



***NORTHROP GRUMMAN***

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DEFINING THE FUTURE



# Northrop Grumman Overview

Marsha Kwalwasser  
Corporate Director, State & Local Government Relations  
Northrop Grumman Corporation  
October 16<sup>th</sup>, 2008

# Agenda

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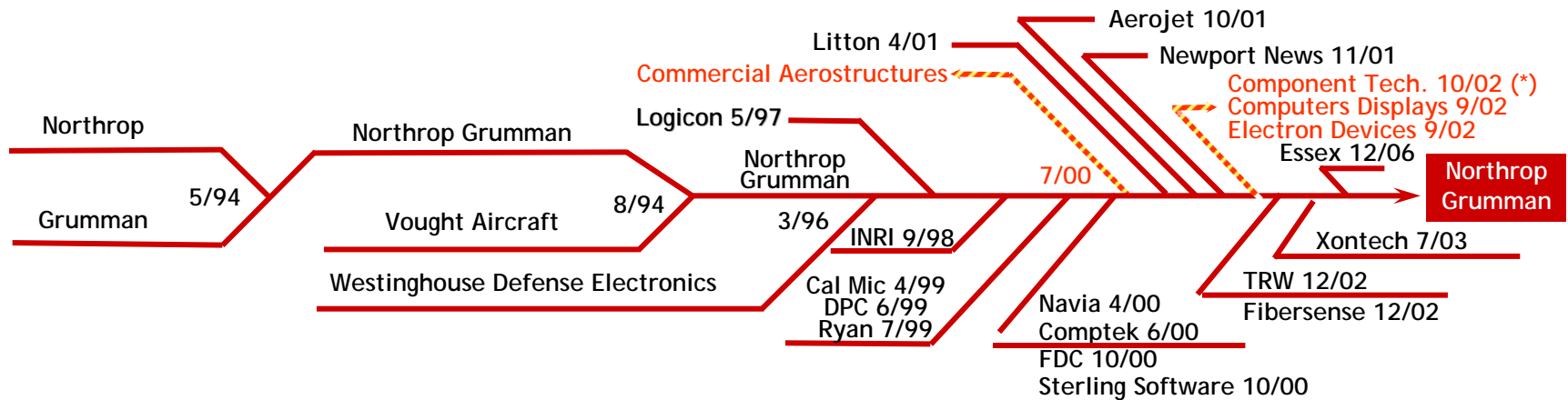
- Corporate Overview
  - NGC Today
  - Historical Background of Northrop Grumman
  - Northrop Grumman Leadership
  - Overview Of Sectors & 2007 Sales
  - Business Portfolio
  - Number Of Northrop Grumman Employees In ASA Member States
- Key Programs & Initiatives
- Areas For ASA Actions/Assistance

# Northrop Grumman Today

- \$32 billion sales in 2007
- 120,000 people, 50 states, 29 countries
- Leading capabilities in:
  - Systems integration (Global Hawk/BAMS)
  - C<sup>4</sup>ISR & battle management (E-2C/E-2D)
  - Information technology & networks (VITA, Virginia)
  - Defense electronics (F-35/F-22 Radar)
  - Naval shipbuilding (Aircraft Carriers)
  - Space & missile defense (KEI)



# Building the Company



- Implemented a Strategic Transformation of the Company Through Acquisition
- Emphasis on Complex Higher Order Systems Integration
- Focus on Performance

