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# SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

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## FORM 8-K

CURRENT REPORT  
PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934

Date of Report (date of earliest event reported): February 13, 2003

### Northrop Grumman Corporation

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(Exact Name of Registrant as Specified in Charter)

**Delaware**

**1-16411**

**95-4840775**

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(State or Other Jurisdiction  
of Incorporation)

(Commission File Number)

(IRS Employer Identification No.)

**1840 Century Park East, Los Angeles, California 90067**

**www.northropgrumman.com**

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(Address of Principal Executive Offices and internet site)

**(310) 553-6262**

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(Registrant's telephone number, including area code)

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**Item 7. Financial Statements and Exhibits**

**(c) Exhibits**

99.1 Conference Presentation Materials

**Item 9.**

Pursuant to Regulation FD, Northrop Grumman hereby furnishes the information contained in Exhibit 99.1 attached hereto, which is incorporated herein by this reference.

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: February 13, 2003

NORTHROP GRUMMAN CORPORATION  
(Registrant)

By: /s/ JOHN H. MULLAN

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**John H. Mullan,**  
**Corporate Vice President and Secretary**

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## Exhibit Index

<u>Exhibit No.</u>	<u>Description</u>
99.1	Conference Presentation Materials



**NORTHROP GRUMMAN**

DEFINING THE FUTURE



February 13, 2003



**Northrop  
Grumman  
Institutional  
Investor  
Conference**



**Gaston Kent**  
Vice President, Investor Relations



## Safe Harbor Statement

Certain statements and assumptions in these materials contain or are based on "forward-looking" information and involve risks and uncertainties. Such "forward-looking" information includes, among other things, the impact of the TRW Inc. acquisition on revenues and earnings. Such statements are subject to numerous assumptions and uncertainties, many of which are outside Northrop Grumman's control. These include Northrop Grumman's ability to successfully integrate its acquisitions including TRW, to realize the preliminary estimates for accounting conformance and purchase accounting valuations for TRW which will be finalized in the 2003 fourth quarter and which may materially vary from these estimates, to close its announced sale of the TRW automotive business, assumptions with respect to future revenues, expected program performance and cash flows, returns on pension plan assets, the outcome of contingencies including litigation, environmental remediation, divestitures of businesses, successful reduction of debt, successful negotiation of contracts with labor unions, timing and amounts of tax payments, and anticipated costs of capital investments. Northrop Grumman's operations are subject to various additional risks and uncertainties resulting from its position as a supplier, either directly or as subcontractor or team member, to the U.S. Government and its agencies as well as to foreign governments and agencies; actual outcomes are dependent upon factors, including, without limitation, Northrop Grumman's successful performance of internal plans; government customers' budgetary constraints; customer changes in short-range and long-range plans; domestic and international competition in both the defense and commercial areas; product performance; continued development and acceptance of new products; performance issues with key suppliers and subcontractors; government import and export policies; acquisition or termination of government contracts; the outcome of political and legal processes; legal, financial, and governmental risks related to international transactions and global needs for military aircraft, military and civilian electronic systems and support, information technology, naval vessels, space systems and related technologies, as well as other economic, political and technological risks and uncertainties and other risk factors set out in Northrop Grumman's filings from time to time with the Securities and Exchange Commission, including, without limitation, Northrop Grumman reports on Form 10-K and Form 10-Q and the company's recently filed amendments to Form S-4.



