The IoT Inc Business Meetup Silicon Valley
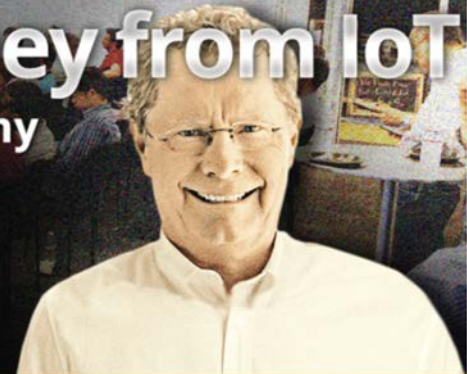
Opening remarks and guest presentation

Join us onsite or online on March 3 at 6PM PST

Making Money from IoT

After All, Isn't that Why We Are Doing This?

John C. Mein
Petzila

Iot-Inc. Meetup

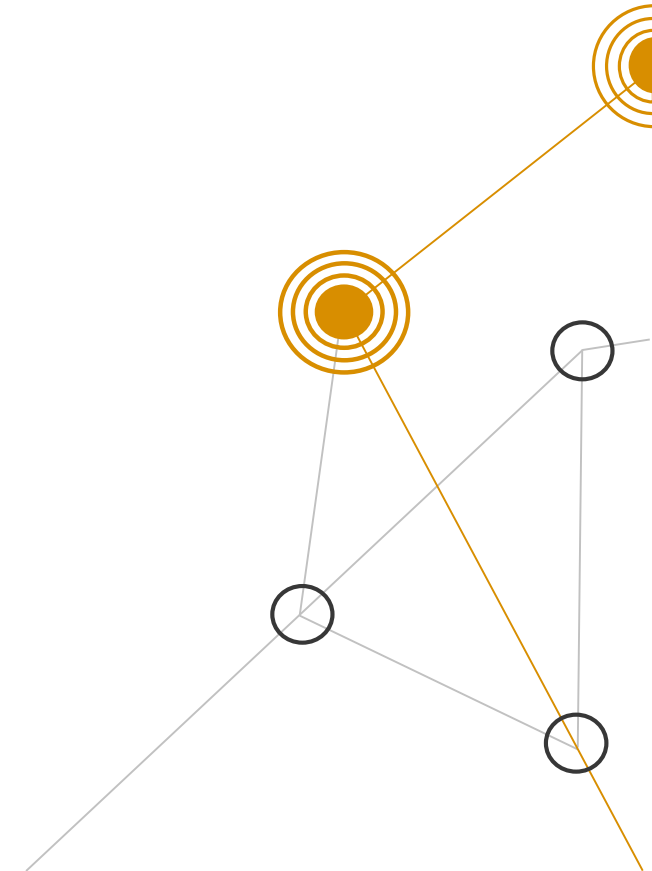Bruce Sinclair (Organizer): bruce@iot-inc.com

Target of Meetup

For business people selling products and services into IoT

but of course everyone else is welcome: techies, end-users, …

Focus of presentations and discussions:

Coming Up

Next Meeting, Thursday, April 7, 2016

KPMG

Presentation, recording of Meetup and announcements for today's meeting will be sent in one week to everyone who provided their email upon signup for this meeting or any other past Meetup

My email: bruce@iot-inc.com

The changing landscape of disruptive technologies

Technology
Innovation Center

KPMG
cutting through complexity

Technologies enabling the next indispensable consumer technology

Q. Select the top technology that in the next three years will enable the next indispensable consumer technology.

Technologies	Global	U.S.	China	Japan	ASPAC	EMEA
Cloud – SaaS/PaaS/IaaS	**11%**	**14%**	**15%**	**13%**	**11%**	6%
Mobile - platforms and apps	**9%**	9%	3%	**10%**	**8%**	**11%**
Internet of things/ M2M	**9%**	8%	**9%**	3%	**9%**	**9%**
Data & analytics	**9%**	**14%**	3%	10%	7%	8%
Biotech/digital health/healthcare IT	8%	**15%**	3%	3%	7%	7%
3D printing	7%	2%	4%	3%	6%	**12%**
Cyber security	6%	5%	8%	**10%**	7%	7%
Robotics	6%	5%	6%	3%	6%	8%
Artificial intelligence/cognitive computing	5%	4%	**15%**	**10%**	**8%**	2%
Digital currency platforms (e.g., Bitcoin, payment systems, etc.)	4%	2%	6%	7%	6%	5%

