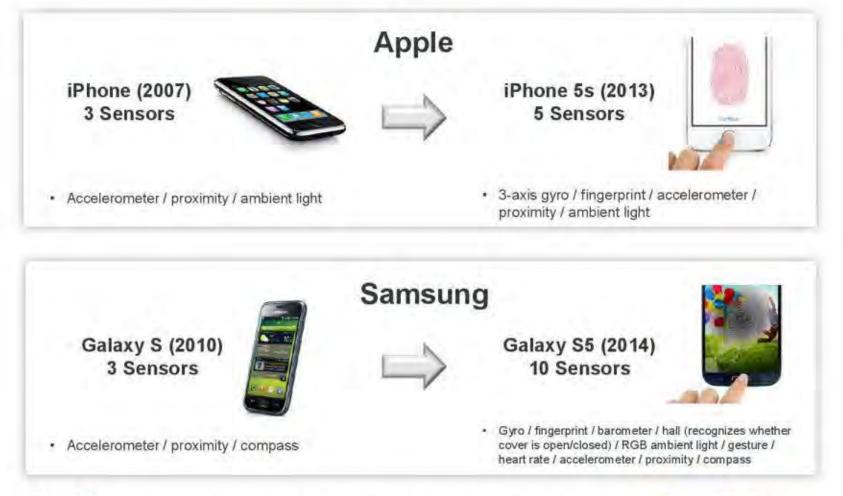


# 传感器的使用迅速普及





# 传感器应用越来越广泛, 增长迅速



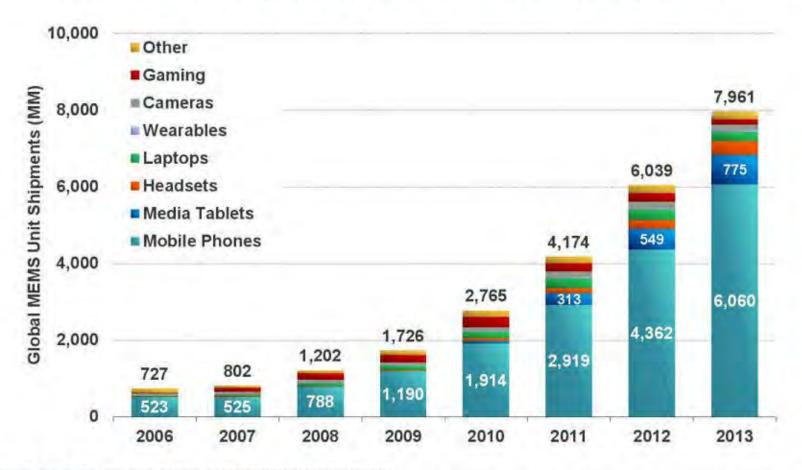


Note: Sensor count for illustrative purposes only – Apple & Samsung sensor count methodology may differ. Source: Publicly available data from Apple & Samsung, and third party reviews.



### 去年全球消费电子设备使用的MEMS传感器出货量达到80亿部, 同比增长32%

Global MEMS Unit Shipments by Consumer Electronics Device, 2006 - 2013



Source: IHS Consumer & Mobile MEMS Market Tracker, April 2014.

MEMS = microelectromechanical systems. Includes sensors + actuators (a type of motor that is responsible for moving or controlling a mechanism or system, such as an autofocus system in a camera).

# 处理成本迅速下滑, 云计算同时兴起

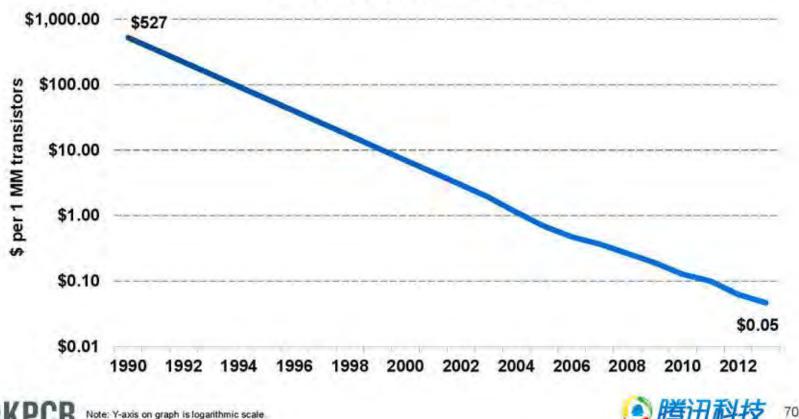




## 计算成本下滑:1990年至2013年间平均年每年下滑33%

Decreasing cost / performance curve enables computational power @ core of digital infrastructure

**Global Compute Cost Trends** 

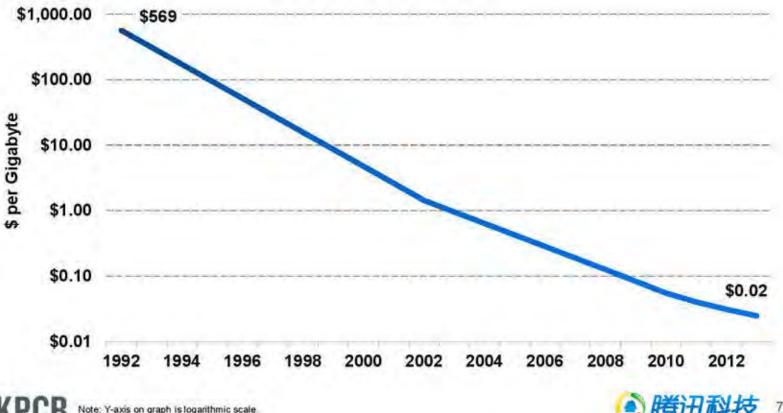


Note: Y-axis on graph is logarithmic scale. Source: John Hagel, Deloitte, 5/14.

## 存储成本下滑:1990年至2013年间平均年每年下滑38%

Decreasing cost / performance of digital storage enables creation of more / richer digital information

**Global Storage Cost Trends** 



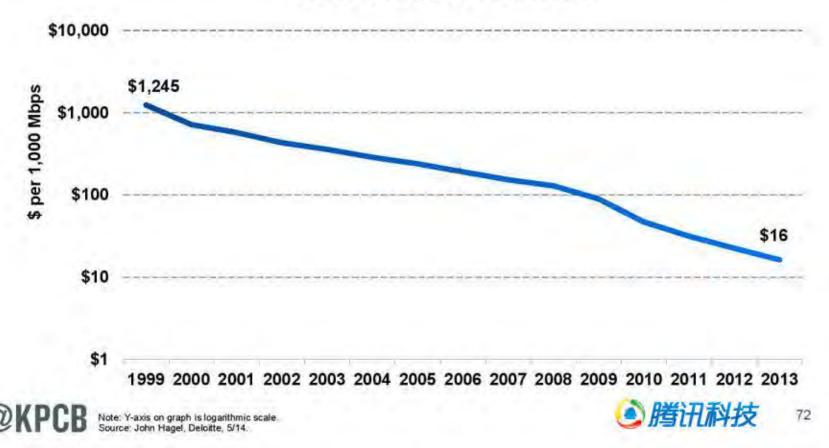
Note: Y-axis on graph is logarithmic scale. Source: John Hagel, Deloitte, 5/14.



## 带宽成本下滑:1990年至2013年间平均年每年下滑27%

#### Declining cost / performance of bandwidth enables faster collection & transfer of data to facilitate richer connections / interactions

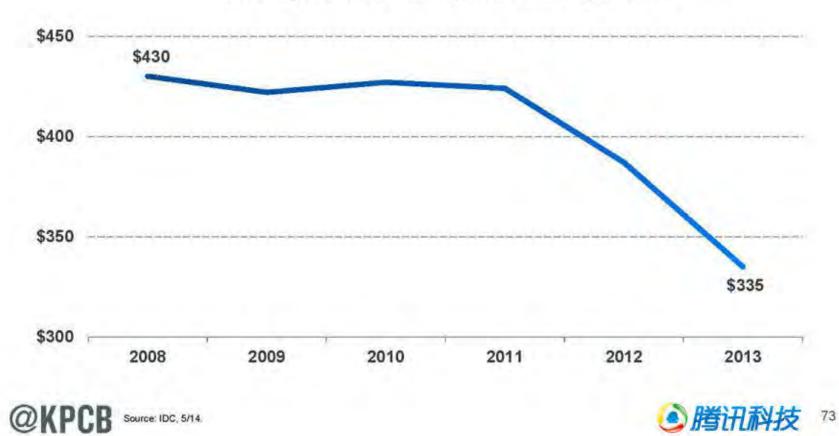
**Global Bandwidth Cost Trends** 



## 智能手机成本下滑:2008年至2013年间平均年每年下滑5%

Smartphone prices continue to decline, increasing availability to masses

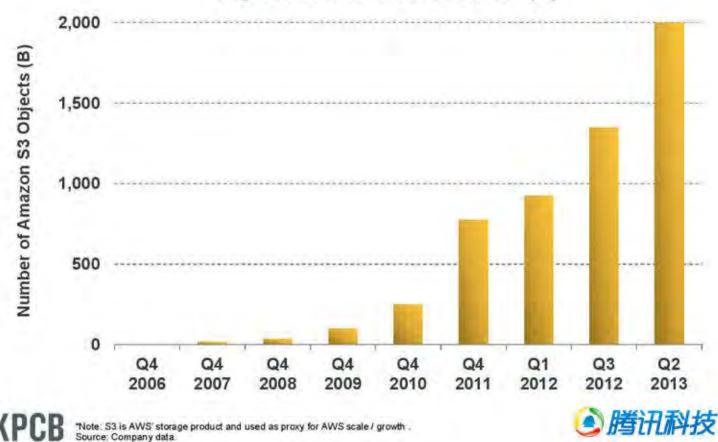
Average Global Smartphone Pricing Trends