## Agenda

- |         |                                    |                         |
|---------|------------------------------------|-------------------------|
| ▪ 8:00  | <b>Welcome</b>                     | <b>Gaston Kent</b>      |
| ▪ 8:05  | <b>Strategic Outlook</b>           | <b>Kent Kresa</b>       |
| ▪ 8:35  | <b>Budget Overview</b>             | <b>Bob Helm</b>         |
| ▪ 9:00  | <b>Operations Overview</b>         | <b>Ron Sugar</b>        |
| ▪ 9:30  | <b>Electronic Systems</b>          | <b>Bob Iorizzo</b>      |
| ▪ 10:00 | <b>Break</b>                       |                         |
| ▪ 10:15 | <b>Newport News</b>                | <b>Tom Schievelbein</b> |
| ▪ 10:45 | <b>Ship Systems</b>                | <b>Phil Dur</b>         |
| ▪ 11:15 | <b>Information Technology</b>      | <b>Herb Anderson</b>    |
| ▪ 11:45 | <b>Lunch</b>                       |                         |
| ▪ 12:30 | <b>Mission Systems</b>             | <b>Don Winter</b>       |
| ▪ 1:00  | <b>Integrated Systems</b>          | <b>Scott Seymour</b>    |
| ▪ 1:30  | <b>Space Technology</b>            | <b>Wes Bush</b>         |
| ▪ 2:00  | <b>Financial Overview</b>          | <b>Dick Waugh</b>       |
| ▪ 2:30  | <b>Wrap-up &amp; Final Q&amp;A</b> |                         |



# Video Presentation



**NORTHROP GRUMMAN**

DEFINING THE FUTURE



February 13, 2003



# Strategic Overview



Institutional Investor Conference



**Kent Kresa**  
Chairman & CEO





## Northrop Grumman = New Powerhouse

- Sustainable growth in defense spending
- Best positioned portfolio
- Purest defense play
- Strong relationships with all DoD & Intelligence customers
- Strengthened system-of-systems integration capabilities
- Strong acquisition integration track record
- Solid financial performance & balance sheet
- Excellent, highly visible, double-digit growth prospects



***Focused on Growth in Shareholder Value***



## Our Persistent Strategy

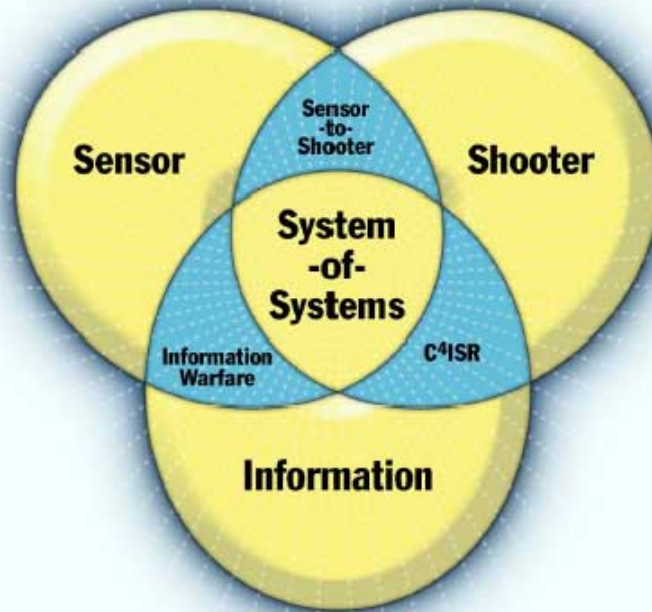
- Build portfolio of technologies essential to system-of-systems, network-centric warfare across all platforms and services
- Aggressively pursue emerging opportunities
- Apply advanced technologies and human capital across the company
- Constantly improve program and financial performance



