The Business of Making
Strategies for Success from Startup to Exit
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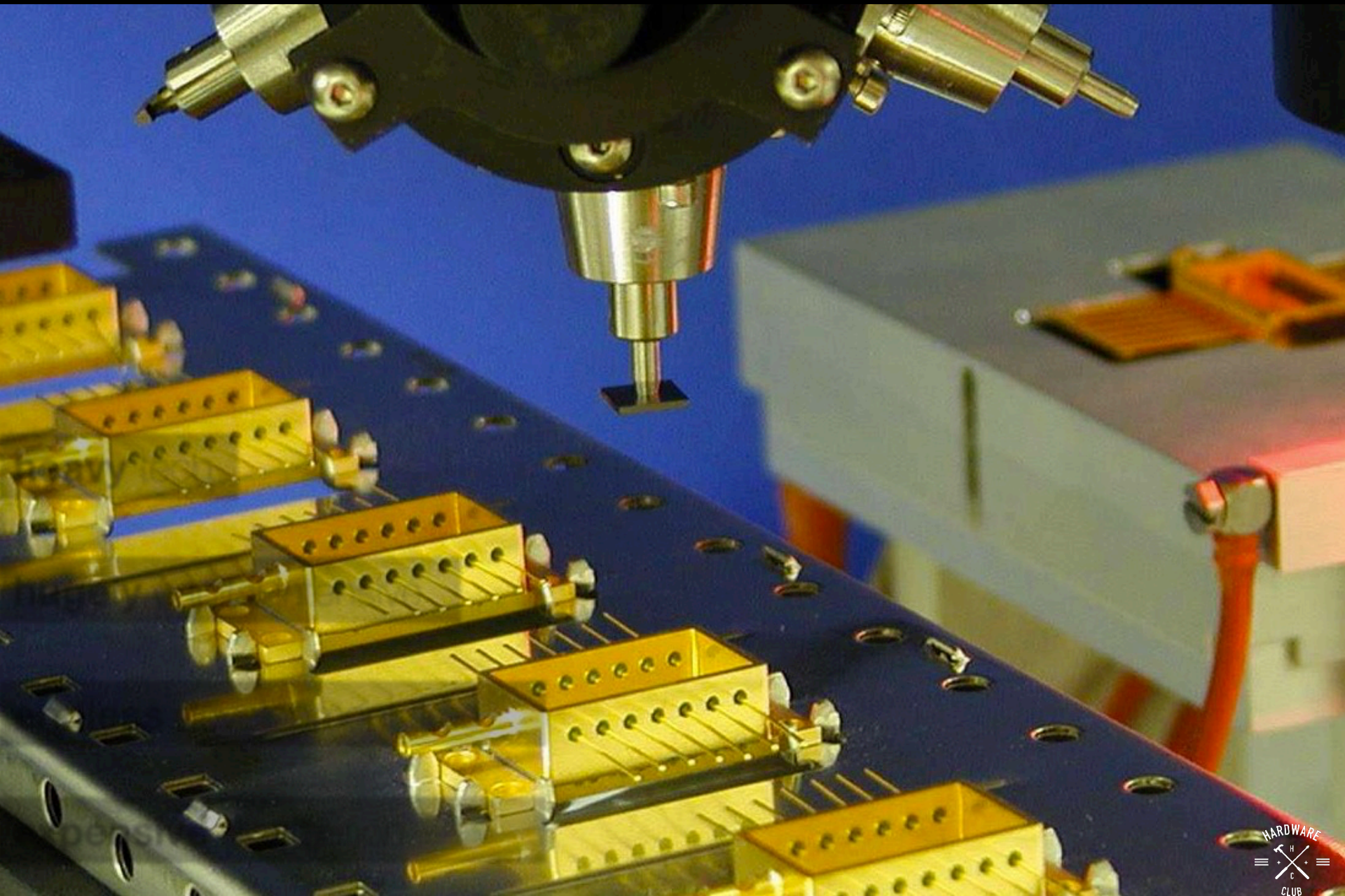
what **hardware** used to be.