# 云计算崛起:亚马逊处于领先地位

#### Amazon Web Services (AWS) Leading Cloud Charge

Objects Stored in Amazon S3\* (B)



# 美观的新用户界面, 加上产生数据的消费者, 有助于让数据更易用/实用





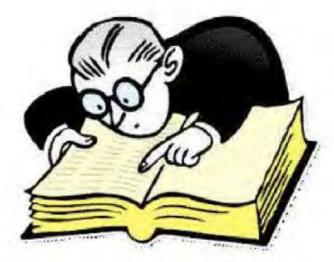
# 挑战 非云业务模式 创业公司:通过重酬融资,通常不会遇到同样的挑战 新公司:利用新型设备获取的新数据, 以最新的方式做旧的事情,发展迅速





## 重塑用户界面—本地搜索业务

### **Yellow Pages**



## Yelp

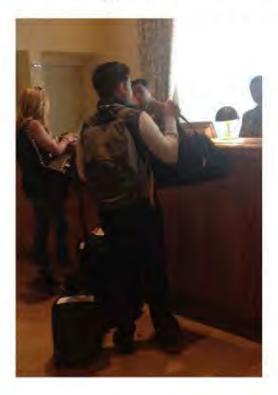






## 重塑用户界面—寻找住处

## **Booking Hotel Room**





## Airbnb

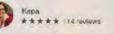


CTE \* 3:19 PM \* 100%



Potrero Hill Garden Cabana

House - Entire home/act 1 becroom, 1 bathroom, 1 bed



Cont



## 重塑用户界面—组织物流/人员流动

## Hailing Cab



## Uber







## 重塑用户界面—通过众筹管理出行

## **Driving in Traffic**



### Waze





**CKPCB** Images: THEMETAQ, streettrafficapp.

## 重塑用户界面—查找音乐

## Satellite Radio





Spotify





## 重塑用户界面—用语音查找视频

## **TV Remote Control**

## Amazon Fire TV

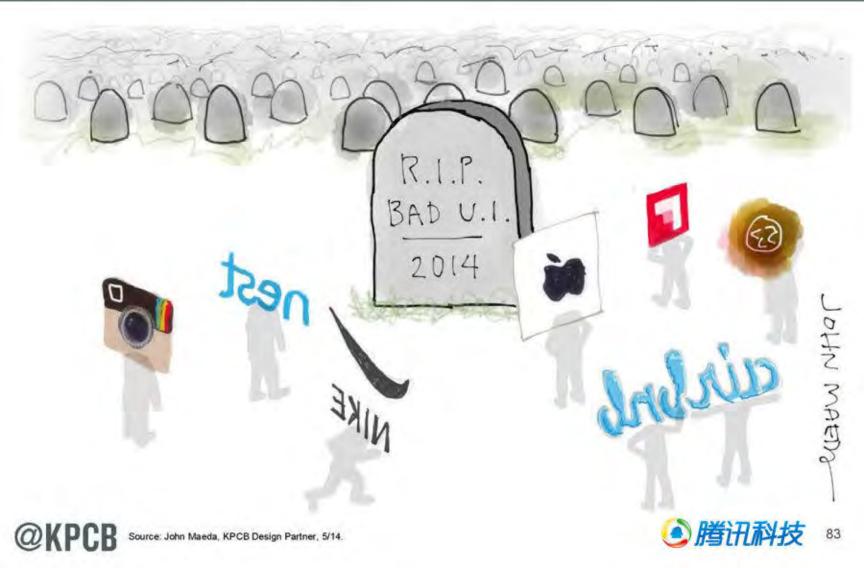






**OKPCB** Images: idownloadblog, distrade.com.

## R.I.P. 摒弃糟糕的用户界面



# 数据挖掘/分析工具帮助寻找模式





# 34%的数字通用数据具有价值,但仅7%被标注整理,1%被分析

### Significant Portion (34%) of IDC Digital Universe Data = Useful -

Derived from embedded systems / data processing / social media / photos / sounds

### Small Portion (7%) Data = Tagged -

Fastest growing segment of valuable data comes from Internet of Things (IoT) – billions of sensors / intelligence systems capturing / sending data, increasingly in real-time

### Immaterial Portion (1%) Data = Analyzed -

Newer tech companies are making it easier to understand / make use of increasing amount of data





# 数据挖掘/分析工具/组织数据正在迎合消费者需求,且增长迅速

### Jawbone

#### Health Wearable

- 100MM nights of sleep logged = 27K years
- 50B activity data points crunched per week
- 1MM personalized insights per week



#### AppDynamics App Performance Monitoring

- 500B Web / mobile transactions instrumented / tracked
- 1.4MM hours saved waiting on apps
- 1,200 enterprise customers



#### Dropcam Home Monitoring

- ~100B video frames processed per hour
- +300% Y/Y revenue growth, 2013



### Netflix

#### Media Personalization / Discovery

- Terabytes of user data analyzed to generate personalized media recommendations
- 44MM subscribers (+25% Y/Y, 2013)



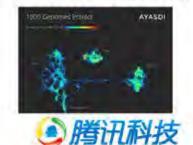
#### SnapLogic Cloud Integration / Data Transmission

- 500MM+ machine / device scans integrated per day
- 160+ data / cloud connectors on SnapStore
- +128% Y/Y subscription revenue, 2013



#### Ayasdi Automated Insight Discovery

- Auto extracts business insights from datasets with 1MM+ features
- 120K hours saved of manual data analysis in 2013
- + +451% Y/Y bookings growth, 2013



86

Source: Company data

# 数据的早期出现/基于模式问题的解决





# 大数据:用来解决大问题

## Google Voice Search

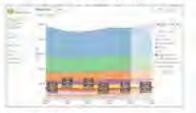
#### Voice Recognition

- · Uses neural nets to reduce speech recognition errors by 25%
- Used by 1/6 of Google's U.S. mobile users



#### OpenGov Government Financials

- Compiles data of 37K US governments
- · Real-time queries across millions of rows of transactions
- Adding new paying government customer every 4 days (& accelerating)



#### Nest Energy

- · 2B+ Kilowatt hours (kWh) of energy saved since 2011\*
- Reduces heating / cooling costs up to 20% ... an estimated annual savings of \$173 per thermostat



#### Automatic Connected Car

- · Collects / analyzes hundreds of millions of data points daily
- · Provides personalized feedback to drivers, saving up to 30% in fuel costs
- Discovered driving over 70 MPH saves <5% time, but wastes \$550 gas / year



#### Zephyr Health Healthcare & Life Sciences

- · Hundreds of millions healthcare data points ingested / organized (+192% Q/Q, Q3:13)
- 3,500+ independent life sciences sources used daily (+159% Q/Q & accelerating), spanning all major disease areas
- +111% Y/Y contracted revenue growth, 2013



#### Wealthfront Investment Management

- +4.6% return vs. average mutual fund\*\*
- 200K risk guestionnaires completed
- 650K free trades, saving clients \$5MM+
- 10K+ clients
- \$800MM+AUM, +700% since 1/13



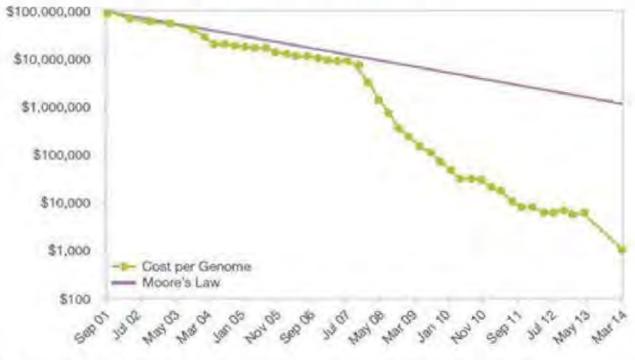


'Based on Nest comparison of actual schedules and set points to a hypothetical (holding constant temperature). \*\*Includes fees + underperformance; client 88 savings of \$5MM+ assumes \$8 per trade retail. Source: Company data

# 基因组测序的成本降至1000美元,所需时间降至24小时

Accurate diagnosis is foundation for choosing right treatments for patients & clinical lab tests provide critical information health care providers use in ~70% of decisions\*

Genetic & genomic testing can be at heart of a new paradigm of [precision] medicine that is evidence-based & rooted in quantitative science\*\*





\*UK Department of Health. \*\* American Clinical Laboratory Association / BattelleTechnology Partnership Practice. Image: Illumina. Note: Genome sequencing data per Eric Schaldt, \$1,000 cost is price of sequencing a genome at 30x coverage in the Mount Sinai Genome Core, 5/14.

# 最大的重塑=

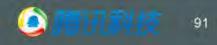
## 移动设备+上传大量可查找、可共享数据的传感器





# 屏幕+视频增长=才刚刚开始





# 电视的未来——Netflix CEO里德·哈斯廷斯(Reed Hastings)

- 1) 屏幕多样化
- 2) 传统的遥控正在消失
- 3) 应用(App)正在取代频道
- 4) 互联网电视取代传统电视



Source: Netflix Long Term View.