***TRW Added the Last Major Building Block***

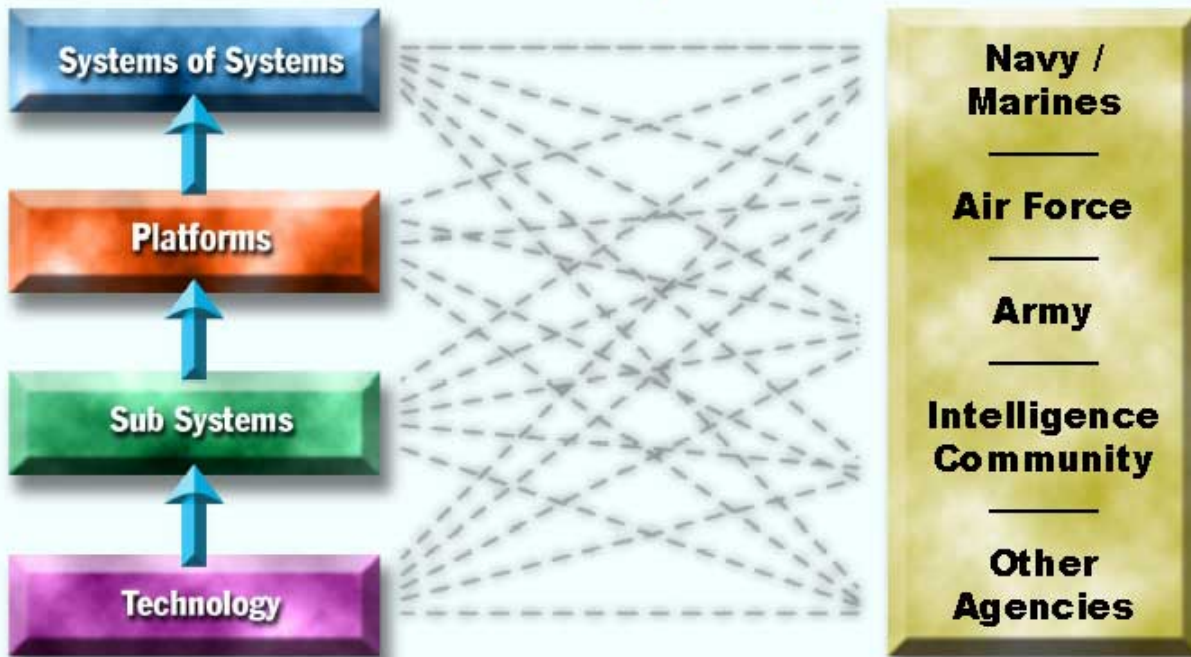


## Culmination of System-of-Systems Strategy



**Undersea → Sea → Land → Air → Space → Cyberspace**

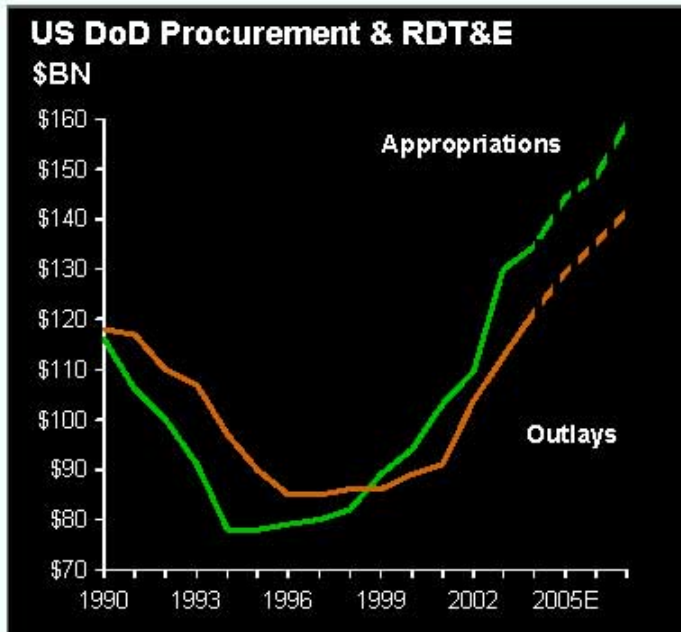
## NOC Can Now Effectively Compete at All Levels



