

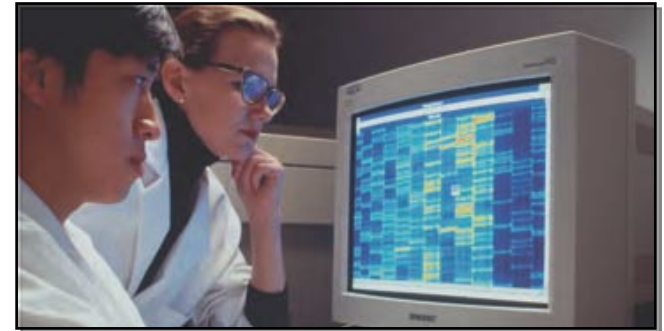
**Presentation to:
Metropolitan Washington
Council of Governments
Climate Adaptation Workshop
Introductory NGC Remarks**

23 July 2009

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VP, Advanced Technology, and CTO
Northrop Grumman Information Systems**

Northrop Grumman Today

- \$34 billion sales in 2008
- \$78 billion total backlog
- 120,000 people, 50 states, 25 countries
- Leading capabilities in:
 - Climate Change
 - Cybersecurity
 - Systems integration
 - C⁴ISR and battle management
 - Information technology and networks
 - Homeland security
 - Defense electronics
 - Naval shipbuilding
 - Space and missile defense
- Largest Manufacturing employer in Virginia, Maryland, Louisiana, and Mississippi



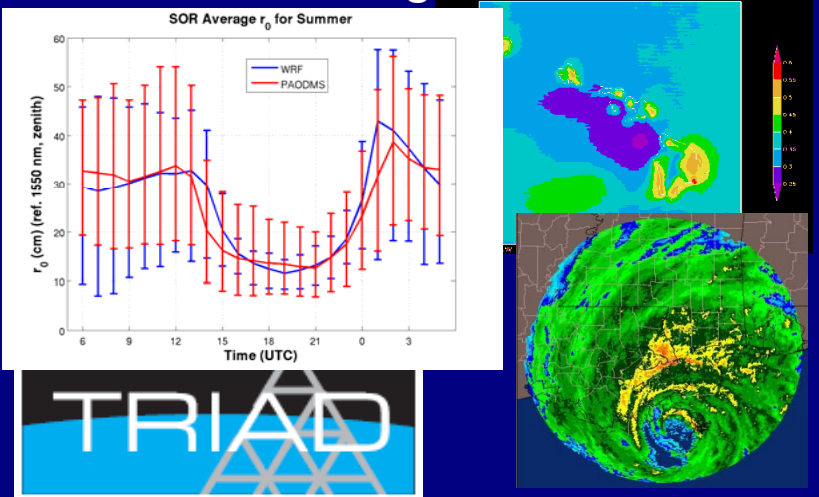
NGC Climate-Related Products and Services