## 今天的屏幕:你的屏幕、我的屏幕,我们都有屏幕

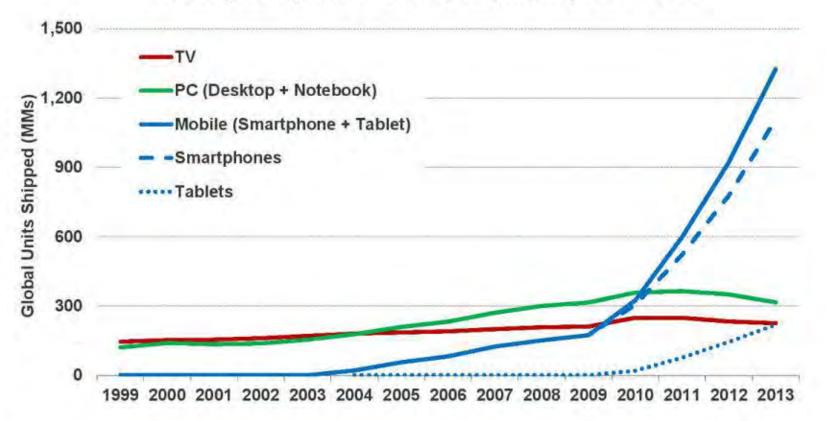






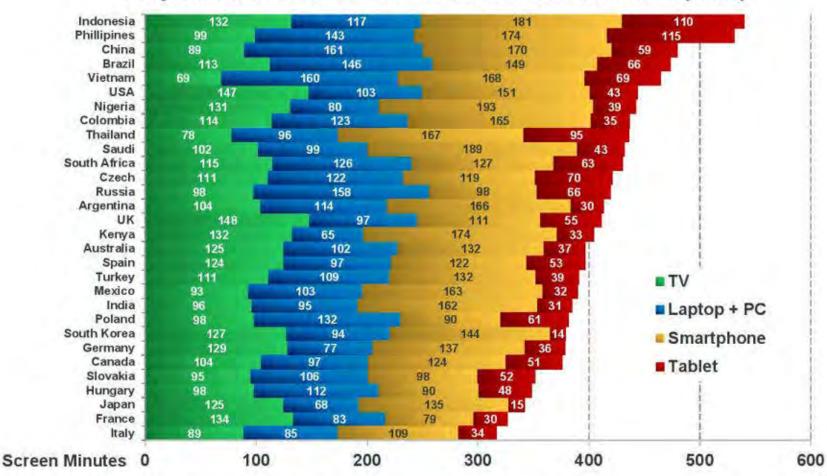
# 自诞生的10年以来,移动设备(智能手机和平板电脑)出货量达到了电视和PC的4倍至5倍。

Global TV vs. PC (Desktop + Notebook) vs. Mobile (Smartphone + Tablet) Shipments, 1999 – 2013





## 智能手机: 被浏览次数最多的屏幕



#### Daily Distribution of Screen Minutes Across Countries (Mins)

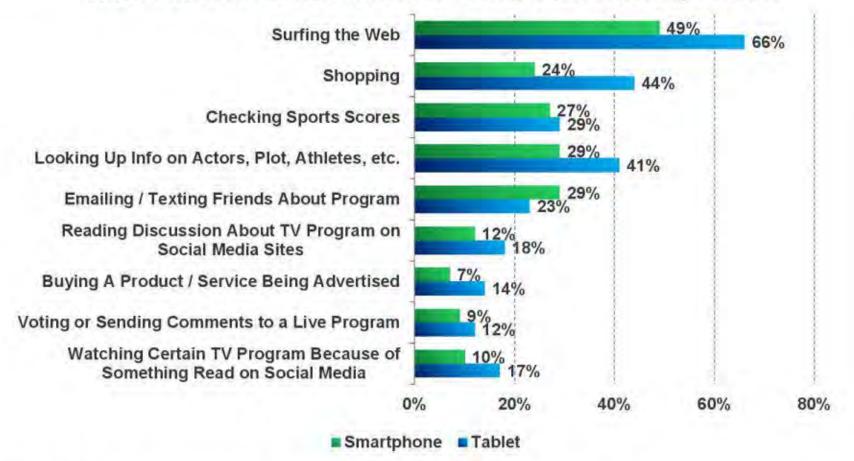
# @KPCB

#### Source: Milward Brown AdReaction, 2014.

Note: Survey asked respondents "Roughly how long did you spend yesterday watching television (not online) / using the internet on a laptop or PC / on a smartphone or tablet?" Survey respondents were age 16-44 across 30 countries who owned or had access to a TV and a smartphone and/or tablet. The population of the 30 countries surveyed in the study collectively represent ~70% of the world population.

# 消费者在看电视的同时还使用移动设备,主要是浏览网页和购物

#### What Connected Device Owners are Doing While Watching TV, USA



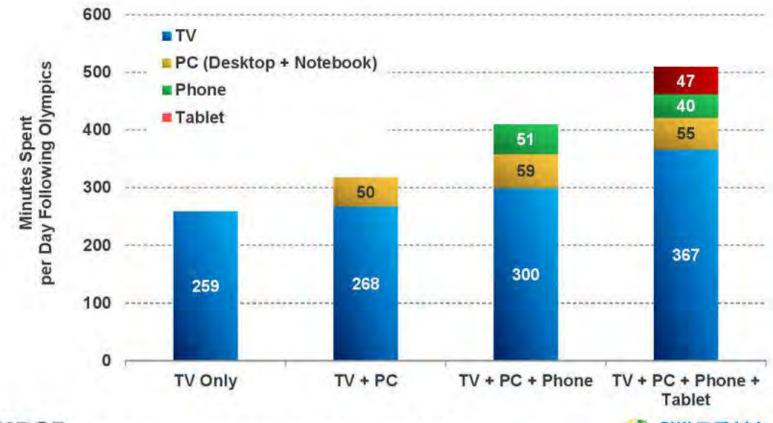


Source: Nielsen Connected Devices Report, Q3:13.

Note: Data gathered from USA general population sample 13+ years old with 9,448 respondents who own a Tablet, e-Reader, Smartphone, or Streaming 97 Capable Device. Study conducted in 9/13.

## 屏幕数量的增加推动媒体互动时间的增长

2012年奥运会期间,"四屏"用户每天的关注时间为单一电视用户的2倍



@KPCB

Source: ComScore Single Source Multi-Platform Study, London Olympics Lab for NBC, 7/12. Note: Data based on total day time spent, N = 720 panelists that use multiple devices and are Olympic fans.



# 多屏幕:消费者以更少的时间获得更多的内容?

VS.

## 5 Hours of TV Screen Media

4 Hours of Content + 1 Hour of Commercials 5 Hours of Multiple Screen Media

Smartphone (35%) + TV (27%) + PC (26%) + Tablet (12%)

>5 Hours of Content?

KPCB Sources: Millward Brown AdReaction, 2014. Nielsen TV Advertising Audiences Report, 5/14. Note: Average global daily screen media time = 417 minutes, of which 147 are on smartphones, 113 on TV, 108 on PC (desktop + notebook), 50 on Tablets. In 2013, an average of 14 minutes of commercials were shown for each hour of Network TV Programming.

# 传统遥控器正在消失





## 重塑传统遥控器:遥控器变成了IP搜索引擎



# 智能机蚕食了功能机市场, 智能电视适配器和智能电视将改变互联网的屏幕



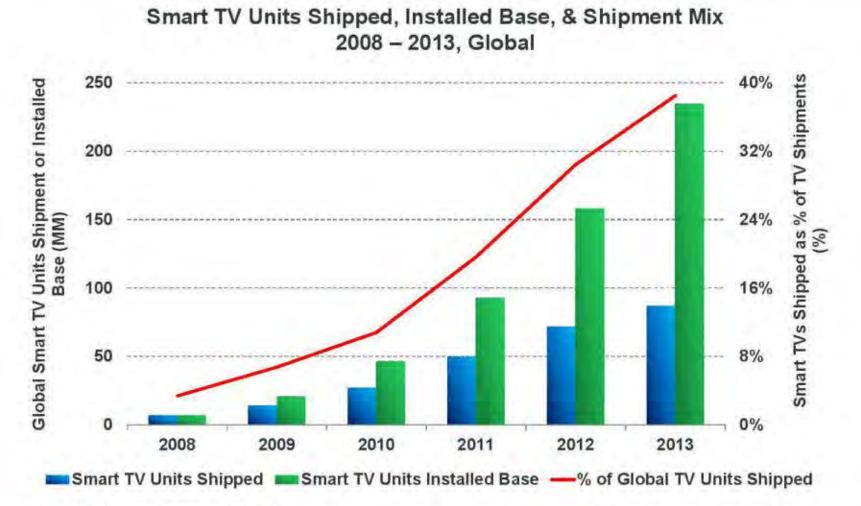


## 谷歌Chromecast、亚马逊Fire TV等智能电视适配器 带来千万级别的用户

	Company / Product	Launch Date	
New	Amazon Fire TV	4/14	
	Google Chromecast	7/13	
	Roku	5/08	
	Apple TV	1/07	
Old	Nintendo Wii Nintendo Wii U	12/06	
	Sony PlayStation 3 Sony PlayStation 4	11/06	
	Microsoft Xbox 360 Microsoft Xbox One	11/05	



## 2013年智能电视出货量增长39%,但使用率仍低于10%





#### Source: Generator Research, 2014.

104 Note: Smart TVs defined as internet-enabled television sets and exclude connected devices or adapters that stream content to television sets, such as game consoles or hybrid set-top boxes

# 应用正在取代电视频道





# 越来越多的电视频道在变成点播应用

### ESPN

 34MM (52%) ESPN digital users access ESPN just on smartphones / tablets
= 48% of time spent on ESPN digital properties, 4/14







- 234MM requests for TV programs on iPlayer in 2/14, +21% Y/Y
- 46% of requests from mobile / tablet vs. 35% Y/Y





### HBO

1,000+ hours of video content







**OKPCB** Sources: ESPN, BBC, HBO

## 互联网从分类目录向搜索与应用进化, 电视在从分类目录向应用和搜索进化

#### **TV Guide**

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#### YouTube - Search Bar Comcast - X1 Guide

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Images: YouTube, Comcast, mag+

@KPCB

# Youtbe上产生了大量的新频道, 40%用户在使用移动设备, 这一数字正在持续增长





### Youtube频道增长迅速,触及大量用户

Channel	Subscribers (MM)	Y/Y Growth (%)		
Music	85	166%		
Gaming	79	165% 164% 213% 133% 342%		
Sports	78			
News	35			
Popular	28			
Spotlight	22			
Movies	18	195%		
TV Shows	12	106%		
Education	10	-		



Source: YouTube. Note: Y/Y growth rates as of 5/14.