***NOC Domain Knowledge Encompasses Entire Battlespace  
Across Entire Customer Base***



## Strong Defense Outlook Benefits NOC



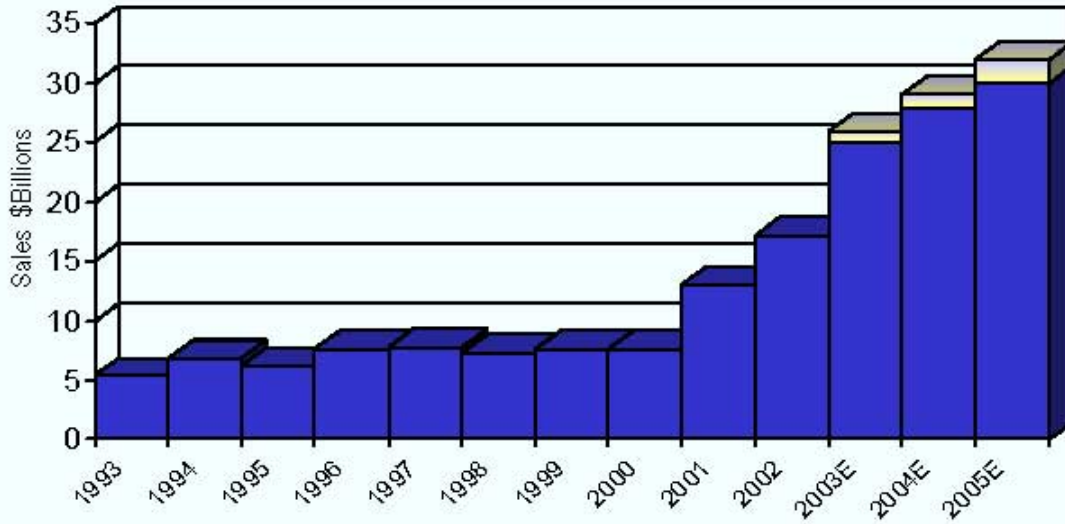
- **6% - 8% CAGR (2002-2007E) in appropriations and outlays**
- **NOC positioned in high priority, faster growing sweet spots – C<sup>4</sup>ISR, Space, NMD, Ships**
- **Homeland Security initiatives provide additional growth**