(\*) Announced as discontinued operation

# Northrop Grumman Leadership Team

**Chairman & CEO**



**Ron Sugar**

Headquarters: Century City, CA & Washington, DC

**President & COO**



**Wes Bush**

**Business Management**



**Jim Palmer**  
Corp VP & CFO  
Century City, CA

**HR & Administration**



**Ian Ziskin**  
Corp VP  
Century City, CA

**General Counsel**



**Burks Terry**  
Corp VP  
Century City, CA

**Government Relations**



**Bob Helm**  
Corp VP  
Washington, DC

**Communications**



**Darryl Fraser**  
Corp VP  
Washington, DC

## Executive Office

## Corporate Staff

**Mission Systems**



**Philip Teel**

Corp VP & President  
Headquarters: Reston, VA

**Information Technology**



**Linda Mills**

Corp VP & President  
Headquarters: McLean, VA

**Technical Services**



**Jim Cameron**

Corp VP & President  
Headquarters: Herndon, VA

**Electronic Systems**



**Jim Pitts**

Corp VP & President  
Headquarters: Baltimore, MD

**Integrated Systems**



**Gary Ervin**

Corp VP & President  
Headquarters: El Segundo, CA

**Space Technology**



**Alexis Livanos**

Corp VP & President  
Headquarters:  
Redondo Beach, CA

**Shipbuilding**



**Mike Petters**

Corp VP & President  
Headquarters: Newport News, VA

## Information & Services

## Electronics

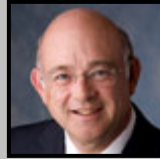
## Aerospace

## Shipbuilding

# Northrop Grumman 2007 Sales






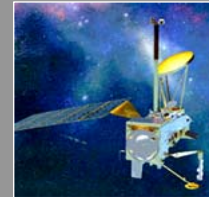

CHAIRMAN  
& CEO

Dr. Ron Sugar



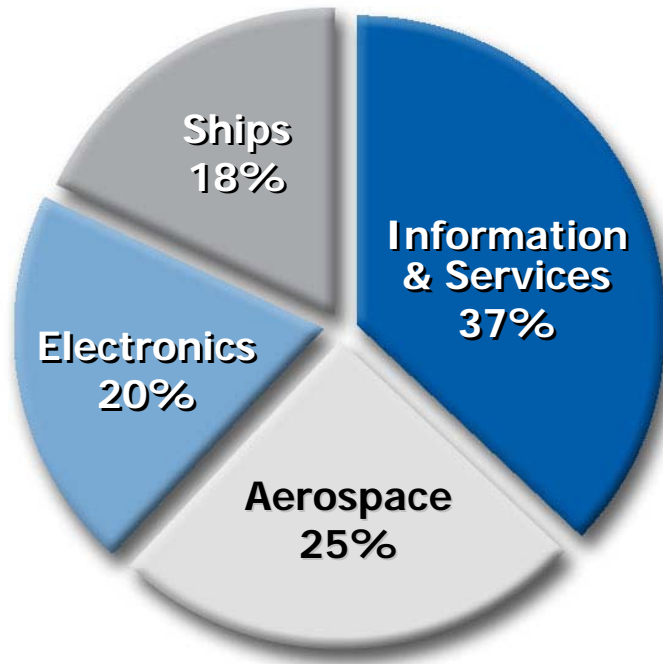
**Total Sales 2007: \$32B**

## OPERATING SECTORS

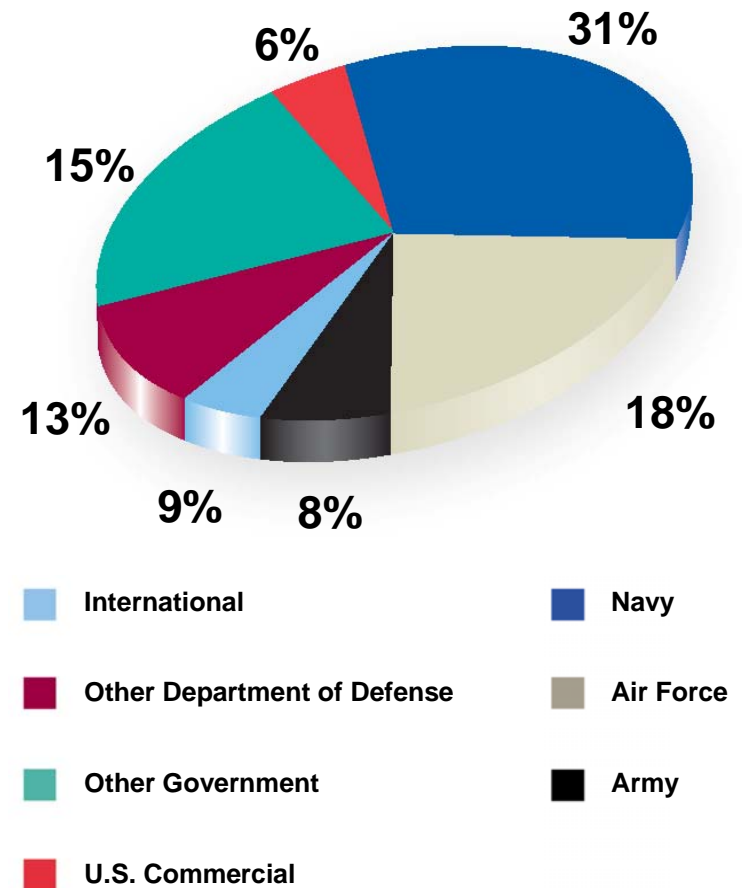
ELECTRONIC SYSTEMS Jim Pitts	INFORMATION TECHNOLOGY Linda Mills	MISSION SYSTEMS Phil Teel	INTEGRATED SYSTEMS Gary Ervin	SHIPBUILDING (Newport News + Ship Systems) Mike Petters	SPACE TECHNOLOGY Alexis Livanos	TECHNICAL SERVICES James Cameron	
							