## Music



Demi Lovato - Let It Go (from "Frozen") [Official] by DemiLovatoVEVO ID 151,060,172 views

#### News



National Climate Assessment cites loomin... by Naws - Top Stories 3 viduos

#### Movies



Frazier (2013) Thereself the second states and the second second

#### Gaming



Minecraft: Diamonda Are Forever by Comderlagee Cli 7,436,601 years CC

#### Popular



Official Extended Trailer | GOTHAM | FOX... by FOX (2) 1,895,217 views

#### TV Shows



Modern Family

1 an identifiers

#### Sports



Top 10 Reign on Plays of the Playoffs: First Round by NBA III 114,323 views

#### Spotlight



Elon Musk: The Rocket Scientist Model for 'Iron... by TIME III 6,854 views

#### Education



3D Scanning at the Smithsonian by Smithsonian Ell (00,457 years (00)



# 消费者爱视频 -长视频和更多短视频





### 新媒体产生新的明星,Youtube热门视频有6-2600万订阅者, 前十名热门视频平均长度为7分钟

Video Game Commentator PewDiePie 26MM+ subscribers, +230% Y/Y



Comedy Duo Smosh 17MM+ subscribers, +81% Y/Y



Spanish Comedian HolaSoyGerman 17MM+ subscribers, +157% Y/Y



Comedian nigahiga 12MM+ subscribers, +50% Y/Y



Make-Up Artist Michelle Phan 6MM+ subscribers, +70% Y/Y



Style and Beauty Blogger Bethany Mota 6MM+ subscribers, +180% Y/Y





## 消费者爱看优秀的广告短片

#1 = Nike Football @ 49MM+ Views



#2 = Dove: Patches @ 20MM+ Views



#3 = Evian Spider Man @ 16MM+ Views



#4 = Castrol Footkhana @ 14MM+ Views



#5 = "Unsung Hero" (Thai Life) @ 12MM+ Views







### 谷歌TureView让用户能跳过广告,创造了观众和广告主的双赢, 彻底改变了行业

#### YouTube's TrueView Ads = 'Cost-per View' Video Marketing

AdWords Dynamically Places Video Ad Content on Google / YouTube Users Can Skip

- Ads = Great Content Transformation potential from commercials users want to skip to short-form content users choose to watch
- Advertisers Win Better results as only pay for users who are engaged & watch video improves direct click-through options with consumers
- Data As YouTube collects data on how users engage with ads, it continues to improve the user experience and advertiser ROI



Evian Baby & Me = Most Watched YouTube Ad Of 2013 = 87MM+ views





# 传统观众定时调台, 粉丝群观看的时间自己做主, 传统观众看完后换台, 而粉丝能分享、评论、传播和创造





# 消费者为社交视频/电视投票





### 新型视频:观众从旁观者-参与者到参与者和活跃的旁观者

#### Twitch

45MM MAUs (12/13) vs. 8MM Three Years Ago (7/11) 12B Minutes Watched / Month, +2x Y/Y 900K Broadcasters / Month, +3x Y/Y

Featured Games Games people are watching now



















Leacue of Legenda NO. INC. CAMPAGE

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Call of Duky Black O. ACCOUNTS AND

#### Twitch = Top Live Video Streaming Site by Volume, USA, 4/14

Rank	Site	Volume (%)			
1	Twitch	44%			
2	WWE	18%			
3	Ustream	11%			
4	MLB.com	7%			
5	ESPN	6%			





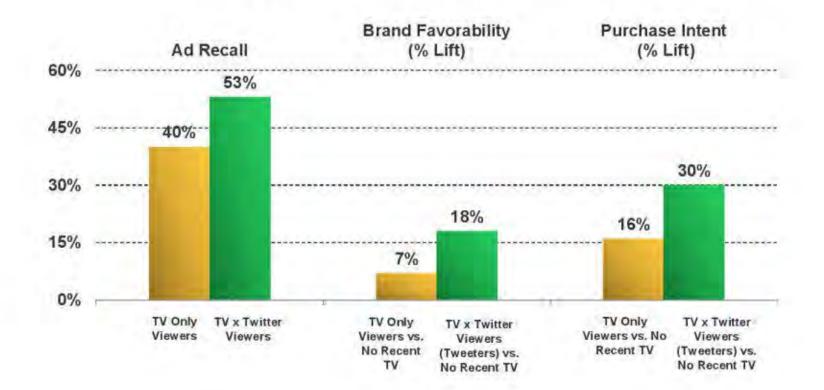
# 社交电视能让广告提升价值





## 电视+Twitter能增加广告印象

Impact of TV Ads on Viewers – TV with Twitter vs. TV without Twitter



Source: Twitter x TV Study, Millward Brown Digital, 12/13. Note: TV x Twitter users defined as people who used Twitter while watching TV. N = 7,500+ respondents who were part of a study to assess impact of TV ads among people who watched TV with and without Twitter.

# 消费者为个性化投票





# Netflix提供了个性化推荐

#### A Father of Two



#### **A Female Millennial**







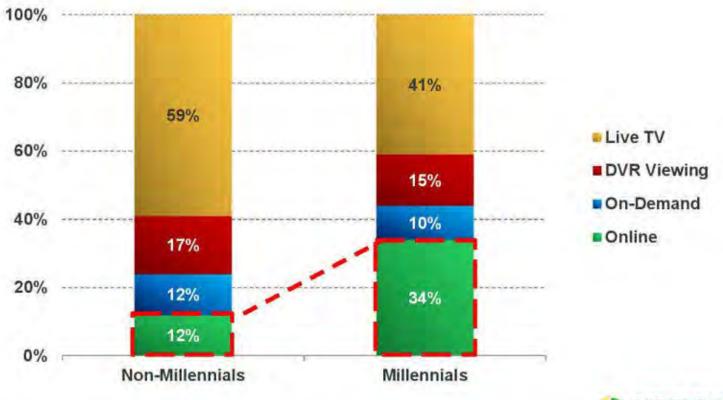
## 年轻消费者青睐视频点播





# Y世代(80后和90后)34%的电视节目是在线观看的

#### Distribution of Total TV Time Millennials vs. Non-Millennials, USA





@KPCB

Source: Verizon Digital Media Study, 3/14. Note: Study encompassed quantitative survey of 1,000 USA consumers (800 millennials age 16-34 and 200 non-millennials age 35-64). Data collected on 11/13.

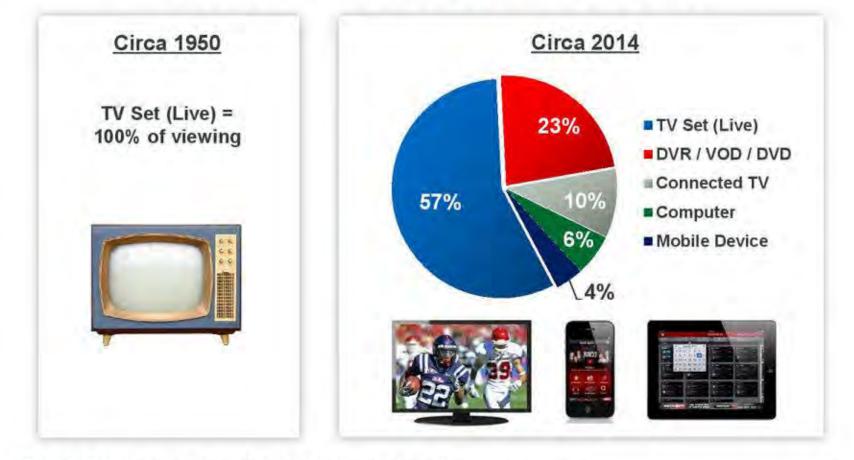
# 互联网电视取代传统电视: 电视黄金时代的早期





#### 用户越来越倾向于在他们想要的设备上和时段里观看电视

#### Device Share of TV Content, USA, 1/14

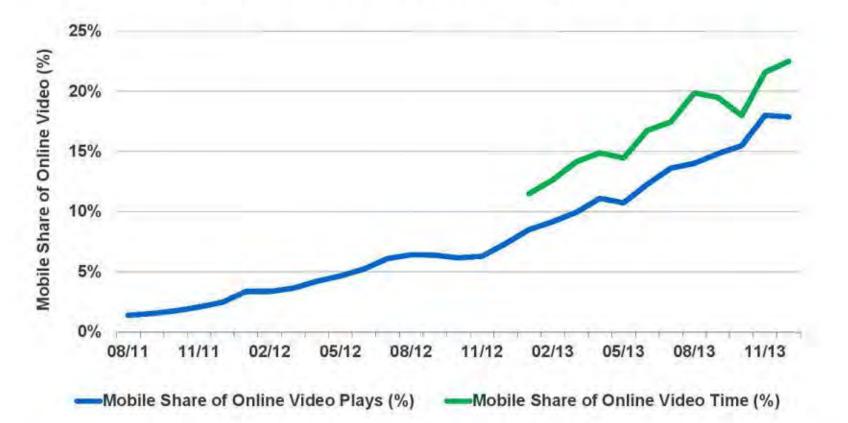




Source: Horowitz Associates, State of Cable and Digital Media Report, 4/14. Note: Study based on 1,200 interviews in 1/14 among heads of households (18+) who watch any kind of TV. Live TV defined as watching linear programming that is not time-shifted from original programming time intended. TV Content defined as any type of video content. Computer includes desktop + notebook. Mobile includes smartphone + tablet.

