



Hacking for X

National Program to Connect Students to
Government and Community Problems

Connecting Students to Solve National Problems

- Students want to work on real and hard problems that matter
- They want to learn entrepreneurship while doing a form of national service
- Government agencies need creative problem solvers
- We took a known class and methodology – Lean LaunchPad / National Science Foundation I-Corps
 - Instead of students working on their problems, they worked on sponsors problems

Hacking for X Curriculum

- Lean Methodology
 - *Mission* Model + Customer Development + Agile Development
- Exact same I-Corps Curriculum
- I-Corps instructors + domain experts

Mission Model Canvas

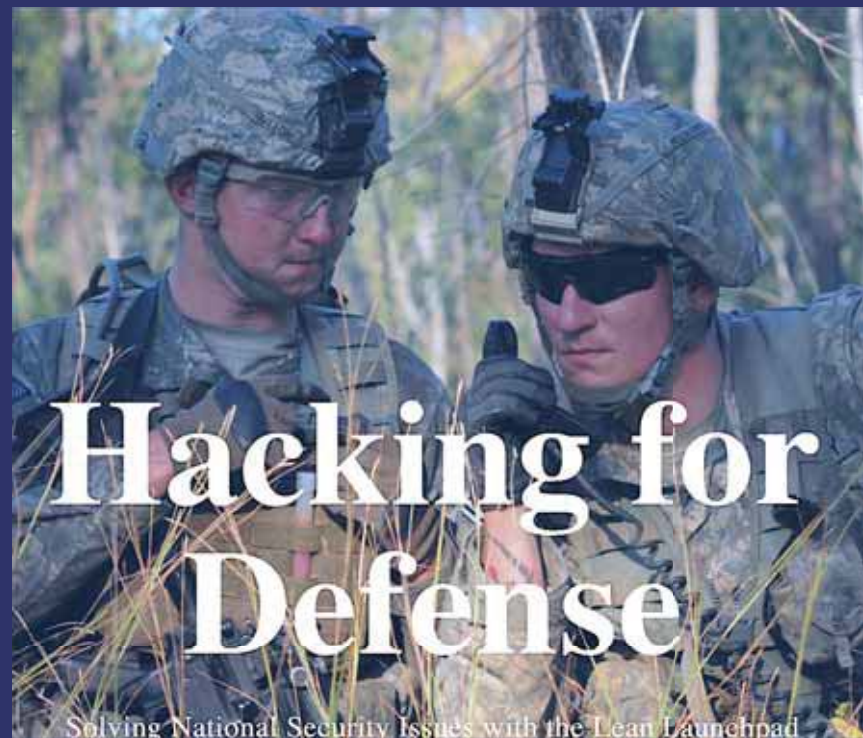


<p>Key Partners</p> <p>Which of these activities can your company outsource to others?</p>	<p>Key Activities</p> <p>What are the <i>unique</i> activities your company needs to deliver the value proposition?</p>	<p>Value Proposition</p> <p><i>For each beneficiary</i> what is <u>their</u> value proposition?</p> <p>What problem pain/gain does this solve for them?</p>	<p>Buy-in & Support</p> <p><i>For each beneficiary</i> how does the team get “Buy-In”</p>	<p>Beneficiaries/S takeholders</p> <ul style="list-style-type: none">• By title/function who are the individuals who are creating value for?• What is their archetype
<p>Key Resources</p> <p>Which of these activities does your company needs to own?</p>		<p>Deployment</p> <ul style="list-style-type: none">• What will it take to deploy the MVP to widespread use?• ”• What constitutes a successful deployment?		
<p>Mission Budget (or cost)</p> <p>What are the costs to deliver the value proposition?</p>			<p>Mission Achievement/Success (or “fulfillment” or “impact”) Factors</p> <p><i>For each beneficiary</i> how does the team know they succeeded?</p>	

2016 – Hacking for *Defense*

- Solicited problems from the U.S. Defense and Intelligence Community
- Uses the Stanford *Lean LaunchPad/ NSF I-Corps* curriculum
- Now taught in 22 universities
- Solving 200+ problems a year

See <https://www.h4di.org>



Sample: Hacking for *Defense Problems*

Stanford University - Spring 2018

- Social Media for Recruiting, *D.C. Air National Guard*
- Vehicle Immobilization, *ERDC*
- Commander's Knowledge Management, *USF Korea*
- Power, *Air Force Research Lab*
- Non-Intrusive Load Monitoring, *Department of Energy*
- BYOD in the DoD, *NAVSUP*
- Indoor Transport of Missile Systems, *Air Force Nuclear Weapons Center*
- Protecting Energy-Related Data, *A.F. Office of Energy Assurance (OEA)*
- OBC Imagery, *9th ISR Wing*
- Building Survivability During Military Operations, *ERDC*
- Finding Life Beyond Earth, *NASA*
- Protocol Analysis, *National Security Agency*

2016 – Hacking for Diplomacy

- Solicited problems from the U.S. State Department
- Uses the Stanford *Lean LaunchPad*/ NSF I-Corps curriculum