Climate Sensors and Observing Systems

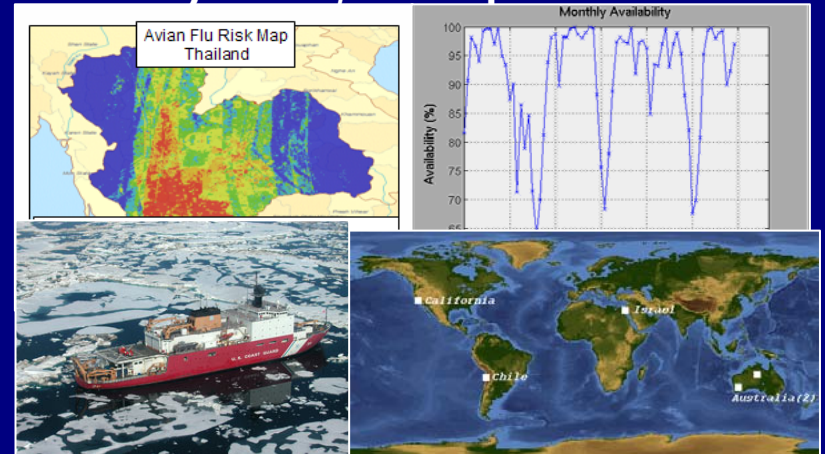


Climate Data Management and Software Algorithms

Climate Modeling and Simulation



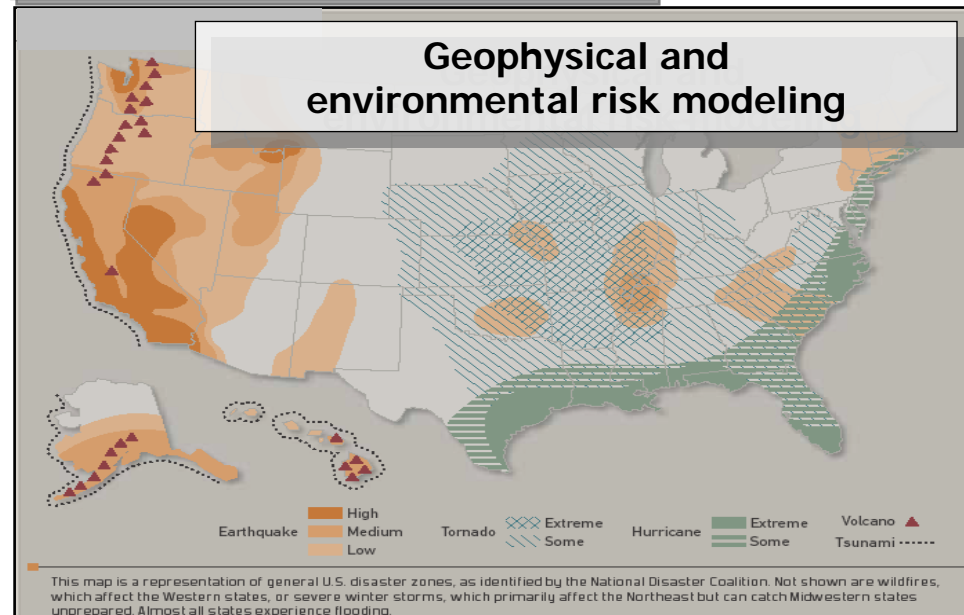
Climate Impacts on People, Systems, and Operations



Climate Impacts on NGC Operations

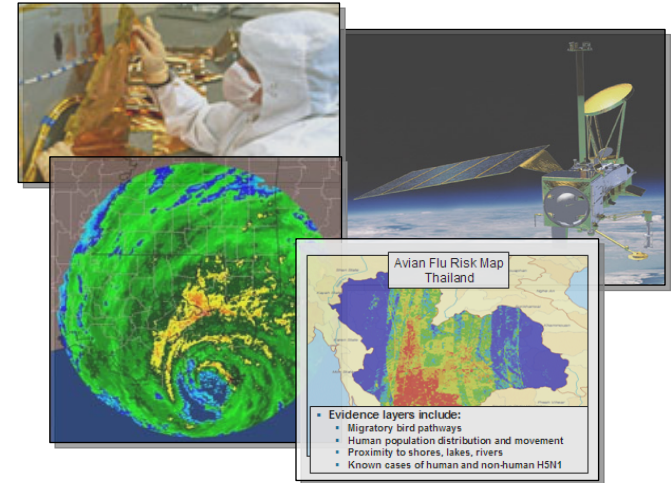
- Climate information used in overall NGC risk management and business continuity planning
 - Likelihood of severe weather is very important input
 - Also include indirect climate effects on population demographics, energy costs, transportation, etc.
 - Consideration of multiple planning scenarios
- Application to NGC Data Center Transformation Project
 - Location determination for Enterprise Data Centers
 - Climate information combined with economic, transportation, staffing, political, risk, etc. factors in location optimization model

Extensive damage from Hurricane Katrina



NGC's **greenNG** Initiative

- NGC-wide initiative
 - HQ and all sectors participate
 - Three major initiative segments
- Global Climate Monitoring
 - New architecture – collection platforms, sensors, data integration and analysis, applications
- New business opportunities
 - Leverage NGC engineering expertise and market reach
 - Ocean environment, energy engineering, green IT, SmartGrid, ...
- NGC internal operations
 - Sustainable facilities (e.g., commitment to LEED ratings for some construction)
 - Procurement standards
 - Compliance and communications



"NVTC Members Advance Green Initiatives"
The Voice of Technology
April 2008

Key Points for This Meeting

- Northrop Grumman has a large and growing business in climate-related technology, science, and services
- Today's meeting is an important part of our planning process.
- We are developing a business plan for providing regional climate-related decision-support services to government and industry. We want an ongoing dialog with many organizations about issues and priorities.
- We are also addressing impacts of the environment and climate change on our own operations
- We are engaging with many public and private sector groups on all aspects of climate change
 - Federal, state, local governments
 - Industry and professional consortia
 - Universities and research organizations

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