### 22%的视频是在移动设备上观看的,占比同比翻倍

Mobile Share of Online Video Plays and Time, 8/11 - 12/13, Global





### Netflix CEO看未来的电视

## 1) 屏幕扩散

- 2) 传统遥控器消失
- 3) 应用取代频道
- 4) 互联网电视取代传统电视。



Source: Netflix Long Term View.

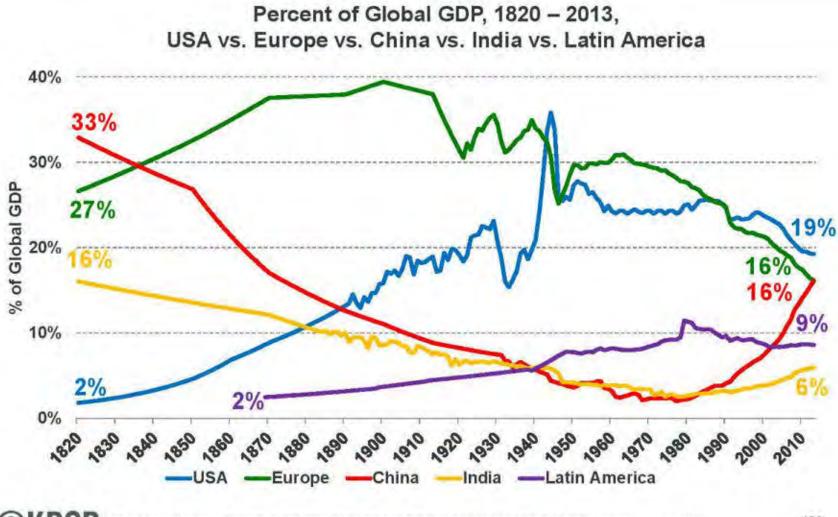




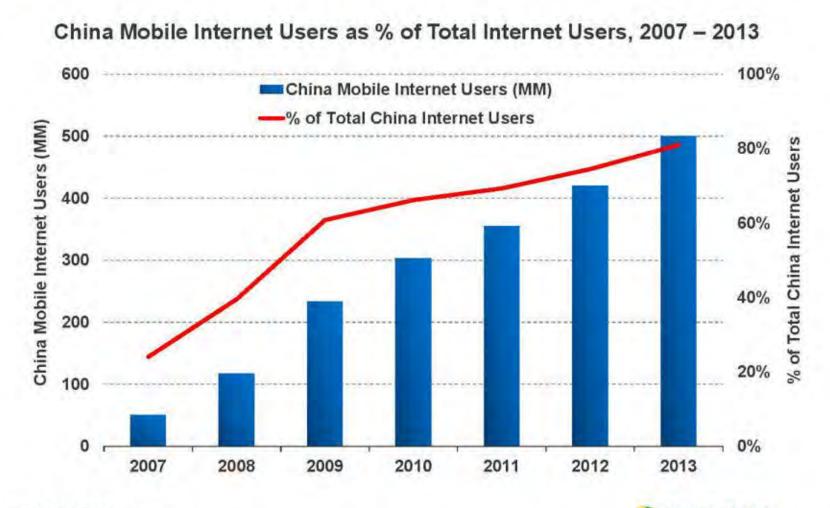




# 中国GDP持续增长,占全球比重迅速上升

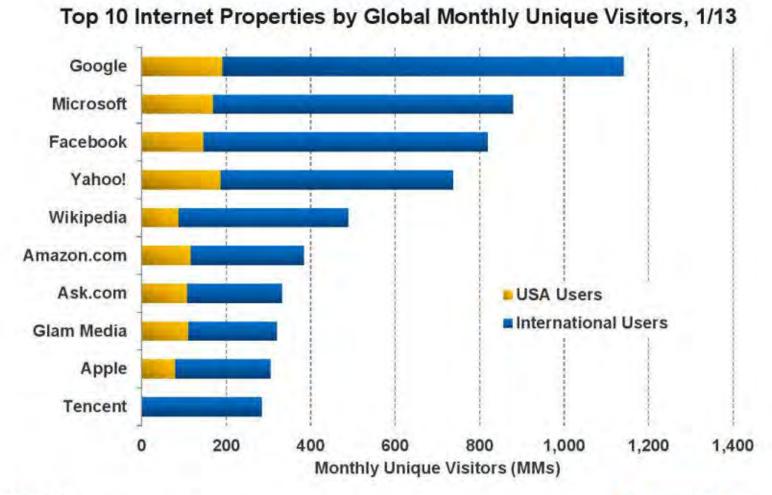


#### 中国有5亿移动互联网用户,移动占比80%,全球最高



腾讯赵技

## 全球10大互联网服务有9个是"美国制造",拥有79%海外用户

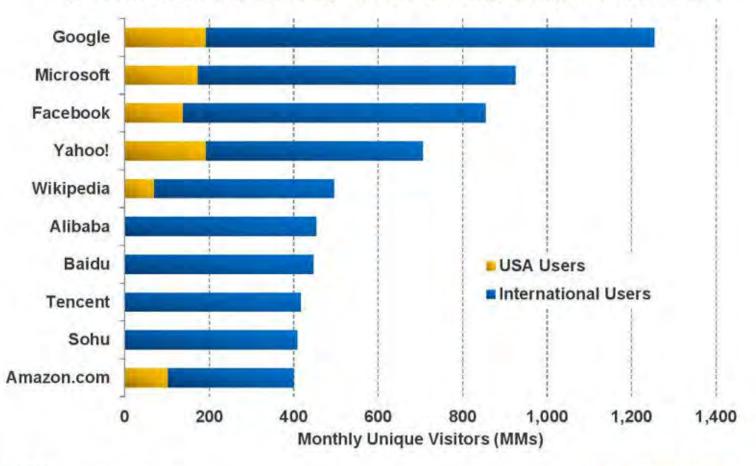






## 全球10大网站(基于月独立用户访问量)有6个是"美国制造" 超过86%的用户来自美国以外,中国企业发展迅速

Top 10 Internet Properties by Global Monthly Unique Visitors, 3/14







# 中国: 移动商务创新领袖

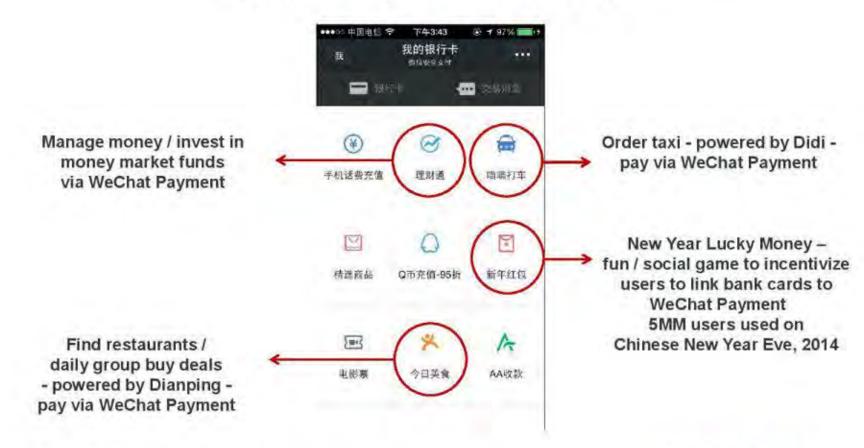
#### Source: Liang Wu, Hillhouse Capital\*



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### 腾讯微信:移动活跃用户达4亿, 上面的移动和商业的元素越来越多

#### WeChat 'My Bank Card' Page





# 腾讯微信服务:虚拟助理

#### WeChat Service Accounts = Interactive Accounts with Communication / CRM / Ordering Capability

1

100

#### Personal Banker

China Merchant Bank allows customers to check & repay balances and ask live questions via WeChat



#### Shopping Assistant

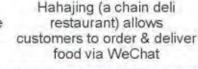
Moguije / Meilishuo (fashion discovery & shopping sites) give customers tailored suggestions via WeChat

蘑菇街

什么呢,直接词复心水美

物的名称(如"高跟鞋")

给牙牙吧!