See <http://web.stanford.edu/class/msande298/>



Learn how to apply "lean startup" principles to tackling global challenges

Sample: Hacking for *Diplomacy* Problems

- Steer Clear: Avoiding Space Collisions by Tracking Objects in Orbit
- Assessing the Effectiveness of Peacekeeping Forces
- Design an Informal Leader Dataset
- Hacking Violent Extremism Online
- Fatal Journeys: Improving Data on Missing or Perished Refugees
- Fruits of Labor: Bringing Sunshine to the "Labor Recruitment" Market
- Platform for a Coordinated Response to the Syrian Refugee Crisis
- All Source Global Violence Datasets
- Crowdsourcing Radiation Detection with New or Improved Methods
- Orchestrating Message Campaigns to Counter Violent Extremism
- Mapping, Analyzing, and Preventing Security Force Abuses
- Leveraging Blockchain for Anti-Corruption: Practical and Policy Implications
- Immigrant and Refugee Integration (mobile solutions for mobile populations)
- Illegal, Unregulated, and Unreported Fishing

2017 – Hacking for *Energy*

- Solicited problems from the utilities and companies for energy sustainability issues
- Uses the Stanford *Lean LaunchPad*/ NSF I-Corps curriculum
- Taught at Columbia and NYU

See

<http://www.hacking4energy.com>



2018 – Hacking for *Impact*

- Solicited problems from Non-profits/ NGO's
- Uses the Stanford *Lean LaunchPad*/ NSF I-Corps curriculum
- Taught at U.C. Berkeley



See <http://hacking4impact.berkeley.edu>

2019 – Hacking for *Local*

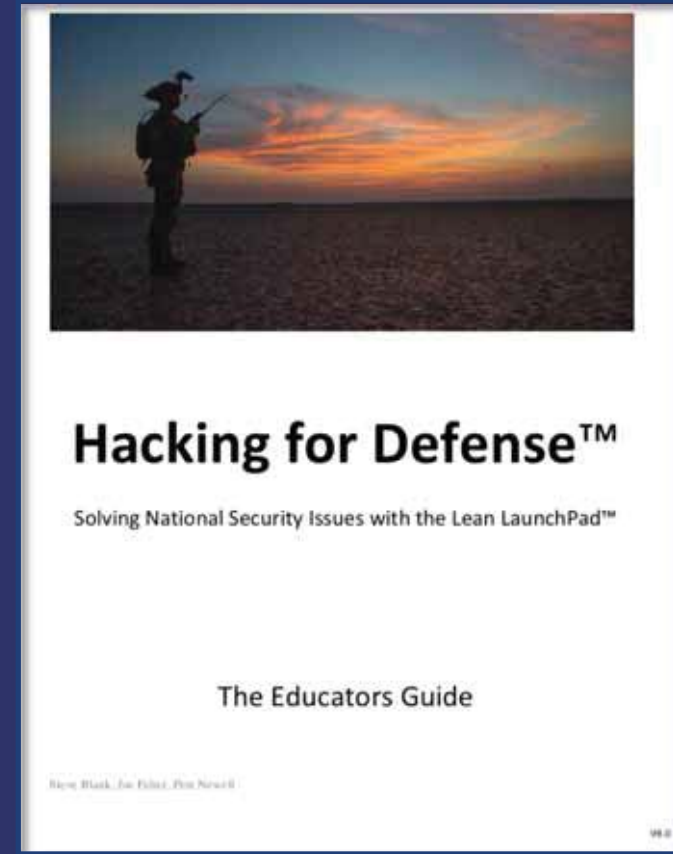
- Solicited problems from the City of Oakland
- Uses the Stanford *Lean LaunchPad*/ NSF *I-Corps* curriculum
- Taught at U.C. Berkeley



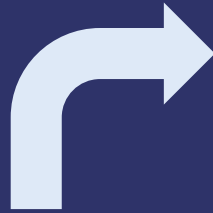
See <https://hackingforlocal-oakland.weebly.com>

Logistics – Hacking for X

- Wrote 200 page educator guide to train-the-trainers
- Developed 2 ½ day educator course to train new instructors
- Developed on-line video course for students to supplement the lectures
- Class depends on sourcing problems
 - Developed sponsor guide to help curate new problems
 - Set up non-profit for Hacking for Defense to scale the program nationally



Hacking for X History



~400,000 on-line students
Udacity.com



I-Corps @ NSF
For SBIR/STTR
2011

1,500+ teams
Taught by 98
Universities



National Institutes
of Health
I-Corps @ NIH
For Life Sciences
2014



I-Corps @ NSA
2015



Hacking for
Defense,
Diplomacy,
Energy,
Local ...
2016

STANFORD
UNIVERSITY

Lean LaunchPad
For Students
2010

Hacking for X: Results

- Students work on 100's of government mission-driven problems every year
 - Using the latest entrepreneurship tools
 - While performing a national service
- Government agencies get hundreds of the the “best and brightest” students helping solve their problems

Hacking for Defense

Student Team Example Presentation