

**Entrepreneurship
and
Innovation Management**

Launching an innovation

Overview

- The course team projects will be carried in teams of 3 to 5 students.
- Each team will choose and work on a single project.
- The idea here is to run a simulation on how to create a real innovation in the real world.
- Each team is required to pitch their innovation to a jury session at the end of this course so as gain credit for the course.

Ricky & Innovation



Ricky Ng-Adam

Founder of Coderbunker

✉ ricky@coderbunker.com

LinkedIn <https://www.linkedin.com/in/rngadam/>

Specialties

- 20 years experience in software development
- Architecture, design, R&D
- Team recruitment, building and coaching
- Javascript, Python, C/C++, bash, plpgsql
- API: REST, Websockets, GraphQL
- Deployment (Linux, Ansible, Cloud, Docker)
- Database (PostgreSQL)

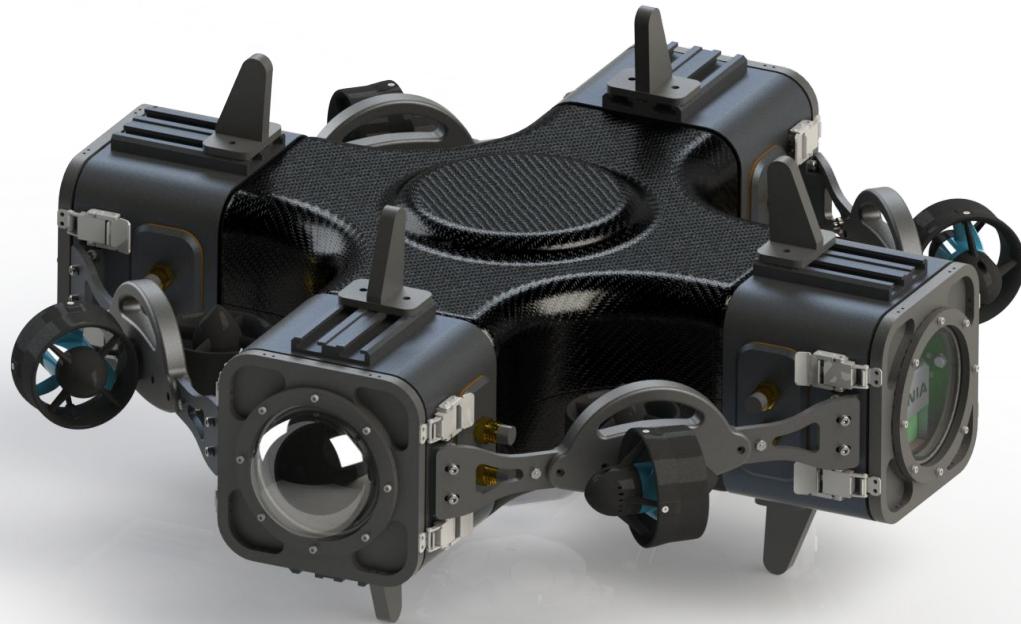


#CoderBunker



RANKING OVER YEARS

- 2015 – 17th position
- 2014 – 3th position
- 2013 – 18th position
- 2012 – 3rd position
- 2011 – 1st position
- 2010 – 4th position
- 2009 – 10th position
- 2008 – 3rd position
- 2007 – 3rd position
- 2006 – 3rd position
- 2005 – 2nd position
- 2004 – 3rd position
- 2003 – 2nd position
- 2002 – 7th position
- 2001 – 11th position
- 2000 – 11th position