Private Chef

#### 10000 出出能的 🐨 T-010:11 8756 哈哈镜 1 < Chats (1) Sec. 12.1 附近的哈哈镜 便利店-日日月月\* 继赴:北京市东三环北路年 10号 电话: 13911089202 [不能外送] 配送点-演源里15号" 地址:北京市新源南路腰源里 小区15号楼 电话: [不能外运] 配送点-青罐超市\* 地址:北京市东三环北路三元

○復信订单 ○门店委询 ○報告目号

#### **Grocery Getter**

Xiaonongny (a grocery delivery startup) prepares fresh groceries & delivers to your address via WeChat

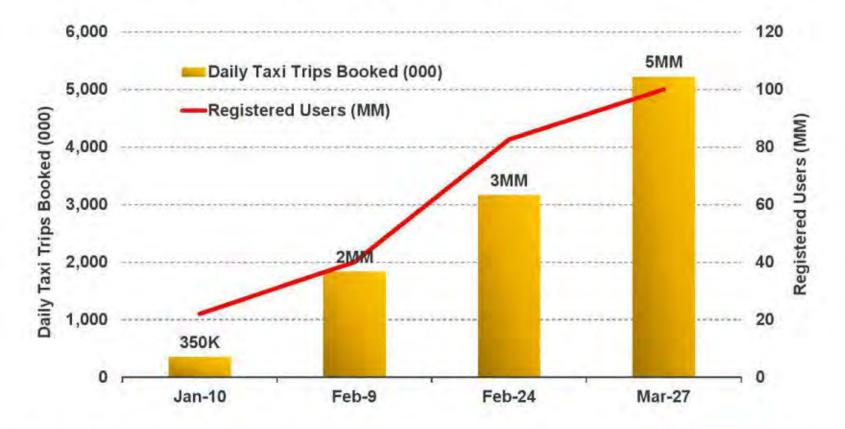
香草 知能	云 三特别
机罗卜玉米餐袋汤	淮山构祀蚌马湾
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	1720 072AB
紮菜囊花汤	地位豆腐活
- CA	1
石茂	20
¥8 52人份	≠18 □2人份



Source: Liang Wu (Hillhouse Captial).

## 嘀嘀打车:注册用户超1亿,每日500万次预订量, 77天增长15倍,得益于微信支付。

Didi Taxi, Daily Taxi Trips Booked, 1/10/2014 - 3/27/2014

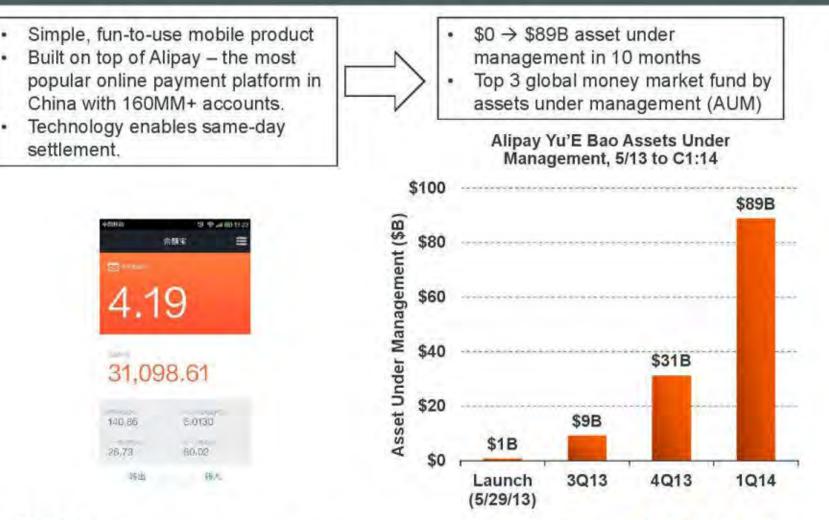




Note: \* Subsidy ranges from \$1-3 per ride. Estimated total subsidy during this period was ~\$233MM. Source: Didi, Liang Wu (Hillhouse Captial).



## 余额宝:推出10个月后管理的资产总额达到890亿美元





"Note: AUM is asset under management, Fidelity and Vanguard manage more assets than Alipay's Yu'E Bao. Source: Alipay, Liang Wu (Hillhouse Capital).



# 上市公司趋势





# 全球20大互联网上市公司(基于市值)

Rank	Company	Region	2014 Market Value (\$B)	2013 Revenue (\$MM)
1	Apple	USA	\$529	\$173,992
2	Google	USA	377	59,825
3	Facebook	USA	157	7,872
4	Amazon	USA	144	74,452
5	Tencent	China	132	9,983
6	eBay	USA	66	16,047
7	Priceline	USA	63	6,793
8	Baidu	China	59	5,276
9	Yahoo!	USA	35	4,680
10	Salesforce.com	USA	33	4,071
11	JD.com	China	29	11,454
12	Yahoo! Japan	Japan	25	3,641
13	Netflix	USA	24	4,375
14	Naver	Korea	23	2,190
15	LinkedIn	USA	19	1,529
16	Twitter	USA	18	665
17	Rakuten	Japan	16	4,932
18	Liberty Interactive	USA	14	11,252
19	TripAdvisor	USA	13	945
20	Qihoo 360	China	11	671
Total			\$1,787	\$404,644



Source: CapIQ. 2014 market value data as of 5/23/2014. Note: Colors denote current market value relative to Y/V market value. Green = higher. Red = lower, Purple = newly public.

# 全球上市互联网公司的领袖:并购+投资活动

Company / Market Cap (\$B)	Volume, 2012- 2014YTD (\$B)	Select Transactions, 2012-2014YTD					
Google	\$6B (M&A)	DeepMind	\$400MM (1/14)	Nest	\$3B (1/14)	Waze	\$1B (6/13)
\$377B	\$3B* (Investments)	Cloudera	\$160MM* (3/14)	DocuSign	\$100MM* (3/14)	Uber	\$258MM (8/13)
Facebook \$157B	\$24B (M&A)	Oculus	\$2B (3/14)	WhatsApp	\$19B+ (2/14)	Instagram	\$1B (4/12)
Tencent \$132B	\$7B* (Investments)	JD.com	\$3B (3/14)	CJ Games	\$500MM (3/14)	Activision Blizzard	\$429MM (7/13)
Alibaba TBD	\$5B (M&A)	ChinaVision	\$800MM (3/14)	AutoNavi	\$1B+ (2/14)		
	\$5B* (Investments)	Youku Tudou	\$1B (4/14)	Weibo	\$1B (4/13)		



Source: Morgan Stanley IBD & public filings. CapIQ, 2014 market value data as of 5/23/2014.

Note: Includes investments that corporations and their subsidiaries/affiliates have made in companies. Google's Docusign investment represents the latest round; however, the Company had been a previous investor.

\*Some data may include entire funding round, of which a portion may be attributable to investors other than the Company listed here.



# ONE MORE THING(S)

# 从一个极端到另一个





### 实时流媒体:配备虚拟现实眼镜Rift的无人机?







### 全球互联网接入也在重塑? 🙁







### Thanks

#### **KPCB** Partners

Especially Alex Tran / Cindy Cheng / Alex Kurland who helped take spurts of ideas and turn them into something we hope is presentable / understandable

#### Participants in Evolution of Internet Connectivity From creators to consumers who keep us on our toes 24x7

Walt & Kara For continuing to do what you do so well





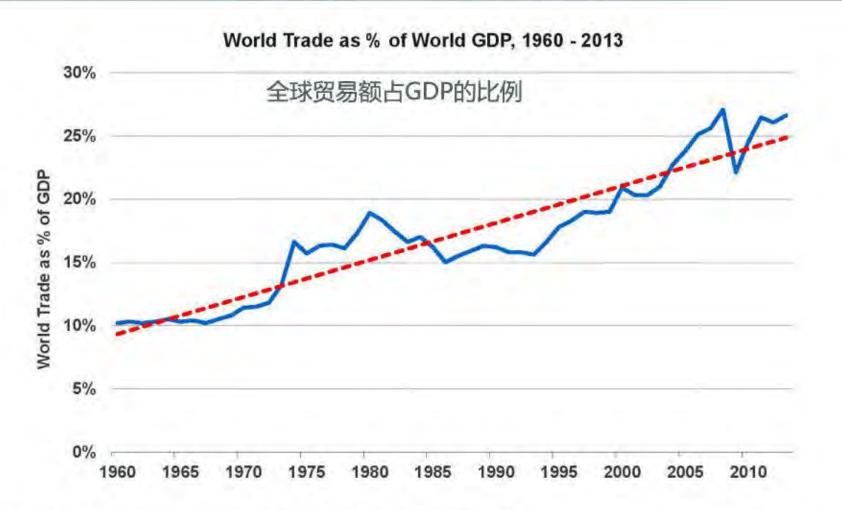
# **RAN OUTTA TIME THOUGHTS / APPENDIX**

# **IMMIGRATION UPDATE**

REPORT: http://www.kpcb.com/file/kpcb-immigration-in-america-the-shortage-of-high-skilled-workers



## 全球经济/人口:共存性增强





Source: Trade data per World Trade Organization (WTO), GDP data per United Nations (UN).

Note: World trade calculated as the sum of all countries' imports (or exports). The biggest trading partners of USA includes EU nations, Canada, China, Mexico, 147 Japan and South Korea.

