USING PUBLIC-PRIVATE PARTNERSHIPS TO INNOVATE AND REACH NEW PEOPLE

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Using Public-Private Partnerships to Innovate and Reach New People

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Introduction – Dr. Joe Adams

- Vice President of Research and Cyber Security for Merit Network
- Degrees in Computer Engineering from Virginia Tech, Univ. of Arkansas, and Syracuse Univ.
- 26 years Army Signal Corps
- Associate Professor at US Military Academy
- Senior Member IEEE
- Distinguished Fellow, Ponemon Institute
Introduction – Michigan Cyber Range

- Public-Private Partnership
- Provides basic cyber security education, training, and testing
- Start up to self-sustaining in 28 months
What is a Public-Private Partnership?

• a coalition between for-profit, non-profit, and government to achieve a commonly-held beneficial goal

• requires active participation by all parties

• Examples
  – Workforce/Job development & training
  – Economic Development
  – Environmental causes

• I’m not talking about privatization of public services!
Public-Private Partnerships – The Good

- Alternative mechanisms to funnel public funds into community projects
- Must eventually become self-sustaining
- Forms “coalitions of the willing” to overcome common obstacles
Public-Private Partnerships – The Not So Good

- Competing with private business?
  - So why is there a need?

- Loss of control
  - Trying to please everyone means pleasing no one

- The Danger of Grants
  - What happens when the money runs out?
So why partner?

- Shared vision
- Shared requirements
- Shared responsibilities
- Everyone has a stake
What makes it work?

• Common Vision
  – Stick to it!
  – Fight scope creep

• Shared Execution

• Adaptive, creative responses

• Solving the group’s problems
  – Then helping others with the same approach
How does it work?

• Distill the mission statement from the vision

• Think like a start up
  – Find the right person to lead
  – Identify candidates to invite

• Set expectations
  – What are you going to do?
  – What aren’t you going to do?
How does it work?

• Getting Started
  – Sponsorship
  – Development costs
  – Infrastructure establishment
  – Service/Product catalog

• Showing versus telling
  – Lots of “hands out”. How are you different?
  – Talking concepts vs. delivering results
  – Tangible examples vs. PowerPoint
How does it work?

• What are the expectations?
  – Development time
  – Pilots
  – Finding your way to the solution

• Timelines and managing expectations
  – Strategic Plan
  – Business Plan
  – Communications Plan

• Ramping up to self-sustainment
How does it work?

• Sustainment
  – Contracts

• Expansion
  – Stay consistent with your vision

• Where you want to go vs. Where you’re pushed
  – Beware of sponsorship’s many forms
  – Fickle budget priorities and lots of favors
How does it work?

• Governance
  – What roles are played?
  – Fiduciary responsibility
  – Management by committee

• Advisor or Partner?
  – What’s in a name?
  – You’ll need both

• Communication
  – Meetings
  – Un-meetings
Timeline of the Michigan Cyber Range

- Oct 2011 – Vision Statement
- Jan 2012 – Assignment to Merit
- Jun 2012 – Hiring the Director
- Nov 2012 – Cutting the Ribbon

- Dec 2012 – First Infrastructure Rental
- Mar 2013 – First Class
- May 2013 – First CTF Exercise
- Jul 2013 – First Red/Blue Exercise

- Mar 2014 – First Multi-Team Exercise
- Jul 2014 – First Incident Response Exercise
- Oct 2014 – Power Phoenix
- Nov 2014 – First Multi-National Exercise
1. Establishing the Vision

- Governor’s Summit 2011
- Merit Network gets involved
- Hire the Range Director
2. Establishing the Mission

- Mission statement
- Design the Program
- Still no money…yet!

- Build a trained workforce through:
  - Accessible resources
  - Experiential training
  - Adaptable assessment

- Target the program
  - Systems Analyst
  - Security Analyst

- Build training programs
3. Establishing the Range

- Get Sponsors

- Hire the Team, Buy the Gear, Build the Infrastructure

- Pilots, Trials, and Fishing Expeditions
  - All about the Product
  - All about the Brand
3. Establishing the Range

• Grants
  – NIST
  – Michigan State Police & DHS

• Sponsors
  – DTE
  – Consumers Energy
  – Plante Moran
  – Juniper Networks

• First Adopters
  – State of Michigan DTMB

• Current Customers include:
  – Michigan National Guard
  – State of Wisconsin
  – General Dynamics Land Systems
  – University of Montana
  – Ixia, ISC8, SoarTech and others

• Current Engagements include
  – Latvia
  – National Governor’s Association
  – California National Guard
4. Establishing the Base

- **Product Catalog**
  - Create your own or outsource?
  - Control vs. Variety

- **Advisory Council**
  - Define their role
  - Beware the words “Partner” or “Board”

- **Strategic Plan**
  - Tell them where we’re going
  - Get their buy in and support
5. Adoption

• Classes

• Exercises
  – Demonstrations
  – Games
  – Assessments

• Infrastructure
  – Test labs
  – Classroom space
6. Getting Imaginative

• Power Phoenix
  – Incident Response for NERC CIP

• Arctic Eagle and Cyber Guard
  – Cyber Injects for kinetic events

• Collegiate Cyber Defense Competition
  – Remote teams for the “tune up”
  – Virtual infrastructure
7. Expanding the Mission

- Still in line with the Vision
- Adding collaborators
- Becoming an economic development engine
- Michigan Cyber Civilian Corps
What’s Next?

• National scope

• Renew, refresh, re-center
  – 1st contracts expiring
  – Are our needs the same?
  – Bring some things back in-house?

• Growing without losing the focus
  – Stick to our values
Conclusion – What were the good parts?

- Building the Range from scratch
  - Inventing stuff!
  - Making movies!
- Serving an underserved need
- Cutting across verticals to get people involved
Conclusion – What were the hard parts?

• Finding sponsorship
  – Sometimes you have to use the big guns

• Building the Brand
  – Surviving the patronizing
  – “Let me tell you how to suck that egg”

• Eating sausage is different from making it
Conclusion – What did we get right?

- Started Business Development early
  - What do they want?
- Pilots…lots of pilots
  - Experimentation
Conclusion – What would I do different?

• More time for process development
  – QA took second place to development

• More time for product development
  – Don’t hit the whole market at once
  – Grow into the space
Final Thoughts

- Public-Private Partnerships build
  - Services that are needed
  - Programs free from political ebbs and flows

- Bulk of the work on the Private part of the Partnership
  - Be prepared to go it alone

- But so are the benefits
  - Engaging new markets
  - Re-engaging old collaborators in new ways
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