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The Hardware Revolution

The New York Times

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Apr 25,

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By Luke

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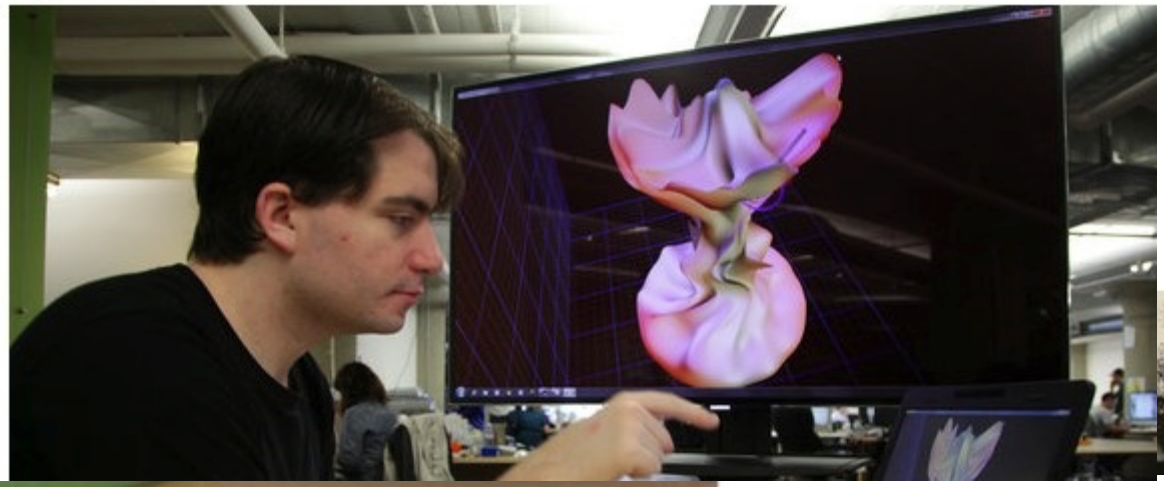
The New York Times

At an Annual Tech Show, It's Hardware's Turn in the Spotlight



By NICK BILTON
Published: August 25, 2012

In recent years, Silicon Valley seems to have forgotten about silicon.

FACEBOOK

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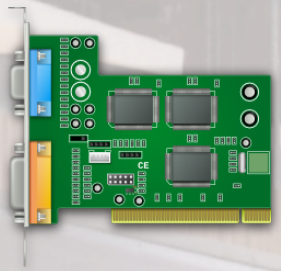

The Hardware Revolution

Removing Barriers to Entry

- Open source hardware
  - Arduino boards, etc
- Cheap pre-fab dev kits & sensors
- Access to tools and equipment for prototyping and early production
  - Techshop / makerspaces
- Crowdfunding platforms to prove early customer traction
- Infusion of capital from funding entities

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Building a Successful HW Company

1. Customer Validation
2. Product/Market Fit
3. Company & Team Building
4. Investor Buy In

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Smart Prototyping

- Fake it until you make it
- One hypothesis at a time
- Ugly & Fast beats Beautiful & Slow

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Successful Products Start Simple

- 1st iPhone - iPod with up/down/left/right buttons
- 1st Fitbit - single pedometer, not wireless, no subscription revenue
- 1st DropCam - overpriced IP camera that was easier to use and had better software

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Supply Chain Hacks

- Shop outside the box
- Ride high volume product coattails
- Alibaba & Other Online Matchmakers
- Never, ever be the guinea pig

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Choosing a Manufacturing Partner

- New Factory or New Product – Not both
- Involve factory early – DFM
- Small production runs to start, increase slowly
- 1st Production Run….be there in person

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Design for Manufacture in the U.S.

- Can be Lower Cost!
- Time to Market
- Inventory Carrying Costs
- Quality Control & IP Protection

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Kickstarter Tips

- Key to success is before the launch
- Nail down 50%+ of total raise before launch
- Everyone wants to back a winner
- Your competitors are watching

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Distribution Amplifies Every Choice

- Price high to start
- Do things that don't scale
- Engineering:Software => Marketing:Hardware

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PROFIT CASH

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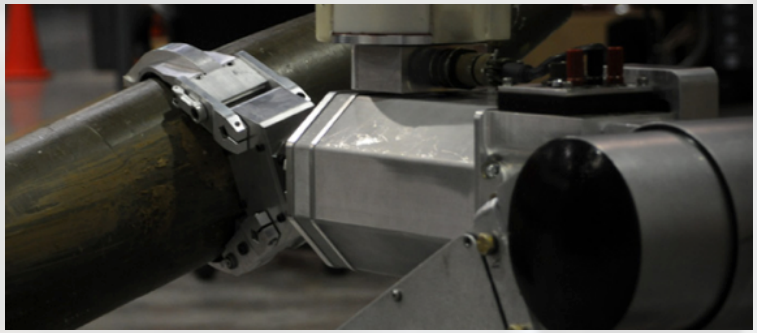
Regional Manufacturing Assets