## 25大科技公司中60%由第一代和第二代美国人创建

#### Founders / Co-Founders of Top 25 USA Public Tech Companies, Ranked by Market Capitalization

Rank	Company	apany Mkt Cap (\$MM) LTM Rev (\$MM) Employees 1st or 2nd Gen Immigran Founder / Co-Founder		1st or 2nd Gen Immigrant Founder / Co-Founder	Generation	
1	Apple	\$529,000	\$176,035	80,300	Steve Jobs	2nd-Gen, Syria
2	Google	376,536	62,294	47,756	Sergey Brin	1st-Gen, Russia
3	Microsoft	331,408	83,347	99,000	And the second se	
4	IBM	188,205	98,827	431,212	Herman Hollerith	2nd-Gen, Germany
5	Oracle	187,942	37,902	120,000	Larry Ellison / Bob Miner	2nd-Gen, Russia / 2nd-Gen, Iran
6	Facebook	157,448	8,916	6,337	Eduardo Saverin	1st-Gen, Brazil
7	Amazon.com	143,683	78,123	117,300	Jeff Bezos	2nd-Gen, Cuba
8	Qualcomm	134,827	25,712	31,000	Andrew Viterbi	1st-Gen, Italy
9	Intel	130,867	52,892	107,600	-*	-
10	Cisco	125,608	47,202	75,049		-
11	eBay	65,927	16,561	33,500	Pierre Omidyar	1st-Gen. France
12	Hewlett-Packard	63,903	111,820	317,500	William Hewlett	-
13	Priceline	62,767	7,133	9,500	Jay Walker	-
14	EMC	54,458	23,314	63,900	Roger Marino	2nd-Gen, Italy
15	Texas Instruments	49,920	12,303	32,209	Cecil Green / J. Erik Jonsson	1st-Gen, UK / 2nd-Gen, Sweden
16	VMware	41,549	5,376	14,300	Edouard Bugnion	1st-Gen, Switzerland
17	Automatic Data Processing	38.014	11,958	60,000	Henry Taub	2nd-Gen, Poland
18	Yahoo!	35,258	4,673	12.200	Jerry Yang	1st-Gen, Taiwan
19	salesforce.com	32,783	4,405	13,300	-	-
20	Adobe Systems	32,004	4.047	11,847	-	-
21	Cognizant Technology	29,583	9,245	171,400	Francisco D'souza / Kumar Mahadeva	1st-Gen, India** / 1st-Gen, Sri Lanka
22	Micron	29,253	13,310	30,900		
23	Netflix	24,120	4,621	2,327	-	-
24	Intuit	22,595	4,426	8,000		
25	Sandisk	21,325	6,341	5,459	Eli Haran	1st-Gen, Israel
Total F	ounded by 1st or 2nd Gen Immigrants	\$2,053,676	\$577,580	1,226,873		

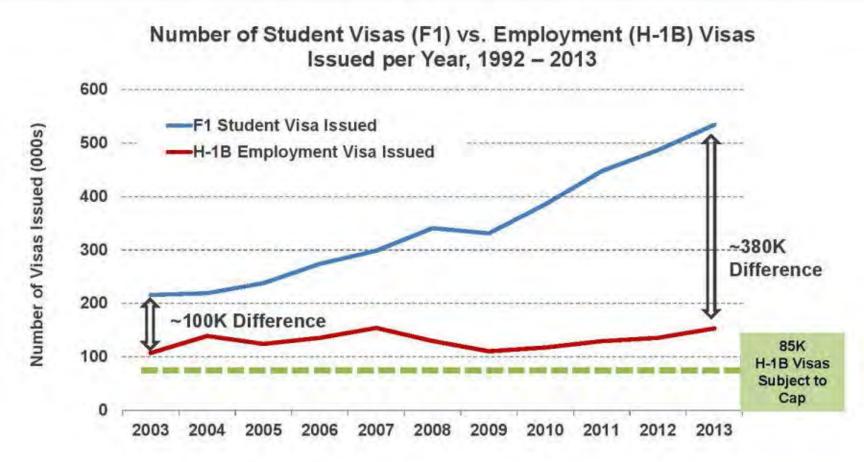


Source: CapIQ, Factset as of 5/14. "The 'New American' Fortune 500", a report by the Partnership for a New American Economy; "American Made, The Impact of Immigrant Founders & Professionals on U.S. Corporations."

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"Note: while Andy Grove (from Hungary) is not a co-founder of Intel, he joined as COO on the day it was incorporated. ""Francisco D'souza is a person of Indian origin born in Kenya.

## 美国政府每年颁发的学生签证(F1)和雇员签证(H-1B)数量



# USA, INC. UPDATE

REPORT: http://www.kpcb.com/usainc/USA\_Inc.pdf VIDEO: http://www.kpcb.com/insights/2011-usa-inc-video



## USA Inc. Income Statement, F2013 – Revenue (Taxes) +13%...Expenses -2%...-24% Net Margin

		F1998	F2003	F2008	F2013	
Revenue (\$B)		\$1,722	\$1,783	\$2,524	\$2,775	
Y/Y Growth		9%	-4%	-2%	13%	
Individual Income Taxes*		\$829	\$794	\$1,146	\$1,316	
% of Revenue		48%	45%	45%	47%	
Social Insurance Taxes	•	\$572	\$713	\$900	\$948	
% of Revenue		33%	40%	<i>3</i> 6%	34%	
Corporate Income Taxes*	1	\$189	\$132	\$304	\$274	
% of Revenue		11%	7%	12%	10%	
Other		\$133	\$144	\$174	\$237	
% of Revenue		<i>8</i> %	8%	7%	9%	
Expense (\$B) Y/Y Growth		\$1,652	\$2,160 7%	\$2,983 9%	\$3,455	
Entitlement / Mandatory		\$870	\$1,168	\$1,582	\$2,049	
% of Expense		53%	54%	53%	59%	
Non-Defense Discretionary		\$273	\$434	\$518	\$551	
% of Expense		17%	20%	17%	16%	
"One-Time" Items % of Expense		1	1	\$14 0%	<u></u>	
Defense		\$268	\$405	\$616	\$633	
% of Expense		16%	19%	21%	18%	
Net Interest on Public Debt		\$241	\$153	\$253	\$221	
% of Expense		15%	7%	<i>8</i> %	6%	
Surplus / Deficit (\$B)		\$69	-\$377	-\$459	-\$680	
Net Margin (%)		4%	-21%	-18%	-24%	

201 MM - Les Ha
erage, revenue grew 3% Y/Y over the 5 years
t driver of revenue
tax on Social Security & Medicare
tes significantly with economic conditions
s estate & gift taxes / duties & fees; ly stable
erage, expense grew 5% Y/Y over the 5 years
cant increase owing to aging population ing healthcare costs
s education / law enforcement / ortation / general government
s discretionary spending on TARP, GSEs, onomic stimulus cant increase owing to on-going War on
ased owing to historic low interest rates

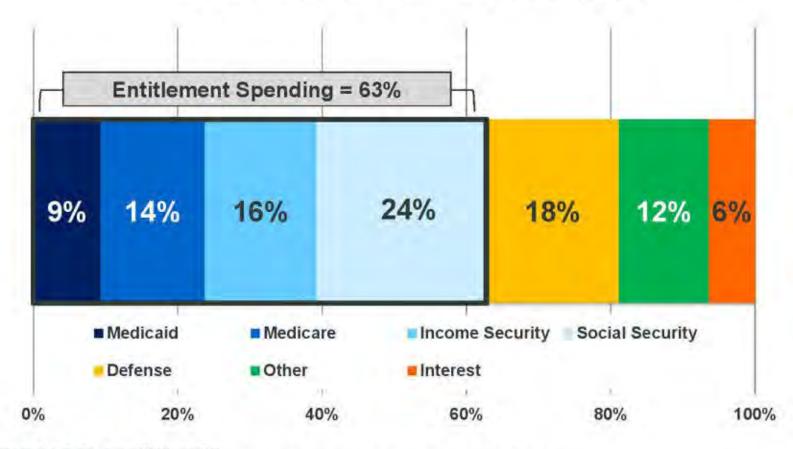


 $(\alpha)$ 

Note: USA federal Biscal year ends in September, "Individual & corporate income taxes include capital gains taxes. Non-defense discretionary includes federal 151 spending on education, infrastructure, law enforcement, judiciary functions.

## Where Your Tax Dollars Go – Entitlements as % of Government Spending = 63% vs. 59% Y/Y

% of USA Federal Government Spending, 2013



#### Source: White House OMB. Note: Income security inclu

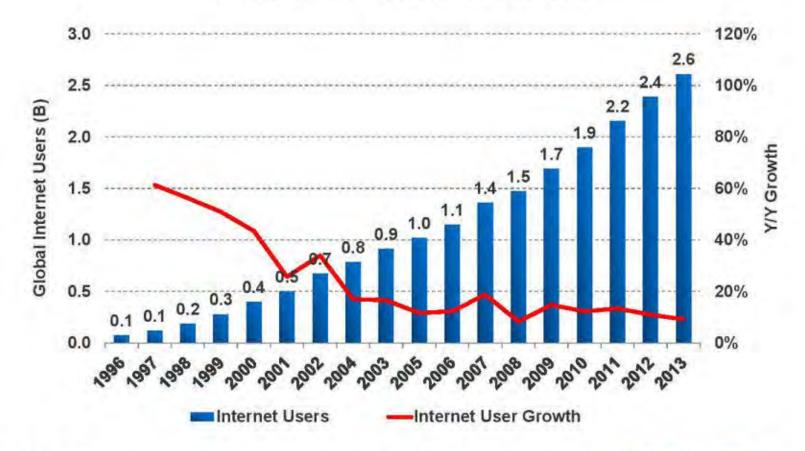
Note: Income security includes unemployment; food, nutrition and housing assistance; federal retirement. Other expenses include transportation, education, justice, and other general government functions.