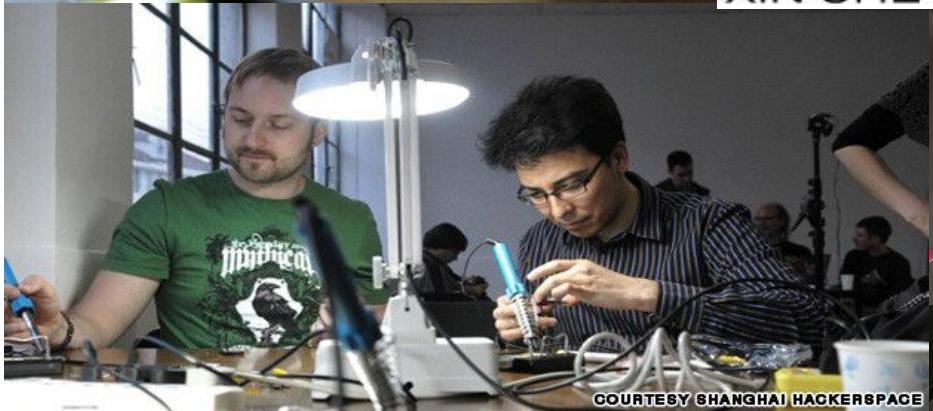






新车间

XIN CHE JIAN



COURTESY SHANGHAI HACKERSPACE





Lophilo

- New, low-cost, extensible hardware platform based on ARM with built-in network capabilities
- Full development environment served as a web site from the device
- Single language for system development leveraging the latest web technologies
- Easy to use FPGA with prebuilt core images





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Recap Best Practices

Innovation Strategies

- embracing open innovation and crowdsourcing
- collaborating with customers
- implementing rapid prototyping
- dividing R&D into decentralized autonomous teams
- spawning internal entrepreneurial ventures
- setting up corporate venture-capital arms
- pursuing external alliances

"You Need an Innovation Strategy", by Gary P. Pisano, HBR June 2015

Cataloguing Strengths, Abilities and Opportunities

Strengths, Abilities and Opportunities

- Look for
 - Specialized Knowledge
 - Previous experiences
 - Understanding of niche verticals
- Relations
 - Personal
 - Professional
 - Family relations
- Where is the money? Who has the money? How is it spent?

