Successes and Challenges in Government-Industry Partnering

How this applies to the Space Weather Enterprise

Growing the Space Weather Enterprise
Panel Discussion at Space Weather Week 2015

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Partnership – What does it mean?

- **"Bigger" than customer-supplier relationships**
  - **Parties commit to a partnership for additional benefits**
- **How does this apply for space weather data buys?**
  - **Government benefit:**
    - **Reduced "up front" expenses (in advance of availability of capability)**
    - **More rapid implementation of improved capabilities (or so we hope)**
  - **Commercial benefit:**
    - **A new market and a new customer (if not new, at least "different")**
    - **Foundation customer, products can be marketed beyond the government**
- **For NSWS "protection and mitigation efforts"?**
  - **Co-develop hazard mitigation plans, and implement mitigations**
  - **Public support of private action to reduce public vulnerability**

A Partnership is something that provides the partners additional value – over and above a mere contract.

Partnership successes

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- **Government technology development "facilitation"**
  - **SEMATECH – successful government-industry partnership to develop semiconductor fabrication technologies**
  - **SBIRs – broad-based program to support partnerships for innovation (government – small business – large business)**
- **Government purchase of commercial capabilities**
  - **Satellite communications**
  - **Terrestrial imaging**
  - **Launch vehicles**
  - **All three of these examples are commercial applications of capabilities initially developed through government contracts. Are they really partnerships, or merely contracts?**
- **How do these examples apply to space weather?**
  - **Are we still in the "technology development" phase?**

Space Weather Partnership Issues

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- "Industry": motivated to make a profit (ultimately)
- "Government": motivated to serve the governed
- Aerospace industry accustomed to "cost plus" contracts
  - Government assumes many risks: Cost, schedule unknowns
- Government is accustomed to "driving the boat"
  - Not just establishing initial terms, but actively managing the development process as responsible stewards of public trust
- Neither government nor industry continued participation is "guaranteed"
  - Congress may not appropriate funds
  - Industrial partner may exit the business

L1 Monitor Data Buy "Toy Example" – to motivate discussion

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- **This is a ROM or a RFT ("rough, factor of two") estimate**
  (better than an order of magnitude, probably not as good as a factor of 2)
- **Simplifying assumptions:**
  - **Left alone and motivated to save money, industry cost is half**
  - **Interest rate (or cost of money) is zero**

Factor	Current state (all Gov't cost)	Partnership Gov't cost	Partnership/Industry Cost	Profit
Capital outlay	$200M	$0	$100M	-$100M
Annual	$2M (ops)	$30M	$1M	+$29M
3-year total	$206M	$90M	$103M	-$13M

- **Is it easier for Uncle Sam to secure $200M or $30M/yr?**
- **Is this kind of return sufficient to attract the business?**
- **Where is the "partnership"?**

Partnerships Proposed in the National Space Weather Strategy

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- **Develop hazard mitigation plans that reduce vulnerabilities, manage risks, assist with response**
- **Achieve long-term vulnerability reduction by implementing appropriate measures at critical locations**
- **Strengthen public/private partnerships that support private action to reduce public vulnerability**
- **All have mutual interests, synergistic contributions**
  - **Government interest: Protect and secure the public**
  - **Industry interest: Protect itself, manage proprietary information**
  - **Government contribution: Motivation, organization, education**
  - **Industry contribution: Develop the specific plans, implement the specific protections, take action when and as required**

Discussion motivation

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- **Growing the space weather enterprise is a shared goal**
  - **Benefits will accrue to both government and industry**
- **"Leveraging technology development" has been the basis of successful government-industry partnerships**
- **Transition of "historically government" capabilities to the commercial sector also has been successful**
- **Growing the space weather enterprise will depend on addressing outstanding issues as true partners**

Both government and industry will benefit from the robust space weather enterprise that results from a partnership.

Now is the time to go for it!