- Over 8000 Manufacturers in the region
- Skilled Advanced Manufacturing Work Force
- Infrastructure to support new manufacturers
- Leading research universities and other technology institutions

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Industry Diversity

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#1 City in World for HW

- Regional Support for Manufacturing
- Experience working with early stage products
- Local Skilled Workers

PITTSBURGHERS KNOW HOW TO MAKE STUFF

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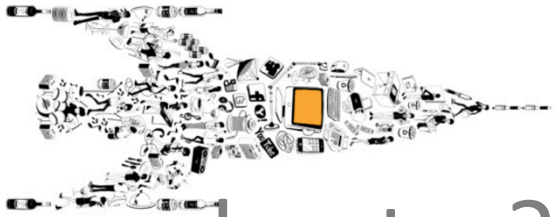

What is an accelerator?

Philosophy

- Accelerate market learning through rapid iteration and testing early products with customers

Unique Model

- Focus on customer development intertwined with product design and development
- Mentorship, Education
- Community, Networking
- Funding
- Space

AlphaLab

- Founded Feb 2008 to build and accelerate Pittsburgh's software/ Internet ecosystem

Leverage national and local trends

- Decreasing cost to build software products
- Agile development techniques

Charter member of Global Accelerator Network

#6 ranked accelerator nationally

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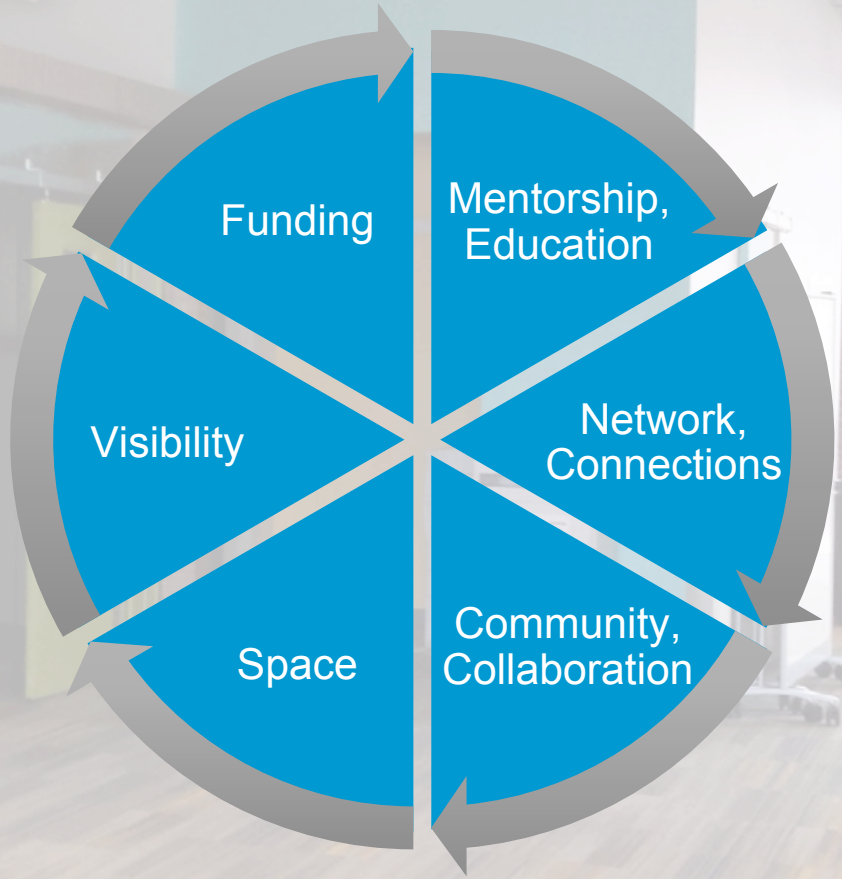
Helping Companies Build Momentum

Accelerator

- Provide key resources to help a startup move faster toward product, customers, funding

