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What am I going to say?

- Innovation as a strategic advantage
- Make you proud of ONR as an S&T Innovation Engine
- The rapidly changing landscape of open innovation across the Federal Government
- What might this mean for the Navy beyond S&T?
- Thoughts on a (window of) opportunity to lead
Invention = working to create ideas

Innovation = putting ideas to work
Classic Innovation

Apple

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Aspects of Apple Innovation

Industrial Design

Marketing

Intellectual Property

Product Integration

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A 23 year old Englishman named Kane Kramer invented the essential iPod along with DRM in 1979. He let his patent lapse.

The iPod internal design came from a company called PortaPlayer.

The iPod interface and operating system came from a company called Pixo.
The Office of Naval Research invests in innovative operational concepts to develop the science and technology (S&T) that ensures our warfighters always have the technological edge.

**ONR Mission** — “to plan, foster, and encourage scientific research in recognition of its paramount importance to future Naval power and national security.”

- Public Law 588 of 1946

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Naval Research Laboratory (Appropriations Act, 1916)
“[Conduct] exploratory and research work...necessary... for the benefit of Government service, including the construction, equipment, and operation of a laboratory....”

Office of Naval Research (Public Law 588, 1946)
“... plan, foster, and encourage scientific research in recognition of its paramount importance as related to the maintenance of future naval power, and the preservation of national security....”

Transitioning S&T (Defense Authorization Act, 2001)
“...manage the Navy’s basic, applied, and advanced research to foster transition from science and technology to higher levels of research, development, test, and evaluation.”
The First Unmanned Air Vehicle (UAV)

U.S Navy Curtis, 1924
Innovative Naval Prototype (INP) Programs

- Determined by DoN guidance, INPs are funded at ~12% of ONR Total Obligation Authority

- Purpose:
  - Explore high-risk, game-changing technologies and advance the capabilities of the warfighter
  - Reduce the acquisition risk of disruptive technologies and capabilities
  - Deliver “The Next Big Thing”

- Approved by VCNO, ASN (RDA) and ACMC

- FY10 Innovative Naval Prototypes:
  - Tactical Satellite (TACSAT) launched Sept. 27

- Current Innovative Naval Prototypes:
  - Persistent Littoral Undersea Surveillance (PLUS)
  - Sea Base Enablers (SBE)
  - Electromagnetic Railgun (EMRG)
  - Free Electron Laser (FEL)
  - Integrated Topside (INTOP)

- FY12 Innovative Naval Prototypes:
  - Autonomous Aerial Cargo Utility System (AACUS)
  - Large Displacement Underwater Unmanned Vehicle (LDUUV)

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Focus Areas:
- Power and Energy
- Operational Environments
- Maritime Domain Awareness
- Asymmetric & Irregular Warfare
- Information Superiority and Communication
- Power Projection
- Assure Access and Hold at Risk
- Distributed Operations
- Naval Warfighter Performance
- Survivability and Self-Defense
- Platform Mobility
- Fleet/Force Sustainment
- Total Ownership Cost

Naval S&T Investments

Discovery & Invention (Basic and Applied Science) ≈ 40%
Leap Ahead Innovations (Innovative Naval Prototypes) ≈ 12%
Acquisition Enablers (FNCs, etc) ≈ 30%
Quick Reaction & Other S&T ≈ 08%

Tech Solutions
FNCs
INPs
D&I

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New Open Innovation Efforts Across the Federal Government


• Many of the innovation efforts are focused on expanding access to ideas and problem solvers:
  – **Challenges and Prizes**: Expansion of Challenge and Prize authority to all agencies of the federal government. Clearinghouse website Challenge.gov. Public private partnerships are explicitly encouraged.
  – **Outward Facing Ideation Crowdsourcing Programs**: Being used both for solicitation of ideas and for required public commentary periods for policy changes
  – **Inward Facing Ideation Crowdsourcing Programs**: Generate ideas from employees (DHS, HHS, State Department, Coast Guard)
  – **Open Government Data Sharing**: may not be appropriate for all
  – **Presidential Innovation Fellows**: Just announced

• Examples of initiatives at:
  – [http://www.whitehouse.gov/open/innovations](http://www.whitehouse.gov/open/innovations)
Pay only for (best) results

Challenge.gov is a place where the public and government can solve problems together.

Featured Challenges

Mapping Dark Matter
Created by National Aeronautics and Space Administration
Help us map the dark matter to better understand the invisible components of the Universe.