Source: KPMG Technology Innovation Survey 2015   Partial list of technologies shown

Technologies that will have the greatest impact in driving business transformation

Q. Select the top technology that in the next three years will have the greatest impact in driving business transformation for enterprises

Technologies	Global	U.S.	China	Japan	ASPAC	EMEA
Cloud – SaaS/PaaS/IaaS	**11%**	**13%**	**9%**	**13%**	**10%**	**10%**
Internet of things/ M2M	**9%**	8%	**14%**	0%	**9%**	**10%**
Data & analytics	**9%**	**13%**	8%	3%	**10%**	6%
Mobile - platforms and apps	7%	5%	5%	**7%**	7%	**10%**
Robotics	6%	4%	8%	3%	7%	8%
Cyber security	6%	**10%**	5%	**7%**	4%	5%
Biotech/digital health/healthcare IT	5%	8%	3%	3%	4%	4%
3D printing	5%	4%	5%	**7%**	6%	5%
Artificial intelligence/cognitive computing	5%	8%	9%	**23%**	6%	3%
Digital currency platforms (e.g., Bitcoin, payment systems, etc.)	4%	5%	5%	3%	6%	4%
Biometrics: gesture, facial, voice	4%	4%	**12%**	3%	6%	3%

Source: KPMG Technology Innovation Survey 2015   Partial list of technologies shown

Enterprise technologies – IoT/M2M benefits & challenges

Q. What is the top benefit for businesses to adopt this technology?

- 20%
- 20%
- 16%
- 13%
- 10%
- 6%
- 6%
- 5%
- 3%
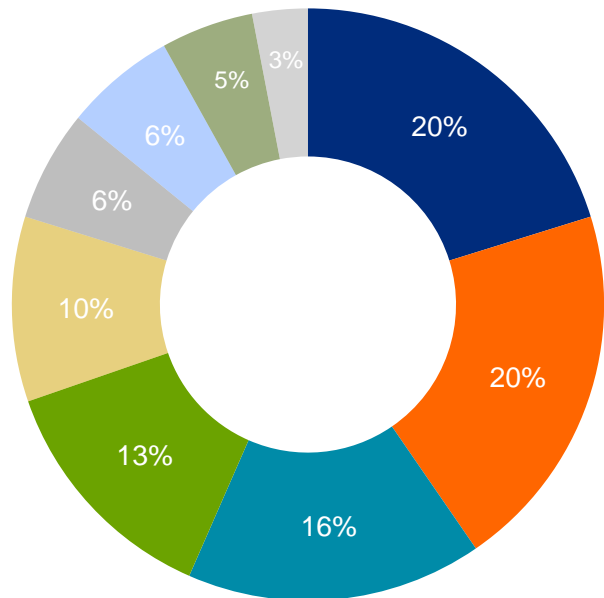
- ■ **Improved business efficiencies/higher productivity**
- ■ **Faster innovation cycles**
- ■ **Product/service differentiation**
- ■ **Cost reductions**