Source: President's 2004 Submittal

***Positioned to Capture Growth***



## Strategy Set the Stage...

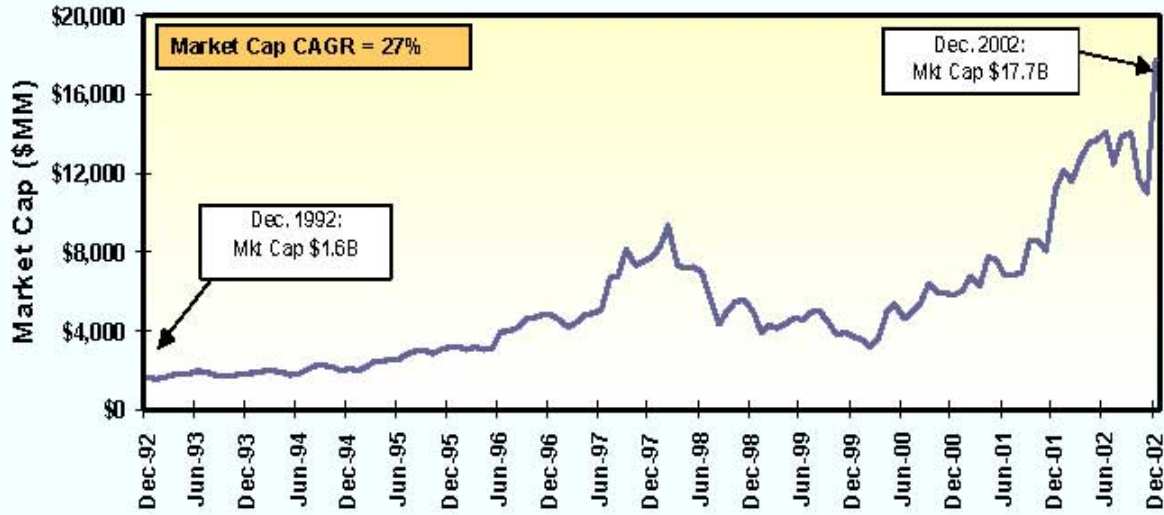


***Positioned to Capture Transformational Growth***



# NOC Market Capitalization

December 1992 - December 2002



**Strategic Focus and Execution Produced Substantial Shareholder Value**



## 2002 Accomplishments...

- Newport News sector “stand up”
- DD(X) win
  - Largest naval procurement in U.S. history
- Deepwater win
  - Establishes NOC as key Homeland Security contractor
- \$500M in new Global Hawk contracts
- NSA “Trailblazer” win w/SAIC
- Immigration and Naturalization Service win
- CVN 21 Decision







## 2002 Accomplishments – TRW Acquisition...

- **Objectives**
  - Space node completes system-of-systems transformation
  - Aligns NOC more closely with customer's vision of network-centric warfare
  - Strengthens missile defense capabilities
  - Adds new customers & technology leadership
  - Leverage TRW's leading technologies to win increasingly complex programs





## 2002 Accomplishments...TRW Acquisition

- Negotiated sale of TRW Auto
- TRW acquisition closed 12/11/02
  - Two new sectors:
    - Mission Systems
    - Space Technology
- TRW 2002 wins
  - Space Tracking and Surveillance System
  - NPOESS
  - James Webb Space Telescope





## 2002 – Another Record Year

### Top Line Revenue Growth

- \$17.2B
- 32% YoY growth
- All sectors met plan

### Segment Operating Margin

- \$1.3B
- 31% YoY growth
- Q3 charges moderated growth

### EPS/EEPS

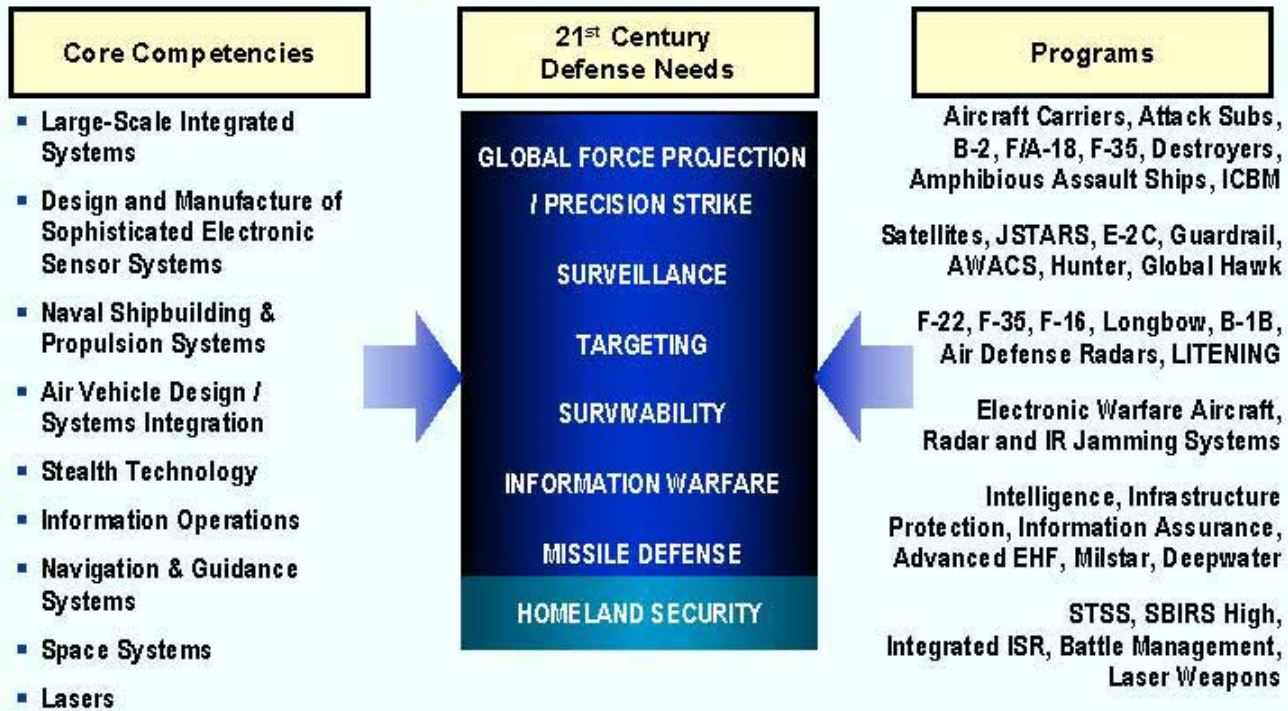
- EEPS \$6.29 (share adjusted)
- Beat \$6.10-\$6.20 guidance
- EPS \$5.85 (share adjusted)
- Beat \$5.65-\$5.75 guidance
- Converting to GAAP only