16 supporters
$3,000 in prizes
Submissions Ending in 3 months

Categories
- Defense (11)
- Economy (3)
- Education (14)
- Energy & Environment (19)
- Health (25)
- International Affairs (4)
- Jobs (1)
- Science & Technology (40)
- Personal and Public Safety (14)

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Welcome to the Tec^Edge Pavilion

This pavilion is sponsored by Tec^Edge, an organization operated by the Wright Brothers Institute (WBI), in partnership with its foundational stakeholder, the Air Force Research Laboratory (AFRL). Tec^Edge operates as a neutral enabler and environment for multidisciplinary joint teams to come together in intense collaborations, which focus on complex problems and challenges.

About the Air Force Research Laboratory:
AFRL is the Air Force’s only organization wholly dedicated to leading the discovery, development, and integration of warfighting technologies for our air, space and cyberspace forces. We trace our roots to the vision of airpower pioneers who understood science as key to air supremacy. The passionate commitment of AFRL people to realize this vision has helped create the world’s best air, space and cyberspace force.

External Links
- AFRL
- Wright Brothers Institute
Focus on Crowdsourcing Ideas

- **Periodic Topical Challenge from Leadership:**
  - Example: HHSinnovates
  - [http://www.hhs.gov/open/innovate/index.html](http://www.hhs.gov/open/innovate/index.html)

- **Continuous Process** (suggestion box model):
  - Example: State Department Sounding Board

- **Mixed**: Ongoing plus Periodic Challenges
  - Example: TSA IdeaFactory

- **Key Innovations over the suggestion box:**
  - Online commentary from the community
  - Online voting to promote best/most popular ideas
  - Facilitated routing, SME vetting and action by leadership

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IdeaFactory is a Web-based tool that empowers all TSA employees to:

- submit ideas,
- provide comments on how to improve new concepts, and
- rate ideas that should be recommended for implementation

It uses social media concepts to harness the “wisdom of the crowds” and expand upon the traditional suggestion box.

IdeaFactory Vision Statement:

Support TSA’s mission by fostering a community that engages employees and encourages collaboration to initiate innovative change.
Users rate ideas on a scale of 1-5 light bulbs

Toolbox functionality allows users to collaborate with peers and track ideas

Reminiscent of open ideation...

But Internal...

Moderated...

Vetted by SME’s...

And feedback

Lots of valuable experience...
... and Key Lessons Learned

• TSA IdeaFactory Team:
  – Carefully identify the business need and idea flow process
  – Ensure senior leadership champions effort and provides support
  – Ideation management group reports directly to senior management team
  – Understand the users and their needs and cultivate the community
  – Focus mission and avoid being all things to users; not a forum for ranting
  – Transparency is key – engage employees throughout the entire idea lifecycle
  – Facilitated Ideation is a program not a website
  – It’s OK to start small and grow

• Gartner Research
  – Do not start an ideation innovation program without CEO level support
  – Senior executive must be accountable for process
  – Best practices are evolving – benchmark and adapt based on research
  – Put most effort towards strategy, focus, process and culture....
  – *Because the technology is the simplest part.*
ONR SwampWorks

- **Project Parameters:**
  - Project duration < 3 years
  - Must be S&T in nature
  - Develop highly innovative, game-changing technology
- Develop and demonstrate newly invented or recently discovered technologies that address emergent and enduring operational problems in an accelerated timeframe
- Develop prototypes of recent technology breakthroughs for experimentation to satisfy Warfighter requirements
- Pilot disruptive and Open Innovation process and tools with the objective of decreasing the time and cost of producing innovative solutions

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Three pirate ships are holding the world hostage. Chinese-US relations are strained to the limit and both countries have naval ships in the arena. Humanitarian aid for rig workers and the East African coastline is blocked. The world is blaming the US for plundering African resources.

Merchant ship movement through the area is blocked. Big cities from Mozambique to Djibouti are already feeling the economic repercussions.

Two years ago, at a Navy-sponsored event, a select group of participants set in motion dozens of innovations that could be used in game changing ways in this situation. You were part of this group. Now we need you to put those ideas to work. Help us create a rapid fire brainstorm of the best strategies in this situation.

we need your help...