Q. What is the biggest challenge for businesses to adopt this technology?

- 22%
- 16%
- 13%
- 13%
- 10%
- 8%
- 8%
- 6%
- 5%
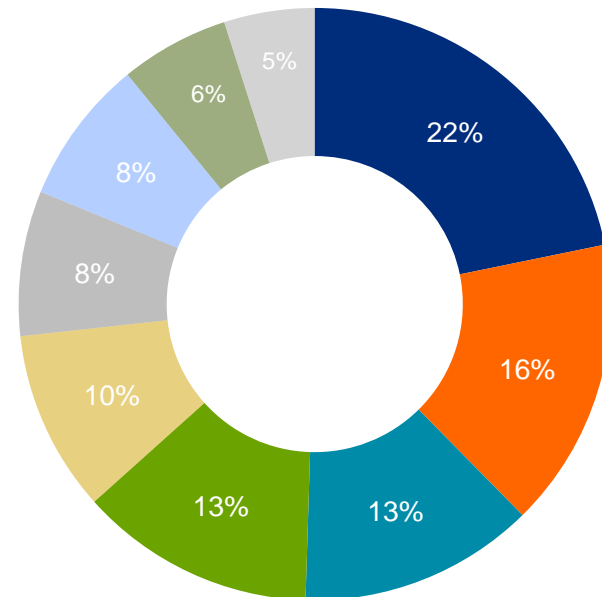
- ■ **Technology complexity**
- ■ **Lack of experience in new technology/business model**
- ■ **Displacement of existing tech roadmap**
- ■ **Security**

Source: KPMG Technology Innovation Survey 2015

The changing landscape of disruptive technologies

Publication

- **Global emerging innovation hubs - November 2015**
- **Innovation convergence unlocks new paradigms - January 2016**
- **Barriers to tech innovation adoption - April 2016**
- **Tech innovation management and start-up perspectives - April 2016**
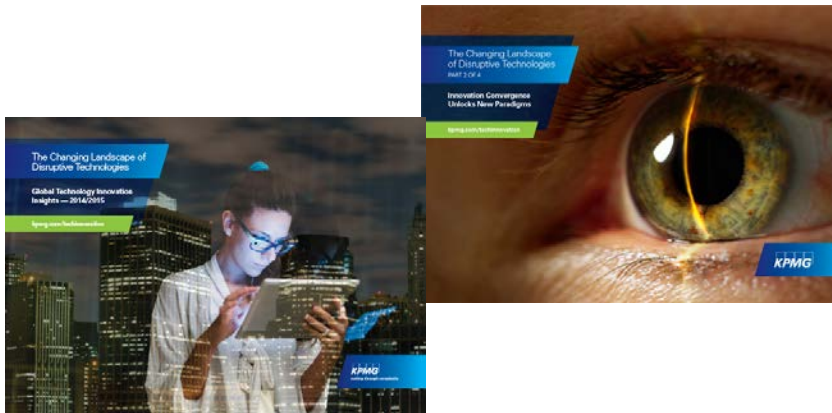
kpmg.com/techinnovation

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The changing landscape of disruptive technologies

Global Technology Innovation Center

Making Money
with
IoT
Is it even Possible?

By John C. Mein,
VP of Business Development,
Petzila, Inc.

Getting to Profitability is Key

- Petzila Snapshot
- IoT opportunity
- Industrial vs. Consumer IoT?
- Funding -- Private money, VC, bootstrap?
- Development Options
- Controlling Costs
- Customer Service
- Data usage
- Exposure
- Margins
- Recurring Revenue
- Exit Plan

Petzila Company Snapshot

- Two co-founders
    - David Clark, CEO: serial entrepreneur & 25 years retail sales
    - Dr. Simon Milner, CTO: serial entrepreneur & 20 years tech guru

- Founded in 2013

- 12 full-time employees in San Jose HQ

- Funding through 3 sources

- Board of Directors: Dave, Simon plus:
    - Sam Spadafora (Chairman), Kapil Nanda (Infogain)

- Technical Advisory Board:
    - Rick Roth, Jim Ready, Steve Campbell, Joe Elliott

The Premier Treat Cam (PTC)

Solves
Separation Anxiety

Three 1.2-minute
check-ins
per day

Unique Customer Experience

- See, speak, treat
- Content generator
- Temperature sensor
- Night vision
- Motion detection
- RFID authentication
- Treat, auto-replenishment
- **Real-time, rich data**

Huge Opportunities

Some 30 billion objects may be connected to the Internet of Things[1] by 2020.