### Cash from Operations

- \$1.7B
- \$1B available for debt paydown
- All sectors exceeded plan



## NOC Ideally Aligned with Future Defense Needs...



## Leadership in Key Business Areas

	Electronic Systems	Information Technology	Mission Systems	Integrated Systems	Ship Systems/ Newport News	Space Technology
<b>2003E Revenue</b>	~\$6.1B	~\$4.7B	~\$3.9B	~\$3.7B	~\$5.2B	~\$2.5B
	<ul style="list-style-type: none"> <li>- Airborne Radars</li> <li>- C<sup>4</sup>ISR</li> <li>- Electronic Warfare</li> <li>- Navigation &amp; Guidance</li> <li>- Military Space</li> <li>- Homeland Security</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 and Intelligence</li> <li>- Digitized Battlefield</li> <li>- ICBM Sys. Mgmt.</li> <li>- Missile Defense BMC<sup>®</sup></li> <li>- Defense/Civil Software</li> <li>- Application Dev.</li> <li>- Information Warfare</li> <li>- Homeland Security</li> </ul>	<ul style="list-style-type: none"> <li>- Tactical Aircraft</li> <li>- Long Range</li> <li>- Unmanned</li> <li>- Airborne Early Warning &amp; Surveillance</li> <li>- Air-to-ground Surveillance</li> <li>- Airborne Jamming</li> </ul>	<ul style="list-style-type: none"> <li>- Naval Systems Integrator</li> <li>- Aircraft Carriers</li> <li>- Attack Submarines</li> <li>- Surface Combatants</li> <li>- Amphibious Assault Ships</li> <li>- Auxiliary Ships</li> </ul>	<ul style="list-style-type: none"> <li>- Intelligence, Surveillance, Reconnaissance</li> <li>- Laser Weapons</li> <li>- Military SATCOM</li> <li>- Scientific Satellites</li> <li>- Military Avionics</li> <li>- Cutting-edge Micro-electronics</li> </ul>

## Today's Northrop Grumman

- System-of-systems network-centric warfare capable across all platforms & services
- DoD & government 90%+ of revenue
- Second largest defense contractor
- One of top three space & missile defense contractors
- Premier airborne radar & electronic warfare systems provider
- Largest federal government IT provider
- Largest military shipbuilder



***Most Diversified and Balanced Portfolio  
in the Defense Industry***

## Northrop Grumman = New Powerhouse

- Sustainable growth in defense spending
- Best positioned portfolio
- Purest defense play
- Strong relationships with all DoD & Intelligence customers
- Strengthened system-of-systems integration capabilities
- Strong acquisition integration track record
- Solid financial performance & balance sheet
- Excellent, highly visible, double-digit growth prospects