## 互联网数量增长趋势: 2012年增长11%,2013年增长9%,增长放缓

#### Global Internet Users, 1996 – 2013 (B)





Source: United Nations / International Telecommunications Union, US Census Bureau, Euromonitor International



### 互联网普及率高于45%的国家:网民增速放缓

Rank	Country	2013 Internet Users (MMs)	2013 Internet User Growth	2012 Internet User Growth	Population Penetration	Total Population (MMs)
1	China	618	10%	10%	46%	1,350
2	USA	263	2	2	83	316
3	Japan	101	0	1	79	127
4	Brazil	100	12	12	50	201
5	Russia	76	9	14	53	143
6	Germany	68	1	1	84	81
7	United Kingdom	55	1	3	87	63
8	France	55	5	4	83	66
9	Iran	45	16	19	56	80
10	South Korea	41	1	0	84	49
11	Turkey	36	6	9	45	81
12	Italy	36	2	6	58	61
13	Spain	34	7	3	72	47
14	Canada	30	5	4	87	35
15	Poland	25	0	4	65	38
1.11.1	Top 15	1,583	6%	7%	(58%)	2,739
	World	2,609	9%	11%	37%	7,098

#### Countries with Internet Penetration >45%, 2013



Source: United Nations / International Telecommunications Union, US Census Bureau. China Internet user data from CNNIC (12/2013). Iran Internet user data from KPCB estimates per data from Islamic Republic News Agency, citing data released by the National Internet Development Center. 155

## 互联网普及率低于45%的国家:网民增速较快

Rank	Country	2013 Internet Users (MMs)	2013 Internet User Growth	2012 Internet User Growth	Population Penetration	Total Population (MMs)
1	India	154	27%	36%	13%	1,221
2	Indonesia	71	13	15	28	251
3	Nigeria	57	19	21	33	173
4	Mexico	46	11	14	38	119
5	Philippines	38	27	18	36	106
6	Egypt	38	13	29	44	85
7	Vietnam	37	14	16	39	92
8	South Africa	20	20	41	41	49
9	Pakistan	19	12	14	10	193
10	Thailand	18	12	6	27	67
11	Ukraine	15	17	22	34	45
12	Kenya	14	17	105	32	44
13	Venezuela	13	11	9	44	28
14	Peru	11	7	5	38	30
15	Uzbekistan	10	22	52	37	29
	Top 15	560	18%	24%	(22%)	2,532
	World	2,609	9%	11%	37%	7,098

#### Countries with Internet Penetration ≤45%



# Established 'Big' Smartphone Markets (USA / Japan / UK / Germany / Korea) = +17% Growth in 2013 = Slowing, Well Past 50% Penetration

Rank	Country	2013 Smartphone Subs (MMs)	2013 Smartphone Sub Growth	Population Penetration	Total Population (MMs)	2014E Smartphone Sub Growth
1	USA	188	21%	59%	316	12%
2	Japan	99	5	78	127	5
3	UK	43	18	68	63	12
4	Germany	40	34	49	81	31
5	Korea	38	18	79	49	5
6	France	33	29	50	66	21
7	Saudi Arabia	30	20	110	27	15
8	Poland	22	29	57	38	24
9	Australia	19	20	85	22	12
10	Canada	18	21	53	35	15
11	Malaysia	16	23	54	30	21
12	Netherlands	12	18	69	17	13
13	Taiwan	11	23	49	23	27
14	Sweden	9	10	94	10	4
15	UAE	9	20	160	5	14
	Top 15	588	19%	65%	910	13%
	World	1,786	28%	25%	7,098	24%

#### Markets with >45% Penetration



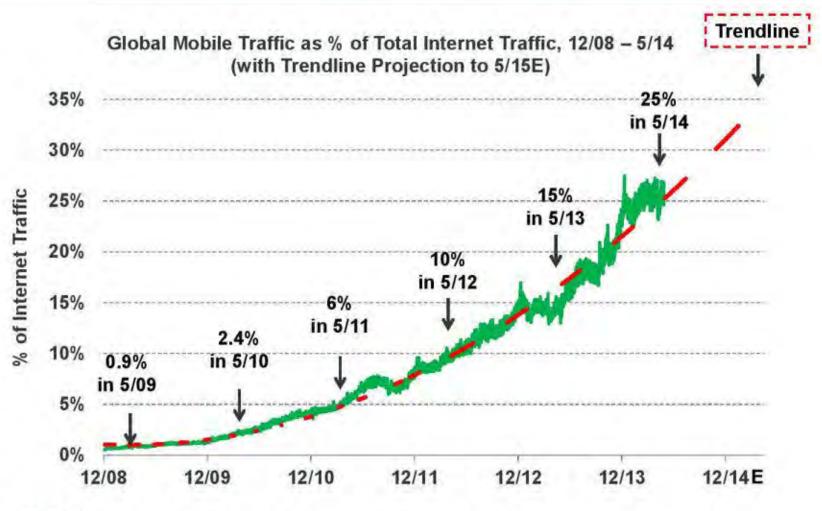
# Developing 'Big' Smartphone Markets (China / India / Brazil / Indonesia / Russia) = +32% Growth in 2013 = Strong, Material Penetration Upside Remains

Rank	Country	2013 Smartphone Subs (MMs)	2013 Smartphone Sub Growth	Population Penetration	Total Population (MMs	2014E Smartphone Sub Growth
1	China	422	26%	31%	1,350	19%
2	India	117	55	10	1,221	45
3	Brazil	72	38	36	201	30
4	Indonesia	48	42	19	251	36
5	Russia	46	30	33	143	27
6	Mexico	22	49	19	119	39
7	Egypt	21	41	25	85	36
8	Italy	21	33	34	61	41
9	Spain	21	20	44	47	17
10	Philippines	20	43	19	106	36
11	Nigeria	20	43	12	173	39
12	South Africa	20	32	41	49	27
13	Thailand	18	27	27	67	24
14	Turkey	18	32	22	81	28
15	Argentina	17	40	41	43	34
	Top 15	905	33%	(23%)	3,996	28%
	World	1,786	28%	25%	7,098	24%

#### Markets with ≤45% Penetration



## 移动流量占整体互联网流量的比例







# **PUBLIC COMPANY TRENDS**

## Financial Philosophy – Michael Marks (Stanford GSB)

- Three Ways to Get Capital into Company Sell stock, borrow money, earn it. Earn it is best!
- Balance Sheets Matter Without a balance sheet, it's hard to understand where a company stands.
- 3) Great Companies Grow Revenue, Make Profits and Invest for Future – Companies that do just 2 of 3 are signing up for being just 'OK,' not 'great.'
- 4) Companies Learn to Make Money or Not Companies that make money generally continue to do so, companies that don't make money generally continue that also. It becomes core to 'culture.'



### Tech Companies = Top 1 or 2 Sector by Market Cap in S&P500 for Nearly 2 Decades

		rs Ago: P500 = \$3.2T	0.000	ASDAQ: P500 = \$11.7T	Today: May 2014 – S&P500 = \$17.4T			
Sector	Weight	Largest Companies	Sector	Weight	Largest Companies	Sector	Weight	Largest Companies
CONS. STAPLES	14%	COCA-COLA ALTRIA	TECHNOLOGY	35%	MICROSOFT CISCO	TECHNOLOGY	19%	APPLE GOOGLE
CONS. DISC.	13%	MOTORS LIQUIDATION FORD	FINANCIALS	13%	CITIGROUP AIG	FINANCIALS	16%	WELLS FARGO JPMORGAN CHASE
INDUSTRIALS	13%	GENERAL ELECTRIC 3M	CONS. DISC.	10%	TIME WARNER HOME DEPOT	HEALTHCARE	13%	JOHNSON & JOHNSON PFIZER
FINANCIALS	11%	AIG FANNIE MAE	HEALTHCARE	10%	MERCK PFIZER	CONS. DISC.	12%	AMAZON.COM WALT DISNEY
TECHNOLOGY	11%	IBM MICROSOFT	INDUSTRIALS	8%	GENERAL ELECTRIC TYCO	INDUSTRIALS	11%	GENERAL ELECTRIC UNITED TECHNOLOGIES
HEALTHCARE	10%	MERCK JOHNSON & JOHNSON	TELECOM	7%	SOUTHWESTERN BELL AT&T	CONS. STAPLES	11%	WAL-MART PROCTOR & GAMBLE
ENERGY	9%	EXXON MOBIL	CONS. STAPLES	7%	WAL-MART COCA-COLA	ENERGY	10%	EXXON MOBIL CHEVRON
TELECOM	8%	SOUTHWESTERN BELL GTE	ENERGY	5%	EXXON MOBIL CHEVRON	MATERIALS	3%	DUPONT MONSANTO
MATERIALS	7%	DUPONT DOW CHEMICAL	MATERIALS	2%	DUPONT ALCOA	UTILITIES	3%	DUKE ENERGY NEXTERA ENERGY
UTILITIES	4%	SOUTHERN COMPANY DUKE ENERGY	UTILITIES	2%	DUKE ENERGY AES	TELECOM	2%	VERIZON AT&T



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