26 billion–30 billion objects in 2020

7 billion–10 billion objects in 2013

~15–20% growth annually
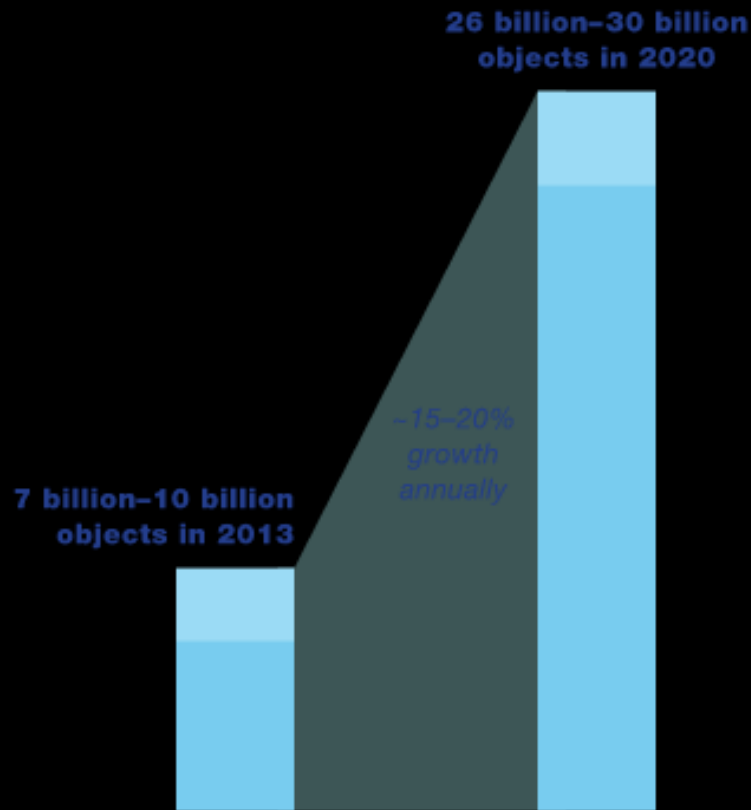
[1]A networking of physical objects via embedded devices that collect and/or transmit information.

Source: Forecasts derived from ABI Research; expert interviews; Gartner; IDC; McKinsey analysis