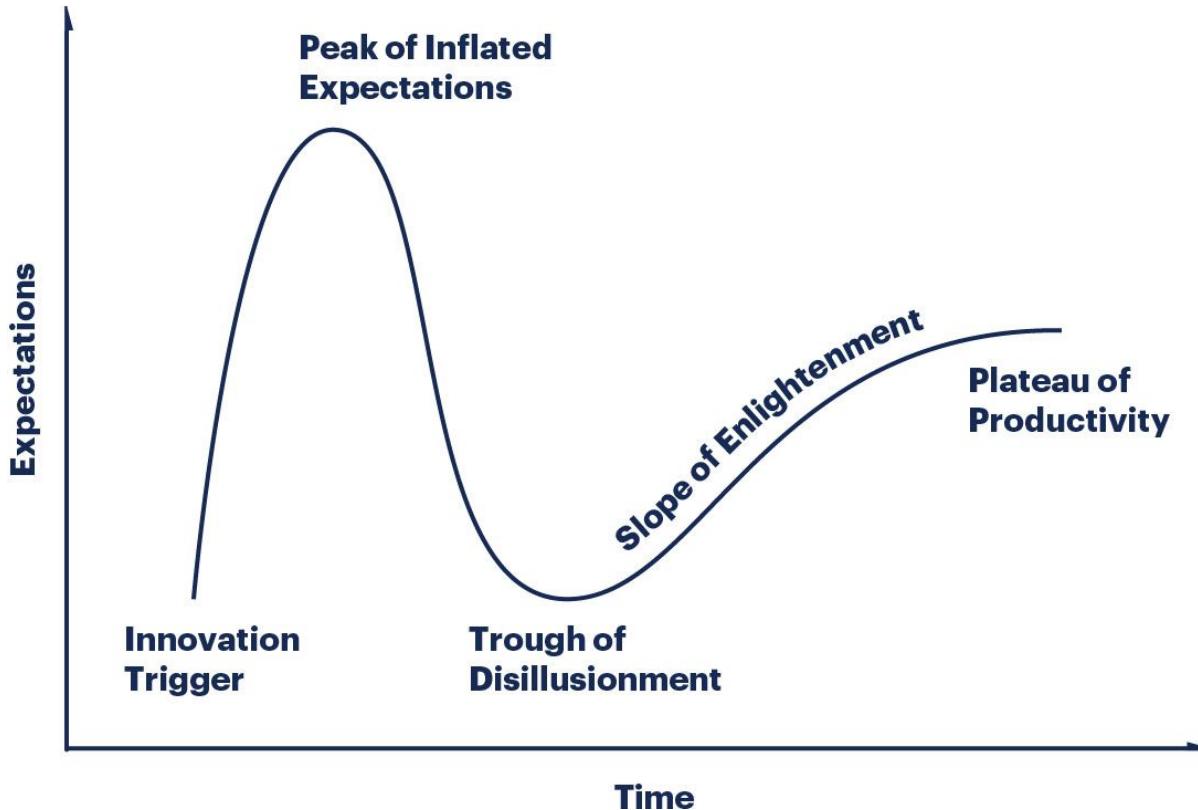
Understanding Trends

Global Trends (McKinsey)

- The age of urbanization
- Accelerating technological change
- Responding to the challenges of an aging world
- Trade, people, finance, and data: Greater global connections

Book Excerpt McKinsey Global Institute April 2015

Hype Cycle for Emerging Technologies, 2016



"The Hype Cycle for Emerging Technologies is unique among most Hype Cycles because it distills insights from more than 2,000 technologies into a succinct set of must-know emerging technologies and trends that will have the single greatest impact on an organization's strategic planning. This Hype Cycle specifically focuses on the set of technologies that is showing promise in delivering a high degree of competitive advantage over the next five to 10 years."

[Mike J. Walker](#), research director at Gartner

Ricky's favorite trends

- Scarcity vs abundance
- Distributed systems (including humans organizations)
- Automation: robotics and AI
- Intersection of technology and biology
- Communities (offline and online)

Innovation areas

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement
CONFIGURATION				OFFERING			EXPERIENCE		
PROFIT MODEL	STRUCTURE	PRODUCT PERFORMANCE		SERVICE	BRAND				
The way in which you make money	Alignment of your talent and assets	Distinguishing features and functionality		Support and enhancements that surround your offerings	Representation of your offerings and business				
<i>For example, how Netflix turned the video rental industry on its head by implementing a subscription model</i>	<i>For example, how Whole Foods has built a robust feedback system for internal teams</i>	<i>For example, how OXO Good Grips cost a premium but its “universal design” has a loyal following</i>	<i>For example, how “Deliver WOW through service” is Zappos’ #1 internal core value</i>	<i>For example, how Virgin extends its brand into sectors ranging from soft drinks to space travel</i>					
NETWORK	PROCESS	PRODUCT SYSTEM	CHANNEL	CUSTOMER ENGAGEMENT					
Connections with others to create value	Signature or superior methods for doing your work	Complementary products and services	How your offerings are delivered to customers and users	Distinctive interactions you foster					
<i>For example, how Target works with renowned external designers to differentiate itself</i>	<i>For example, how Zara’s “fast fashion” strategy moves its clothing from sketch to shelf in record time</i>	<i>For example, how Nike+ parlayed shoes, sensors, apps and devices into a sport lifestyle suite</i>	<i>For example, how Nespresso locks in customers with its useful members only club</i>	<i>For example, how Will’s experience draws more from the interactions in the room than on-screen</i>					

Paul Hobcraft

<https://www.ideatovalue.com/author/paul4innovating/>

Identifying (Big) Problems

A well defined problem to solve

- Current inputs and desired outputs
- Goal oriented





"We are the global leader in designing and implementing innovative competition models to solve the world's grandest challenges. We believe that inherent to every individual on the planet is a creative, entrepreneurial and inventive spirit, and as a global community – or crowd – we can activate this ingenuity and create innovation to collectively solve the Earth's most pressing problems."

ACTIVE XPRIZE COMPETITIONS

- Google Lunar
- Global Learning
- Adult Literacy
- Ocean Discovery
- Carbon Reduction
- Artificial Intelligence
- Water Abundance
- Women's Safety

challenge.gov

 [CHALLENGES](#)[ABOUT](#)[HOW IT WORKS](#)[PRIZEWIRE](#)[CONTACT](#)[LOG IN / REGISTER](#)[FOR AGENCIES](#)

NEWEST CHALLENGES

[Sort](#) [Submit](#)

Agency Search

Prize Amount Range

Prize Start From:

0

Prize End To: 1000000+

Challenge Type

- Software / Apps
- Ideas
- Designs

776 Competitions Found

DataApp: A Mobile App Framework for Field Data

Capture – Stage 1



\$30,000 in prizes

Can you help us create a flexible, extensible, open source app for capturing field data?