PLAY A CARD NOW:
Help us identify the worst. Start now, work fast, work together.
ONR MMOWGLI Pilot

3 days of gameplay per chapter

2000 invites 805 registered players 4484 idea cards played

24 action plans developed 200 simultaneous players

1000.mils 300.edus 250.govs 450.coms

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Develops applications of existing and emerging technologies to meet high-interest, near-term Fleet/Force needs

- Demonstrate prototype solution within 14 months of request
- 1 year turnaround time, off the shelf technologies

Solutions with NRE partners and Fleet/Force feedback early and often

Video: www.youtube.com/usnavyresearch

Requests submitted online at:
- www.onr.navy.mil/techsolutions

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Notional ONR Ideation Program

S&T Challenges to or Ideas from Navy (Fleet, NRE, CTR)

Commentary and Voting

- Ideas Selected by Program
- Highly Rated Ideas

Program Office/SME Review

- Program Office Responds
  - Can’t Implement
  - Yes

Cross-functional Refinement

- Can’t Implement
- Yes

Transition to Implementation and Recognition of Submitter

Hot Topics to Leadership for SA

Adapted from TSA
ICoC defines a constrained multifaceted challenge topic

CNO issues the challenge to the fleet

**Software:** Solutions and ideas submitted via the web

ICoC sifts out silly or redundant replies and posts ideas

**Software:** Ideas receive comments from the fleet

**Software:** Solutions are sieved down using iterative voting

Best idea(s) receive an award from the CNO

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**Software**

Existing open source government or commercial ideation software hosted by Navy.

This is something Navy should be able to do in-house and often.

**Hosts:**
- Navy CIO
- Naval Postgraduate School
- Naval War College
- NWDC

**Examples:**
- IDEO’s open IDEO
- IBM’s JAMs
- HHS ideation suite
- State Department Sounding Board

**Or Not:**
- email and people can work well
S&T is just one piece

Do we want iTunes or confusion?

Fleet and Friends

Crowdsourced Broker
NWDC?

Vetting Sorting Routing
ICoC?

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Innovation is about follow-through and is a strategic advantage

You can be proud of ONR as an innovation engine for S&T

But innovation for the warfighter is bigger than things

Federal innovation is a fast moving target that has not gelled

My opinion is that you have a window of opportunity to influence and protect how innovation is defined and implemented in your organization….

Diversity in innovation practice is critical but government wants a one size fits all solution

So get out in front and define it on your terms

And who is going to broker the Navy’s open innovation process?
CNR RADM Matt Klunder, Director of Innovation Dr. Larry Schuette, and the entire ONR team want to celebrate your innovation success. We are standing by to help.

Chris Fall
ONR/03I
chris.fall@navy.mil
It seems pretty easy at first

How can we strengthen our democracy and promote efficiency and effectiveness by making government more transparent, participatory, and collaborative?

June 26, 2009

The Open Government Dialogue is now closed. Because of your participation, this dialogue has generated a rich collection of ideas that will shape the President’s commitment to making our government more transparent, participatory, and collaborative.

This dialogue represented the first of a three-phase process that is soliciting public input in crafting recommendations on open government. Summaries of the brainstorming that has occurred here, and of subsequent phases in the process, can be found on the White House Office of Science and Technology Policy Blog.

Visit the White House Open Government Initiative website for more information.

The National Academy of Public Administration

On January 21st, the President issued the Memorandum on Transparency and Open Government, calling for an unprecedented level of openness in government. In the memorandum, the President outlined three principles for promoting a transparent and open government: transparency, participation, and collaboration. Now, the President is calling on you to help shape how that commitment is fulfilled. This online brainstorming session, open from May 21st to 28th, 2009, will enable the White House to hear your most important
Prepare for the unintended

**Browse Popular Ideas**

**Recent (4207) | Popular (4207)**

**Remove Marijuana from Schedule I of the Controlled Substances Act**

- I agree
- **1184 votes**
- I disagree

Dear Mr. President, Please direct the DEA to remove marijuana from Schedule I and correctly classify it under the definitions that the Controlled Substances Act... more

- 56 comments
- Submitted by DarthNole 2 years ago

**Legalize Marijuana And Solve Many Tax Issues / Prison Issues**

- I agree
- **1001 votes**
- I disagree

To legalize marijuana would mean an end to the billions of wasted dollars fighting this “war on drugs”. A war, that anyone who grew up in America... more

- 162 comments
- Submitted by gbtorsion 2 years ago

**End Imperial Presidency**

- I agree
- **894 votes**
- I disagree

Leave the White House less imperial than you found it. Appoint an independent prosecutor to prosecute Bush, Cheney, and their top officials... more

- 231 comments
- Submitted by david 2 years ago

**Stop the "War on Drugs"**

- I agree

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