We have only just begun…

Gartner Hype Cycle
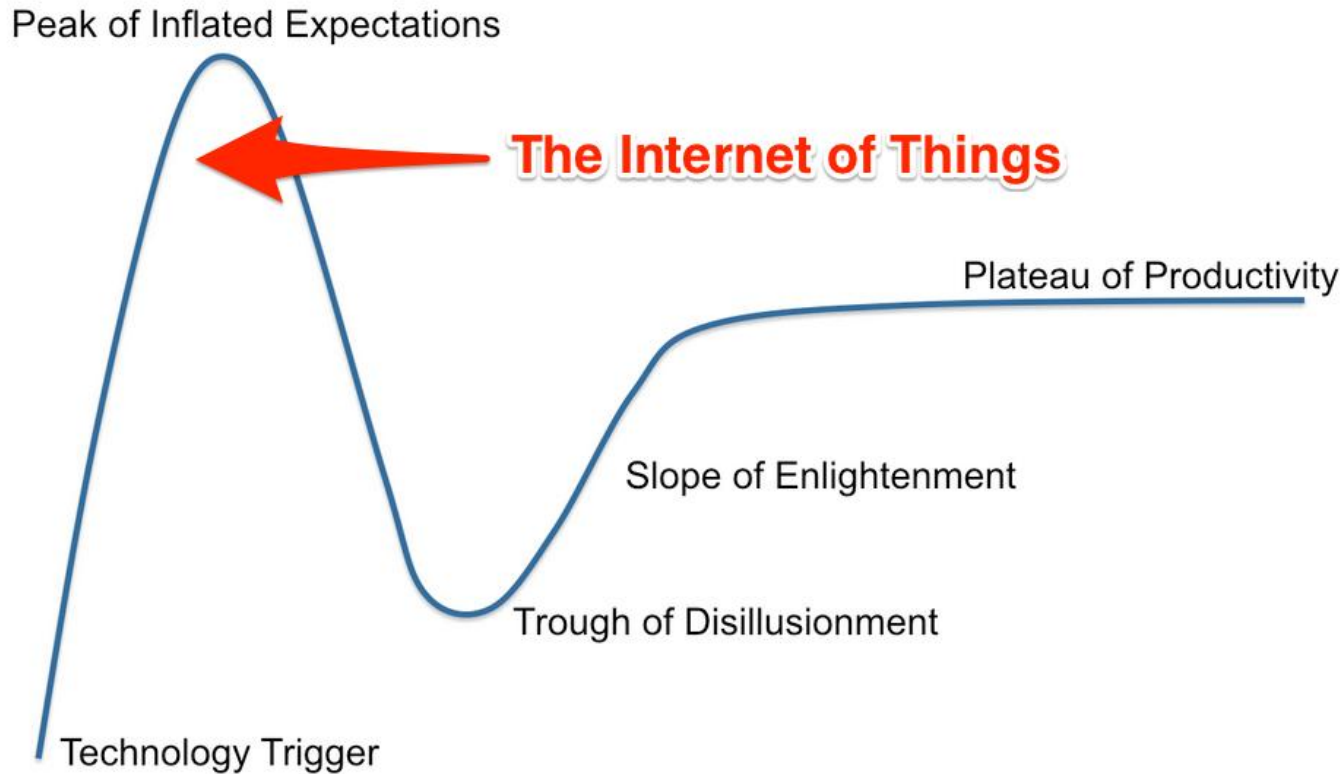
2014 GARTNER HYPE CYCLE

Current as of July 2014

What is this?

Hype Cycles offer a snapshot of the relative maturity of technologies, IT methodologies and management disciplines. They highlight overhyped areas, estimate how long technologies and trends will take to reach maturity, and help organizations decide when to adopt.

Plateau will be reached in:

▶▶ Less Than 2 Years

▶ 2 - 5 Years

● 5 - 10 Years

■ More Than 10 Years

Natural-Language Question Answering
Wearable User Interfaces
Internet of Things
Speech-to-Speech Translation
Consumer 3D Printing
Autonomous Vehicles
Cryptocurrencies
Smart Advisors
Complex-Event Processing
Data Science
Big Data
Prescriptive Analytics
In-Memory Database Mgmt Systems
Neurobusiness
Content Analytics
Biochips
Hybrid Cloud Computing
Affective Computing
Gamification
Smart Robots
Augmented Reality
3D Bioprinting Systems
Volumetric and Holographic Displays
Software-Defined Anything
Machine-to-Machine Commication Services
Quantum Computing
Human Augmentation
Mobile Health Monitoring
Brain-Computer Interface
Quantified Self
Virtual Reality
Connected Home
Cloud Computing
Smart Workplace
NFC
Virtual Personal Assistants
Digital Security
Bioacoustic Sensing

Speech Recognition
Consumer Telematics
3D Scanners
Enterprise 3D Printing
Activity Streams
In-Memory Analytics
Gesture Control

| Innovation Trigger | Peak of Inflated Expectations | Trough of Disillusionment | Slope of Entitlement | Plateau of Productivity |

Expectations

Time

Design Refresh By: VISUAL CAPITALIST

Industrial Vs. Consumer IoT?