Open Until

Jul 06, 2017

Posted by:
[Bureau of Reclamation](#)

2017 Excellence in AmeriCorps Programming and Service Awards

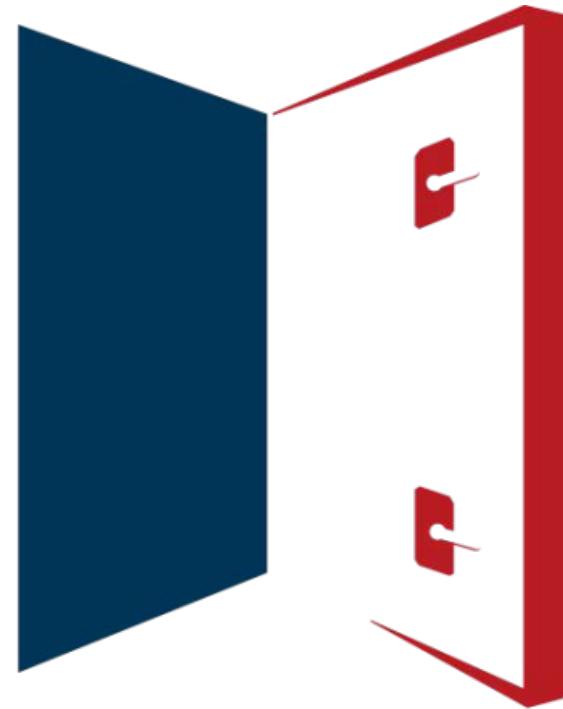
[View Prize List On This Challenge](#)

Nominate an outstanding AmeriCorps program, member, or alumnus for high-quality and impactful service.

Open Until

Jun 23, 2017

Posted by:
[Corporation for National and Community](#)



#CoderBunker

Coderbunker Customers Focus Areas

- Data engineering
- Fitness
- Luxury goods
- Community creation
- Education Technologies

<https://chinaccelerator.com/portfolio-companies/>



中国加速
CHINACCELERATOR

Identifying (smaller) Problems

Pain Points: Empathy

- What are you experiencing daily that is causing you frustration?
- What are other experiencing daily that is causing them pain?
- Take interest into others' people daily life and challenges

Surveying market

KICKSTARTER



Plobot | Physical Coding for ages 4 and up

Plobot



Plobot is a robot companion that teaches programming logic through storytelling and play - with cards instead of screens.

Created by

Plobot Team

345 backers pledged \$39,054 to help bring this project to life.

Wearhaus Arc - Wireless audio sharing



Designed with precision tuned audio, social music listening, color customization and touch controls.

[BUY NOW](#)

Created by

Wearhaus Inc

1,240 backers pledged \$247,379 to help bring this project to life.

<https://wiki.xinchejian.com/w/index.php?title=Category:Project>

A

- Aaaaiirrr.org
- Air particulate matter measurement
- Analog line follower
- Aquaponics
- Arcade Machines
- ArduBlock
- Arduino wireless programming over WiFi
- Assembly-AFRON
- Assistive Devices

B

- Beckoning Cat
- Biolab
- Bouncer

C

- City project
- CNC
- Composting
- Cubieboard

E

- EL wire
- Electric powered Waveboard
- Eyes Plan

F

- Fingerprint Bouncer

G

- Insectbot
- Interactive Door
- Interactive Plant
- IR receiver shield parts list

L

- LED Matrix digital logic using Logisim
- Liobar
- Lophilo

M

- Mastermind Safe
- Mechanical object avoidance shield parts list
- Mendel Reprap
- Mesh network 703n
- MINI—Quadcopter
- MotorShield
- Mr Octopussy
- Multiplo
- Musical Instruments