Philosophy

- Be open to challenge and test your key assumptions quickly



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innovation works
Among Most Active in US
$70M
Dollars Invested
$2.0B
Follow-on Funding
300+
Companies Funded
up to $600k
Invests up to $600k in early stage companies
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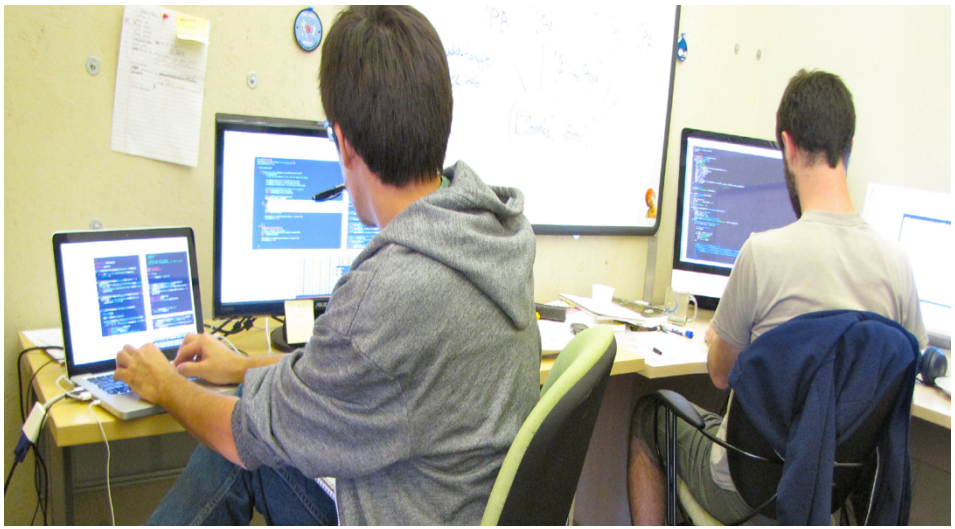
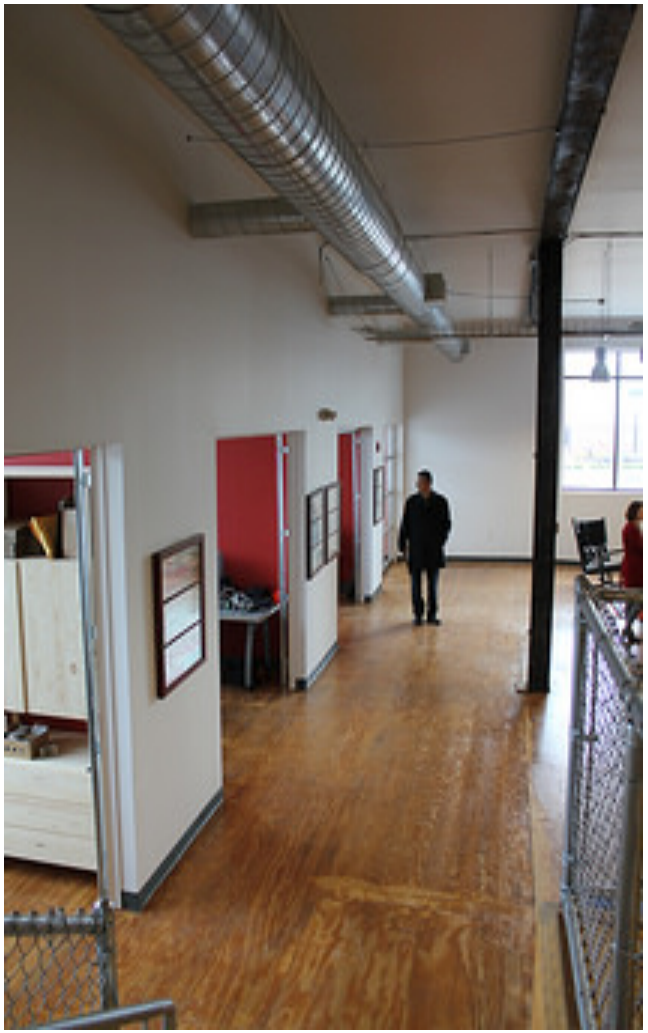
Office Space