***Focused on Growth in Shareholder Value***



**NORTHROP GRUMMAN**

DEFINING THE FUTURE

February 13, 2003

# Defense Budget Overview

Institutional Investor Conference

**Robert W. Helm**  
Corporate Vice President  
Government Relations





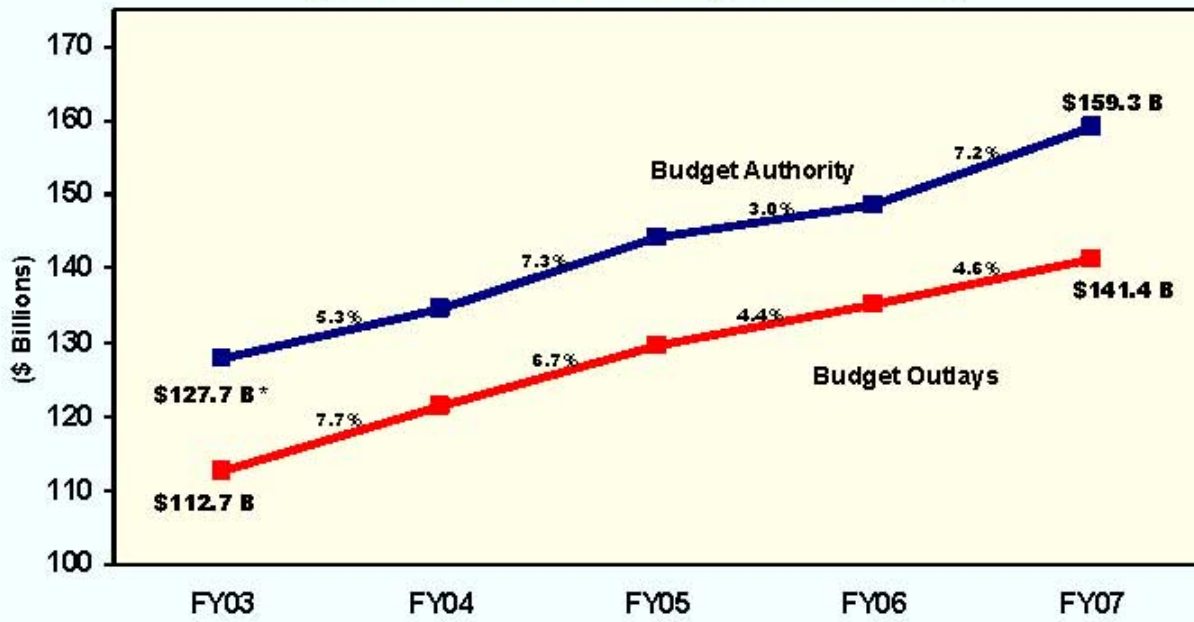
## Overview of FY04 DoD Budget Request

- The President's DoD budget request for FY04 is \$379.9 billion
- Increase in defense spending by \$15.3 billion over FY03
- Modernization program on track
- Initiates transformational spending
- \$41 billion for Homeland Security spending