- Industrial ~60% of the market
    - Factory Automation, reduce scheduled maintenance times
    - Agricultural
    - Airplanes
    - City Trash Cans, parking spaces
    - Street Lights
    - Track assets

- Consumer ~40% of the market
    - Security
    - Appliances
    - Cars
    - Lights
    - Hot water tank, furnace,
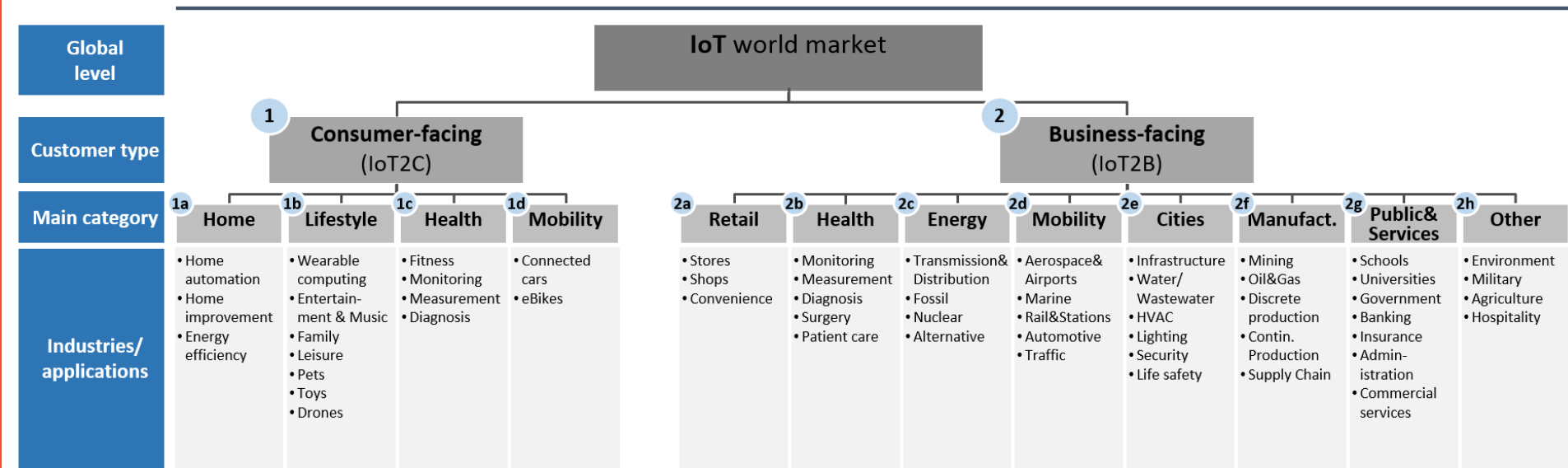   - Pet Tech
    - Earthquake detection

(a) (b)
(c) (d)

Even more categories...

IoT Analytics – *Quantifying the connected world*

Internet of Things – Market segmentation by industry/application

	IoT world market											

Global level

Customer type

1 Consumer-facing (IoT2C)				**2** Business-facing (IoT2B)							

Main category

1a Home	1b Lifestyle	1c Health	1d Mobility	2a Retail	2b Health	2c Energy	2d Mobility	2e Cities	2f Manufact.	2g Public& Services	2h Other

Industries/ applications

1a Home	1b Lifestyle	1c Health	1d Mobility	2a Retail	2b Health	2c Energy	2d Mobility	2e Cities	2f Manufact.	2g Public& Services	2h Other
• Home automation • Home improvement • Energy efficiency	• Wearable computing • Entertain-ment & Music • Family • Leisure • Pets • Toys • Drones	• Fitness • Monitoring • Measurement • Diagnosis	• Connected cars • eBikes	• Stores • Shops • Convenience	• Monitoring • Measurement • Diagnosis • Surgery • Patient care	• Transmission& Distribution • Fossil • Nuclear • Alternative	• Aerospace& Airports • Marine • Rail&Stations • Automotive • Traffic	• Infrastructure • Water/ Wastewater • HVAC • Lighting • Security • Life safety	• Mining • Oil&Gas • Discrete production • Contin. Production • Supply Chain	• Schools • Universities • Government • Banking • Insurance • Admin-istration • Commercial services	• Environment • Military • Agriculture • Hospitality