<b>Sales \$6.7B</b>	<b>\$4.5B</b>	<b>\$6.1B</b>	<b>\$5.1B</b>	<b>\$5.8B</b>	<b>\$3.1B</b>	<b>\$2.2B</b>	
<ul style="list-style-type: none"> <li>Radar Systems</li> <li>C<sup>4</sup>ISR</li> <li>Electronic Warfare</li> <li>Navigation &amp; Guidance</li> <li>Military Space</li> <li>Homeland Defense</li> <li>Naval Systems</li> </ul>	<ul style="list-style-type: none"> <li>C<sup>4</sup>ISR</li> <li>Government IT Infrastructure</li> <li>Science &amp; Technology</li> <li>Information Security / Assurance</li> <li>Enterprise Solutions</li> <li>Homeland Security</li> </ul>	<ul style="list-style-type: none"> <li>Command, Control &amp; Intelligence</li> <li>Digitized Battlefield</li> <li>Missile Defense BMC3</li> <li>Defense Software Application Development</li> <li>Information Warfare</li> </ul>	<ul style="list-style-type: none"> <li>Theater Strike Systems</li> <li>Global Strike Systems</li> <li>Space Systems</li> <li>Unmanned Systems</li> <li>Naval BMC2ISR</li> <li>Airborne Ground Surveillance / ISR</li> <li>Electronic Combat Operations</li> <li>Air Mobility Systems</li> </ul>	<ul style="list-style-type: none"> <li>Naval Systems Integrator</li> <li>Nuclear Aircraft Carriers</li> <li>Nuclear Submarines</li> <li>Fleet Maintenance</li> <li>Naval Systems Integrator</li> </ul>	<ul style="list-style-type: none"> <li>Surface Combatants</li> <li>Amphibious Ships</li> <li>Auxiliary Ships</li> <li>Patrol Craft</li> <li>Marine Composite Technology</li> </ul>	<ul style="list-style-type: none"> <li>ISR Satellite Systems</li> <li>MILSATCOM Systems</li> <li>Environmental &amp; Space Science Satellite Systems</li> <li>Software Defined Radios</li> <li>Directed Energy Systems</li> <li>ICBM Systems Management</li> </ul>	<ul style="list-style-type: none"> <li>Logistics Support</li> <li>Sustainment</li> <li>Technical Services</li> </ul>