O

- OWL VoIP project

P

- P10 LED Screen
- PandaBoard
- Partkeepr
- Plobot
- Project
- Project Passport

- Robotic Go-Kart
- Rudy Bike

S

- Sofa Car
- Solar Charger
- Space Program
- Susan
- Swarm robots

T

- TheSpaceIsTheProject
- TheSpaceProjectS
- Thumb joystick

U

- Ultrasonic Sensing Haptic Feedback Motorbike Safety System
- Urban Farming
- Urban Farming Ebb and Flow
- USB Joystick
- Useless Machine

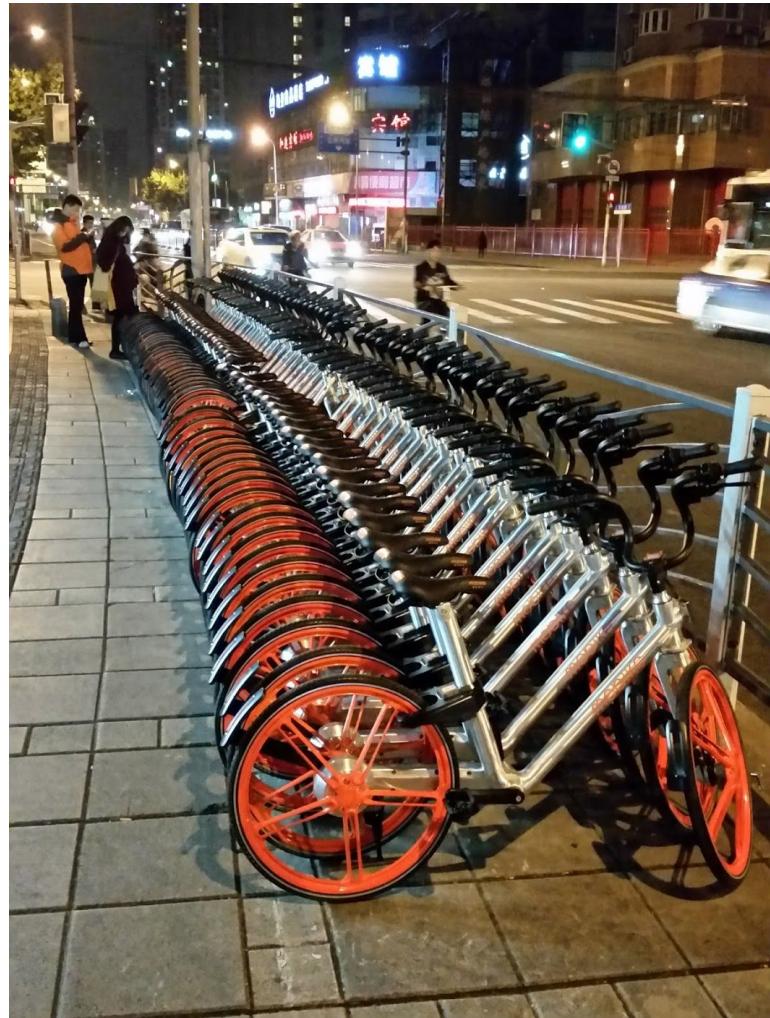
V

- Vacuum former
- Video Mapping in VVVV
- VVVV

W

- Wifi Data Collection

V

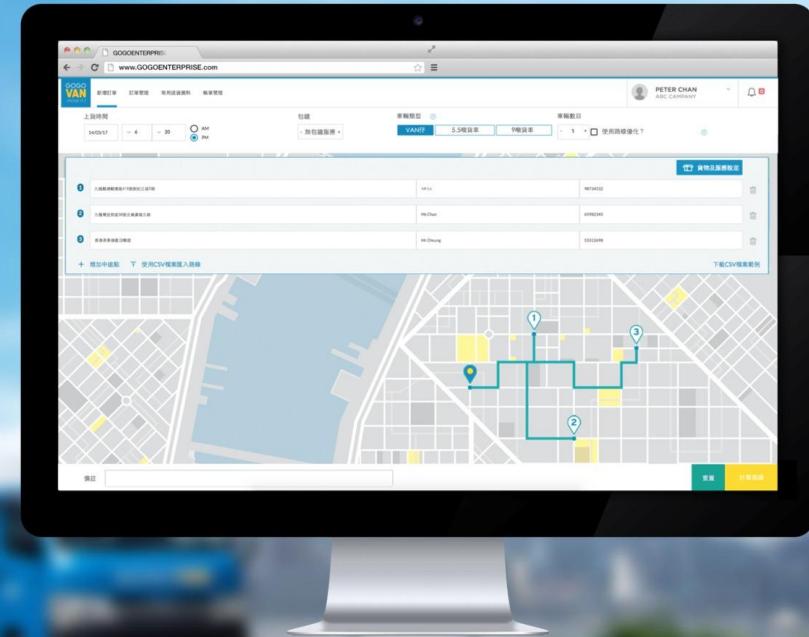


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Identifying Building Blocks

Identifying Cutting Edge of Research



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Publications

Google publishes hundreds of research papers each year. Publishing is important to us; it enables us to collaborate and share ideas with, as well as learn from, the broader scientific community. Submissions are often made stronger by the fact that ideas have been tested through real product implementation by the time of publication.

21 Research Areas

[Algorithms and Theory](#)

539 PUBLICATIONS

[Data Management](#)

114 PUBLICATIONS

<https://research.google.com/pubs/papers.html>

Identifying Popular Software Libraries

Trending in open source