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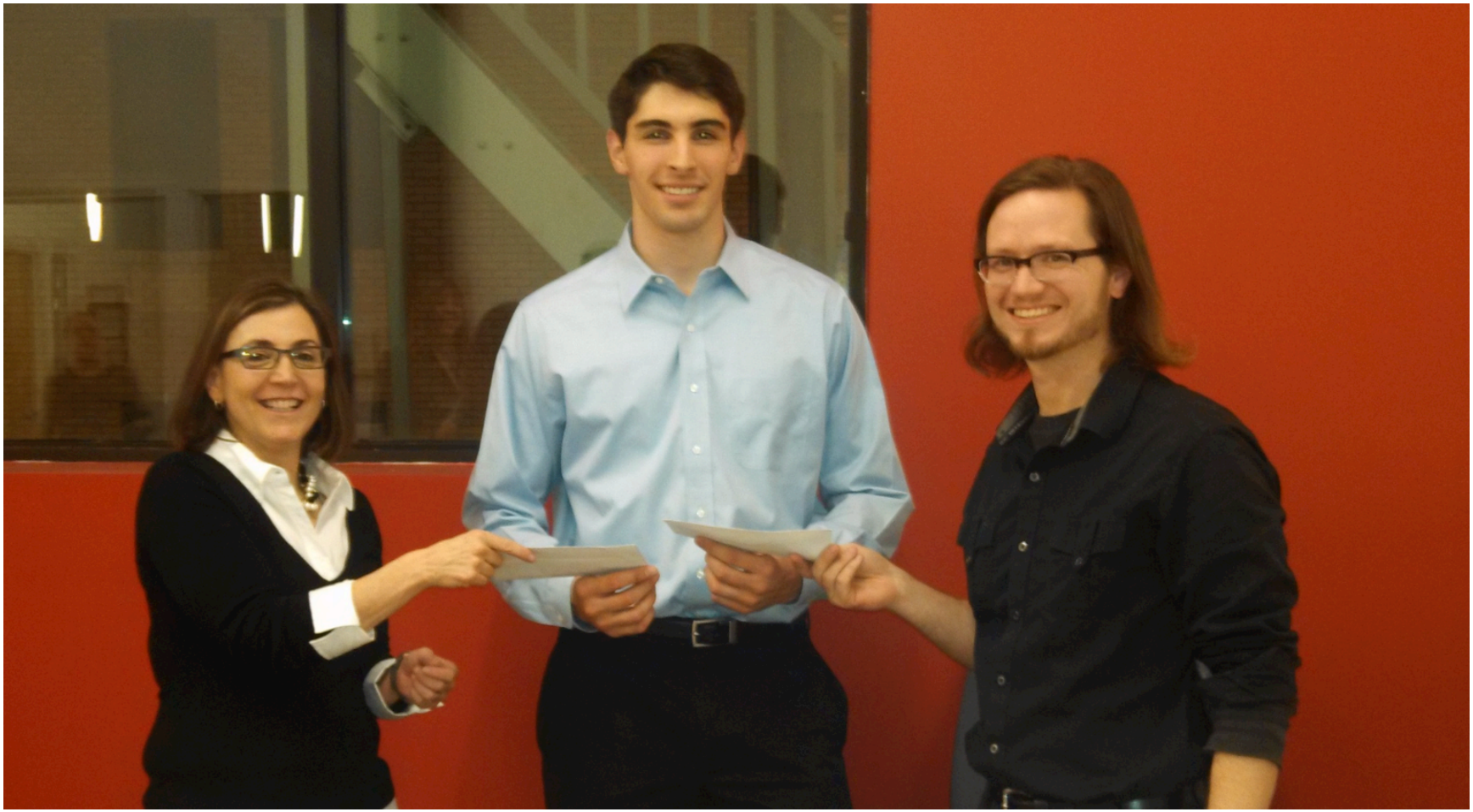
Funding



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Educational Sessions

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Mentors & Advisors

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Network, Community & Collaboration

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Demo Day

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What do accelerators look for?

- Able to have a fundable plan by program end
- Unique, compelling solution with strong market potential
- Capital efficiency - ability to achieve significant milestones in short period of time
- Passion, commitment and capabilities of the team

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What do we look for?

- Big problem & big market
- Off-the-shelf or new tech
- 21 weeks and $50k will get you to a point that you can raise funds (investment or revenues)
- Enter at the right stage to reach meaningful result by end of program

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AlphaLab Gear Market Validation Module

- 21 weeks (April through August)
- Up to $75,000
  - $25k-$50k upon entry
  - Additional $25,000 convertible note provided that company receives $25,000 in purchase orders
- Well-positioned to apply for Manufacturing program

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The Spring 2018 Market Validation application cycle is open!