# NOC – Business Portfolio

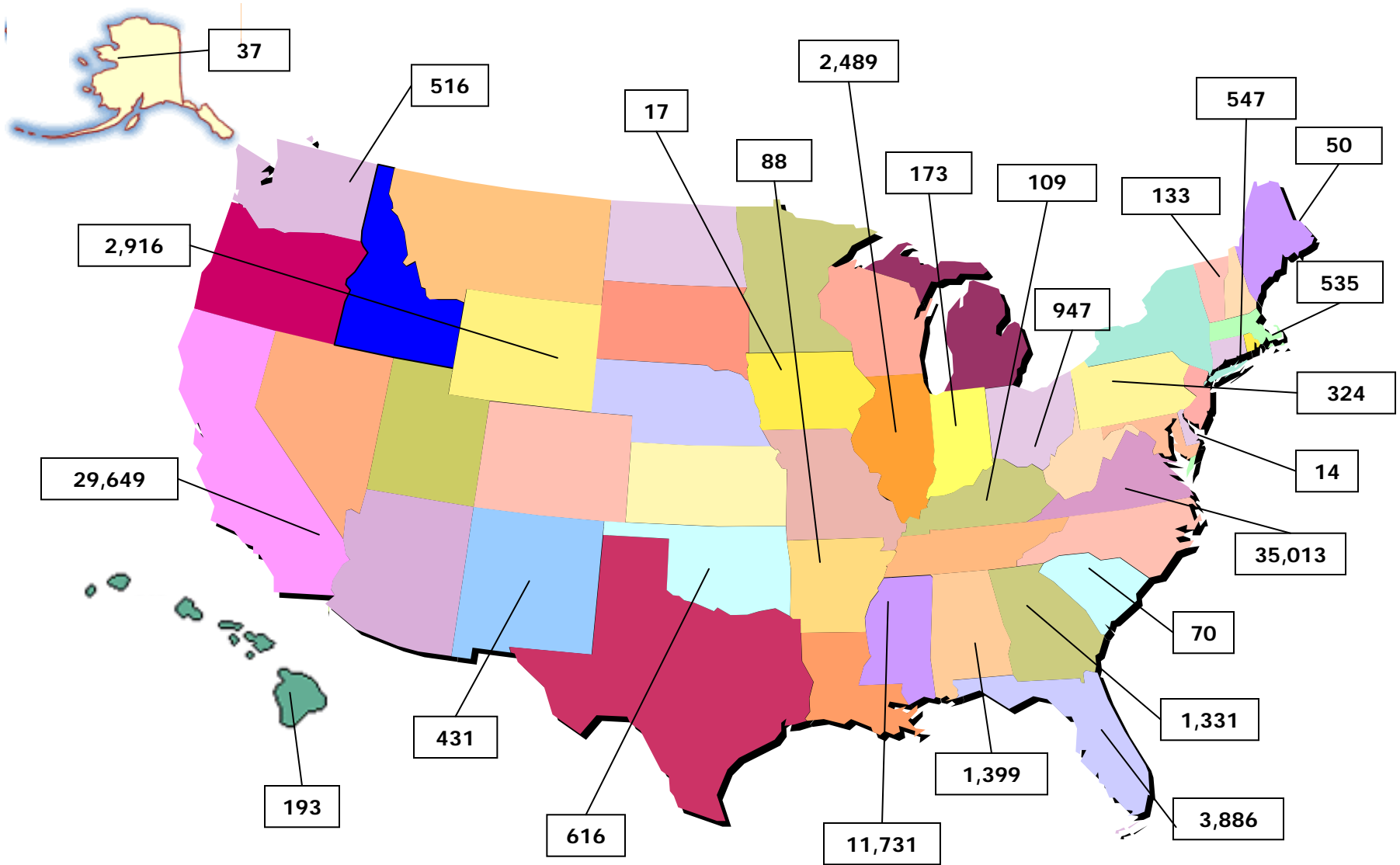
## 2007 Sales By Segment



## 2007 Sales By Customer

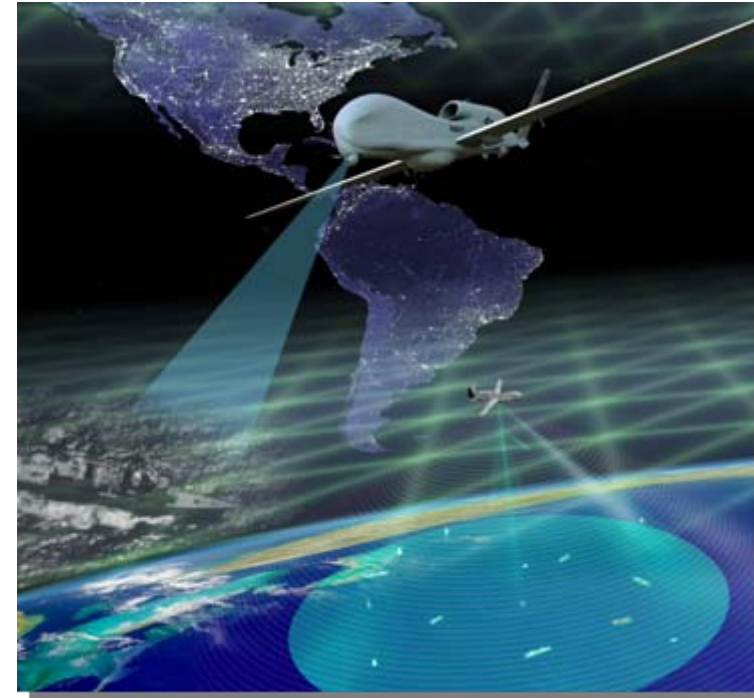


# NGC Employee Figures - ASA Member States



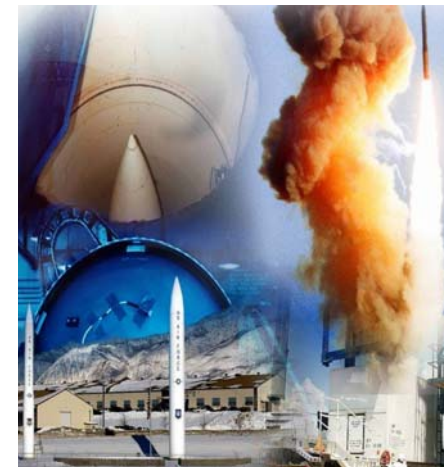
# Northrop Grumman Programs & Initiatives- Integrated Systems

- **Global Hawk (USAF/Navy):** The Navy's Global Hawk Maritime Demonstration (GHMD) System is the Navy's only unmanned, High-Altitude Long Endurance, intelligence, surveillance & reconnaissance system. USAF and US Navy GHMD Aircraft have been used to support & help firefighters gather information about brush fires because of the quality of their sensors and the persistence of the air vehicle during the California wildfires. Information gathered by the Global Hawks was immediately passed on to officials coordinating the firefighting effort.
- **B-2:** The U.S. Air Force's B-2 stealth bomber is the flagship of the nation's long-range strike arsenal, & one of the most unique & survivable aircraft in the world. The B-2 is the only U.S. aircraft that combines long range, large payload & stealth in a single platform, giving it the ability to project air power anywhere in the world. It can fly more than 6,000 nautical miles unrefueled & more than 10,000 nautical miles with just one aerial refueling. It has the ability to carry more than 20 tons of conventional & nuclear ordnance & deliver it precisely under any weather conditions.
- **Tanker:** The recompetete has been postponed & will take place during the next administration