We consider the following applications as adjacent to the Internet of Things but not part of it: Car sharing, ePayment

Business Case

- Must fulfill a need

- Must be compelling

- OK if others on the market—difference between pioneers and settlers

- Not a real market if no competitors
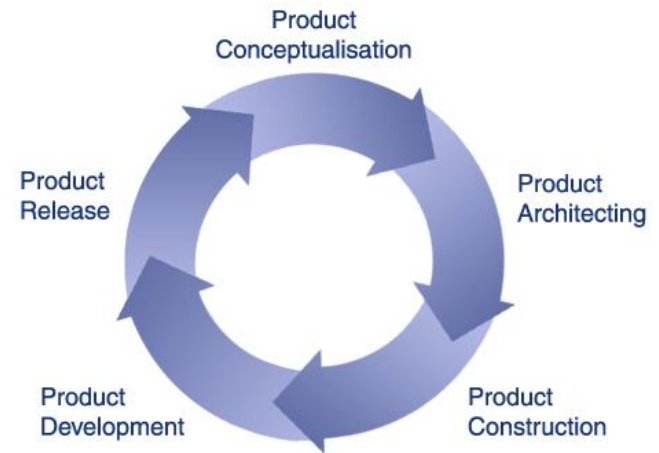
Funding Options

- Private – Friends and Family

  - Convertible Debt

  - Convertible Equity

- Strategic Investors

- Bootstrap

  - Home Equity

  - Growing revenues

- Traditional Venture Capital

- Angel Investment Organization

- VC Private Equity Group in Palo Alto as an example

Development Options

- Outsource
  - Software
  - Hardware
  - Keep key IP development
- Inhouse
  - Larger headcount
  - Employees vs. contractors
  - Interns – with few exceptions, must be paid
- MVP
  - If you are not embarrassed of your rev 1.0, you waited too long to ship it!
  - Use Beta Customers
  - Crowd funding is great for this

Product Conceptualisation

Product Architecting

Product Construction

Product Development

Product Release

Controlling Costs

- Spend company money like it is your own money

- Where to manufacture? Near shore vs. Offshore

- Have suppliers and customers invest and give LOC

Customer Service

- Must be outstanding due to the Internet (i.e. Uber)

- Can be outsourced with backup

- Can be a differentiator

- Must have FAQs, email, and telephone support

- Inapp support highly desirable

What about all that Data?

- Stop me if you have heard this one:
    - Generate revenue from hardware sales
    - Sell an on-going subscription
    - Monetize user data through sale of that data

- The best use of data in the early days is to improve the customer experience
- You can monetize it later when you have a much larger database

Product Exposure

- Online, use SEO
    - Amazon (Launchpad)
    - Ebay
    - Your own website

- Brick and Mortar

    - B8ta

    - IoT outlets/departments

- Tradeshows

- Gadget Reviewers

- Advertising—various forms—Costs $$$

Margin Expectations

- Consumer IoT

  - Retailers expect 30% to 50% (keystone)

- Industrial IoT

  - Distributors expect 10% to 20%

  - Reps 5%

$$\text{Gross Profit Margin} = \frac{(\text{Revenue} - \text{Cost of Goods Sold})}{\text{Revenue}}$$

Multiple Revenue Streams Possible

- Commerce
  - Initial Product
  - Consumables
  - Partners for companion products
- Support
  - Proactive
  - Reduce expensive in-field support
- Data
  - Improve customer support and experience
  - Feedback for product improvements
  - Sell to manufacturers
- Services
  - Home Service
  - Subscription Services
  - Remote Management

Exit Plan

- Do you need one? Should you have one?
- Options:
  - Remain private
  - Get bought
  - Go IPO
  - Go out of business

- Question: How many IoT startups have gone public? How many have been acquired?