See what the GitHub community is most excited about this month.

Repositories Developers Trending: this month All languages

JetBrains / kotlin ★ Star Unknown languages
The Kotlin Programming Language
Java ★ 14,499 ⚡ 1,355 Built by 6,640 stars this month

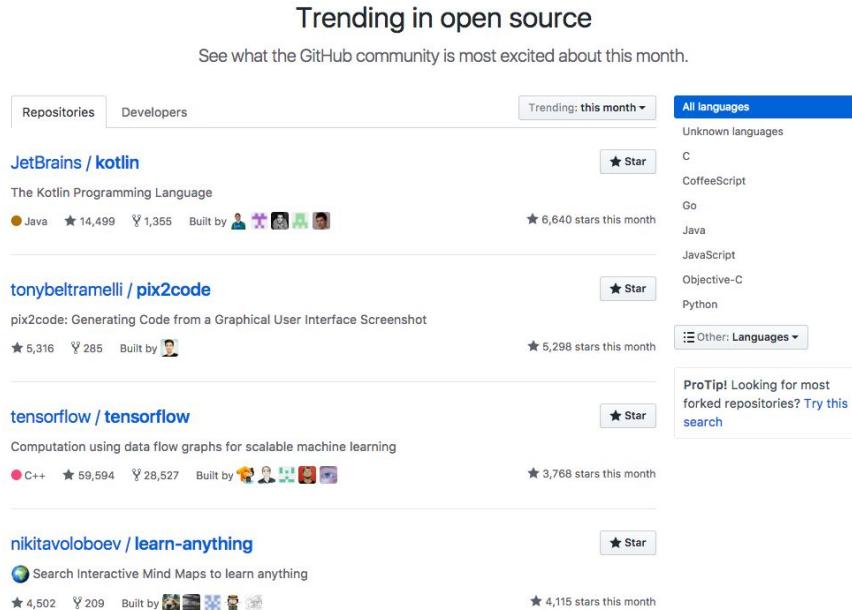
tonybeltramelli / pix2code ★ Star C
pix2code: Generating Code from a Graphical User Interface Screenshot
Java ★ 5,316 ⚡ 285 Built by 5,298 stars this month

tensorflow / tensorflow ★ Star CoffeeScript
Computation using data flow graphs for scalable machine learning
C++ ★ 59,594 ⚡ 28,527 Built by 3,768 stars this month

nikitavoloboev / learn-anything ★ Star Go
Search Interactive Mind Maps to learn anything
Java ★ 4,502 ⚡ 209 Built by 4,115 stars this month

All languages Unknown languages
C
CoffeeScript
Go
Java
JavaScript
Objective-C
Python
Other: Languages ▾

ProTip! Looking for most forked repositories? Try this search



<https://github.com/trending?since=monthly>

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BREAKING NEWS BLOG: SCOTUS Ends Texas Patent Craze

QUALCOMM NXP

Apple Turns Up Speakers, AR
Intel's Passenger Economy: What's the Point?
18 Views of an AR World
Qualcomm-NXP Deal Faces EU Snag

Most Recent Comments

resistion XPoint is still too close to NAND to be outside of the reach of incremental improvements such as the controller.