# Northrop Grumman Programs & Initiatives – Space Technology

- **Intercontinental Ballistic Missile (ICBM):** Responsible for maintaining the readiness of the nation's ICBM weapon systems by ensuring the system's total performance. Northrop Grumman has been involved in the U.S. ballistic missile program for nearly 50 years, helping to shape the aerospace & defense industry.
- **Kinetic Energy Interceptor (KEI):** KEI is a very high acceleration, sea or land mobile missile defense system with a capability to engage in boost, ascent and early mid-course phases of flight. KEI offers tremendous military utility -- its high speed combined with its basing flexibility allows for early battle space engagement, increasing probability of engagement success.
- **National Polar-orbiting Operational Environmental Satellite System (NPOESS):** Design, develop, integrate, test, & operate an integrated system comprised of two satellites with mission sensors & associated ground elements for providing global & regional weather & environmental data. NPOESS will be an important monitor of the effects of climate change on the Earth's topography.
- **Hubble Space Telescope (HST):** The HST was carried into orbit by the Space Shuttle Discovery in April 1990. Although not the first space telescope, the Hubble is one of the largest & most versatile, & is well known as both a vital research tool & a public relations boon for astronomy. The HST is a collaboration between NASA & the European Space Agency, & is one of NASA's Great Observatories. Hubble's position outside the Earth's atmosphere allows it to take extremely sharp images with almost no background light. The James Webb Space telescope is a successor to Hubble.



# Northrop Grumman Programs & Initiatives – Mission Systems, Information Technology, & Technical Services

**NORTHROP GRUMMAN**

## • Mission Systems

–**Joint Light Tactical Wheeled Vehicle (JLTV):** JLTV, currently in competition, is a U.S. Army, United States Special Operations Command, & U.S.M.C program to replace the current HUMMVEE with a family of more survivable vehicles & greater payload.



## • Information Technology

–**Virginia Information Technologies Agency (VITA) :** IT services provided include network services, desktop services & e-mail, data-center consolidation & management, customer-care services, call centers, & other infrastructure projects & services within state agencies across Virginia.



–**NYC Wireless:** NGC won the competition to provide New York City's broadband public safety wireless network which will lead to interconnectivity between first responders, which was not available on 9/11.

## • Technical Services

–**Hunter:** Provide life cycle & engineering support for existing tactical unmanned aerial system. For new aircraft, NGC conducts file assembly, integration, & testing. All of this work is conducted at our Sierra Vista, AZ facility, near FT. Huachuca. MQ-5B Hunter is a multi-mission, medium altitude endurance tactical unmanned aerial system.



## & Weightless Flights of Discovery

- **Electronic Systems**

- **BIOWATCH:** An integrated real time Biohazard detection system that provides early warning of Bio attacks against population centers. This automated solution provides rapid detection & warnings, potentially saving many lives with improved performance & reduced costs.
- Design & build special purpose radar equipment (e.g. F-22 & F-35)



- **Weightless Flights of Discovery:**

- Northrop Grumman Foundation Weightless Flights of Discovery is an innovative hands-on training program that gives teachers an 'out-of-this-world' experience as a way to help them inspire their students to pursue careers in science, technology, engineering and math. Area teachers prepared for the zero-gravity flights by attending workshops and designing experiments to execute while in zero-gravity in order to test Newton's Laws of Motion. Following the flights, the teachers will bring their in-flight experiences, enthusiasm and videotaped experiments into the classroom, where they will be integrated into lesson plans.
- The goal of the program is to inspire the next generation of scientists, mathematicians and engineers -- critical areas where the U.S. has fallen behind globally. This program was brought to several states across the country



# Northrop Grumman Programs & Initiatives - Shipbuilding

- **Carriers:** The Nimitz-class aircraft carrier is a powerful warship of the 21st century that features numerous improvements & modernizations.
- **LPD:** Amphibious Transport Dock Ships for Expeditionary Warfare, The 684-foot-long, 105-foot-wide ships have a crew of 360 & are used to transport & land 700 to 800 Marines, the ships will support amphibious assault, special operations, or expeditionary warfare & humanitarian missions.
- **DDG 51:** The Arleigh Burke Class Destroyers are the most advanced state-of-the-art surface combatants built for the U.S. Navy. The Aegis guided missile destroyers are equipped for conducting anti-air, anti-submarine, anti-surface & strike operations.



# Areas For ASA Actions/Assistance

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- Continued tax credits at the Federal level
- Further R&D credits at the State level
- Adequate funds for science & math education from elementary schools to colleges
- Need states to look at a longer timeframe when they enact incentive programs