AlphaLab Gear application process

- Deadline: Feb 11
- Interviews: Feb 27 & 28
- Offers: late March
- Cohort starts: April 9

alphalabgear.org/apply

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AlphaLab Gear Hardware Cup

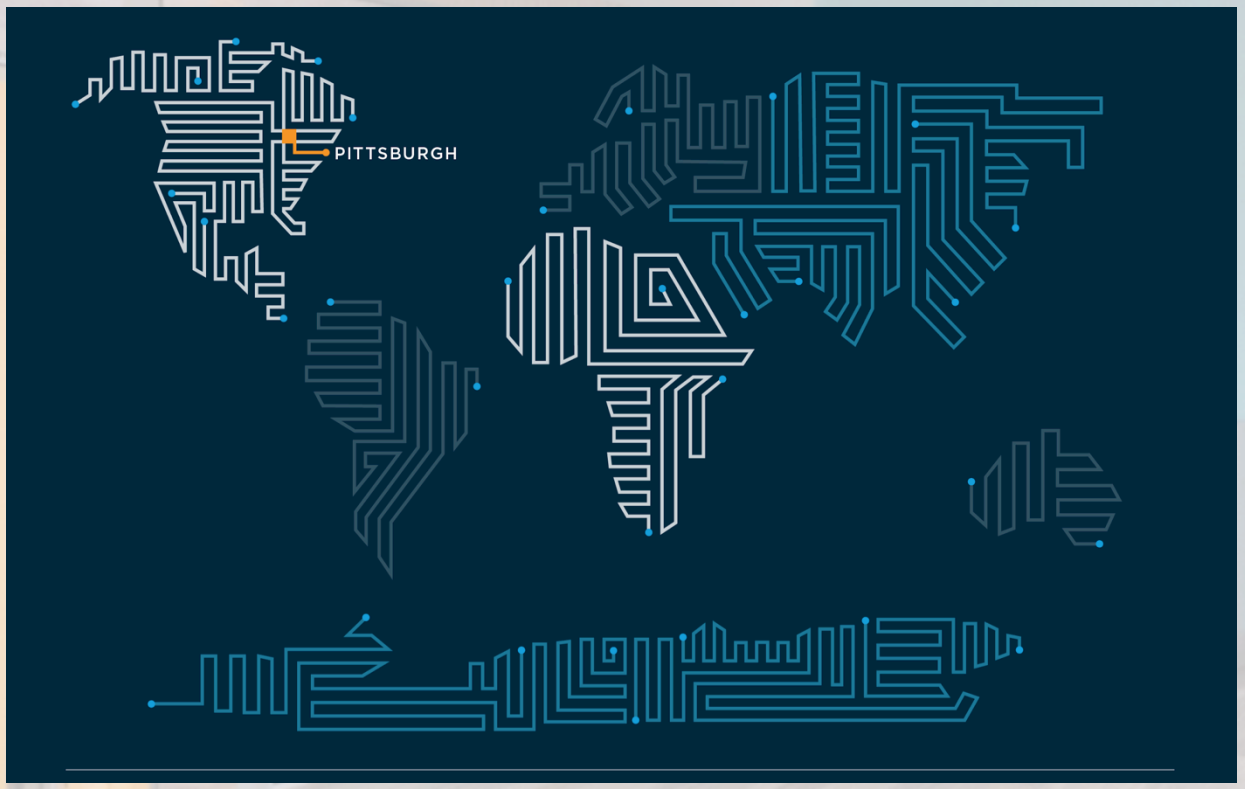
Applications are open! www.hardwarecup.com

2/6 Mid-Atlantic: Pittsburgh

2/13 Northeast: Boston

2/21 East Coast: DC

3/6 South: Austin



3/13 West Coast: LA

4/3 Midwest: Chicago

Japan, South Korea, Israel also holding Hardware Cups

4/18 & 4/19: International Finals in Pittsburgh

@AlphaLabGear

#HWCup2018

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38

Companies since 2013

85%+

Currently Operating

63%

Have Paying Customers by Demo Day

95%+

Follow on Funding w/in 6 months of Demo Day