6/5/2017 7:06:11 PM

News & Analysis

IBM Claims 5nm Nanosheet Breakthrough

6/5/2017 LAKE WALES, Fla. — IBM researchers and their partners have developed a new transistor architecture based on stacked silicon nanosheets that they ...

10 comments Post a Comment

latest comment resistion Adjustable width seems just an excuse.

EEdesignlines

Today's Top Picks

SoC Designline
4 Views of the Silicon Roadmap 8

Latest comment resistion The doses here of ~30-40 mJ/cm² are still too low, need something like 60-80 mJ/cm²,...

Opinion

BLOG Intel to Strike Thunderbolt in CPUs

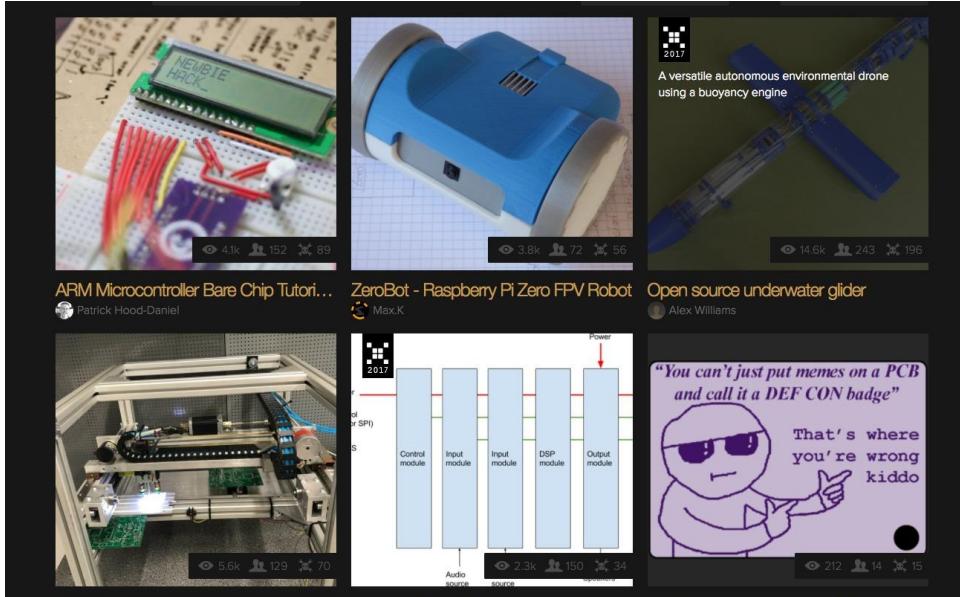
Ryan Shrout 10 comments

With speeds of 40 Gbits/second, plug-and-play support and a single unified cable design, Thunderbolt should be the most adopted and accepted cabling interface in the ...

latest comment Bad93386 We have been hearing of the

<http://www.eetimes.com>

Identifying Products Prototypes



<https://hackaday.io/projects>

Pitch

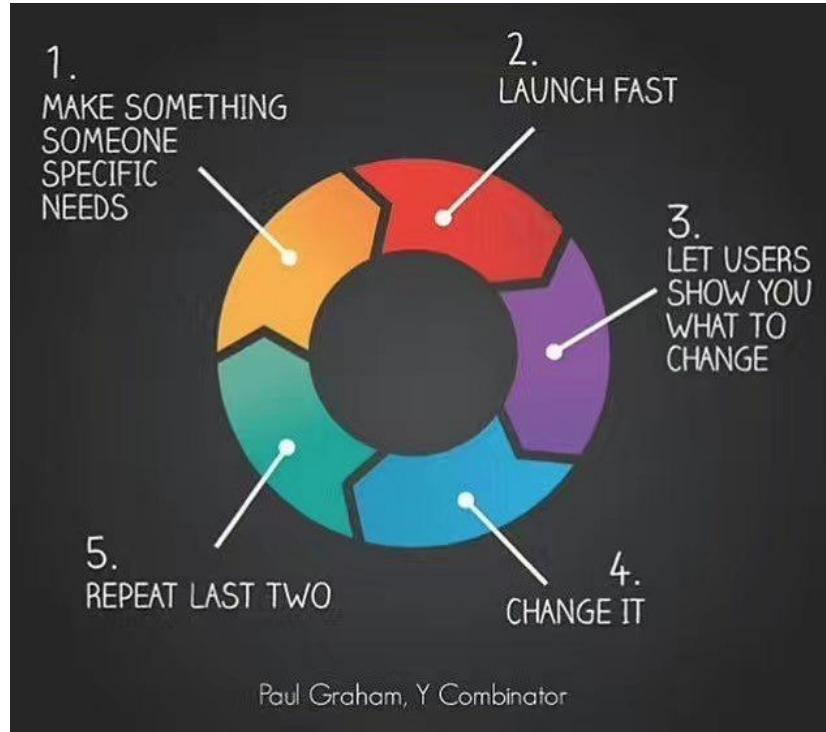
"The Greatest Sales Deck I've Ever Seen"

1. Name a Big, Relevant Change in the World
2. Show There'll Be Winners and Losers
3. Tease the Promised Land
4. Introduce Features as "Magic Gifts"
5. Present Evidence that You Can Make the Story Come True

["The Greatest Sales Deck I've Ever Seen" By Andy Raskin](#)

Fail Faster

Launch!



Landing Page

L'objectif d'une landing page est d'obtenir des chiffres qui pourront être analysés afin de mieux comprendre le marché :

- Combien de visiteurs ont visité ma landing page en 3 semaines ?
- Comment les visiteurs sont-ils arrivés sur la landing page ? (Google, Medium, Twitter, Facebook, ...)
- Combien de visiteurs ont renseigné leur email ou numéro de téléphone pour essayer le produit ?

[Pourquoi je refuse de devenir ton CTO by Romain Asnar](#) (Medium)

WHAT WE DO

WHO WE ARE

WHO'S TALKING

CONTACT US



We start innovative businesses

— Innovation Management —

strikingly

Innovative Management

<http://utseus-example.strikingly.com/>

 RETURN TO DASHBOARD

LAST 24 HOURS

LAST 7 DAYS

LAST 30 DAYS

LAST 90 DAYS

UNIQUE VISITORS - PAST WEEK

0

Call to action (conversion)

— Contact Us —

Don't be afraid to reach out. You + us = awesome.

Name

Email

Message

SUBMIT

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Grading

Criteria for practical exercise

- Financials
- Quantified
 - Page views
 - Conversions (registered potential customers)
 - Customers interviews
- Qualitative
 - Feasibility
 - Return on Investment : efficiency (cost vs potential revenues)
- Analogies
 - What other successful similar or parallel product/service can it be compared to?
 - Negative: how easy is it for me to find a direct competitor in the same market?
- Correct English (spelling, punctuation, grammar)

Financials

- Revenues
 - Direct and indirect
- Costs
 - R&D
 - Material
 - Marketing
 - Distribution
 - Maintenance
 - Packaging and shipping

TODO

- Prepare for ideas generation: understand yourself and others
 - Catalog Strengths, Abilities and Opportunities
 - Identify micro-trends around you
 - Identify technologies of interests and gain theoretical understanding
- Idea generation and screening
 - from crazy ideas to feasible ideas
- Business Case formulation (market research, business plan, model, **no capital**)
 - "Fake it till you make it": launch website to gain understanding from the market
 - Start collecting potential customers (commitments)
- Business model construction
 - Build an MVP and iterate

Opportunities

"Hot" Opportunities

- VR Experiences (pixolabs.com)
- Community Management (Membership, Events)
- Logistics (searching for shipping rates)
- New niche sports
 - Underwater Hockey: canamuwhgear.com
 - Ultimate Frisbee
- Commercial Real Estate
- Food safety
- Fashion
- Entertainment
- WeChat Bots (<https://github.com/coderbunker/candobot>)