**Key Northrop Grumman FY04 Programs Fully Supported**



## Growth of the Department of Defense Budget (RDT&E & Procurement, FY03 – FY07)

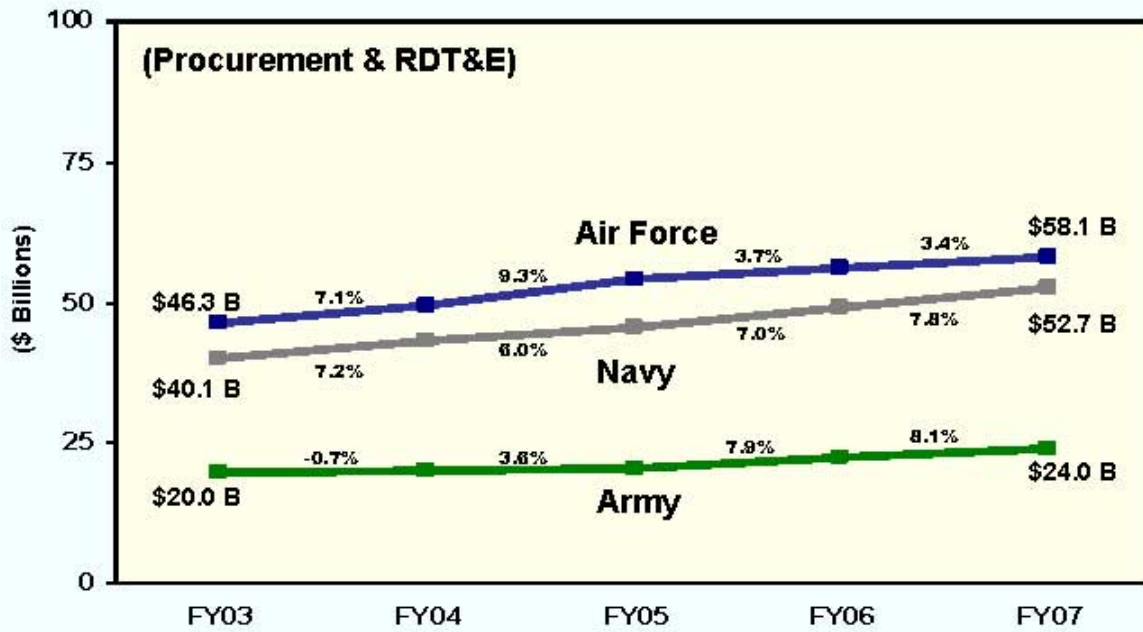


\* \$3 billion for FY03 was reclassified from DoD to DoE

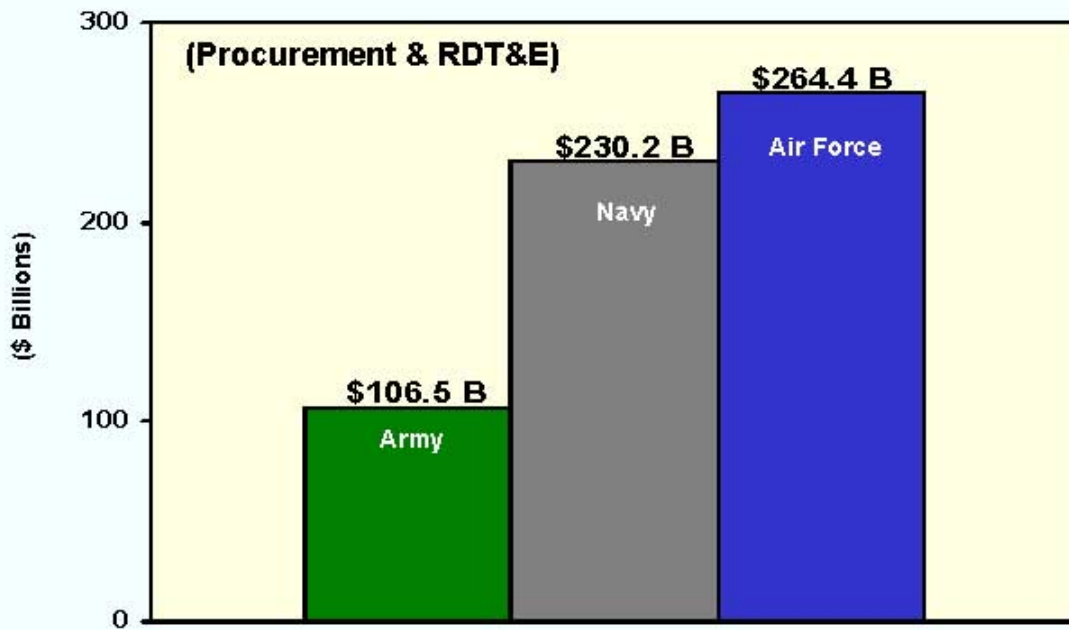
Source: DoD budget briefing, 31 Jan 03



## Military Services Budgets Continue to Grow Through FY07



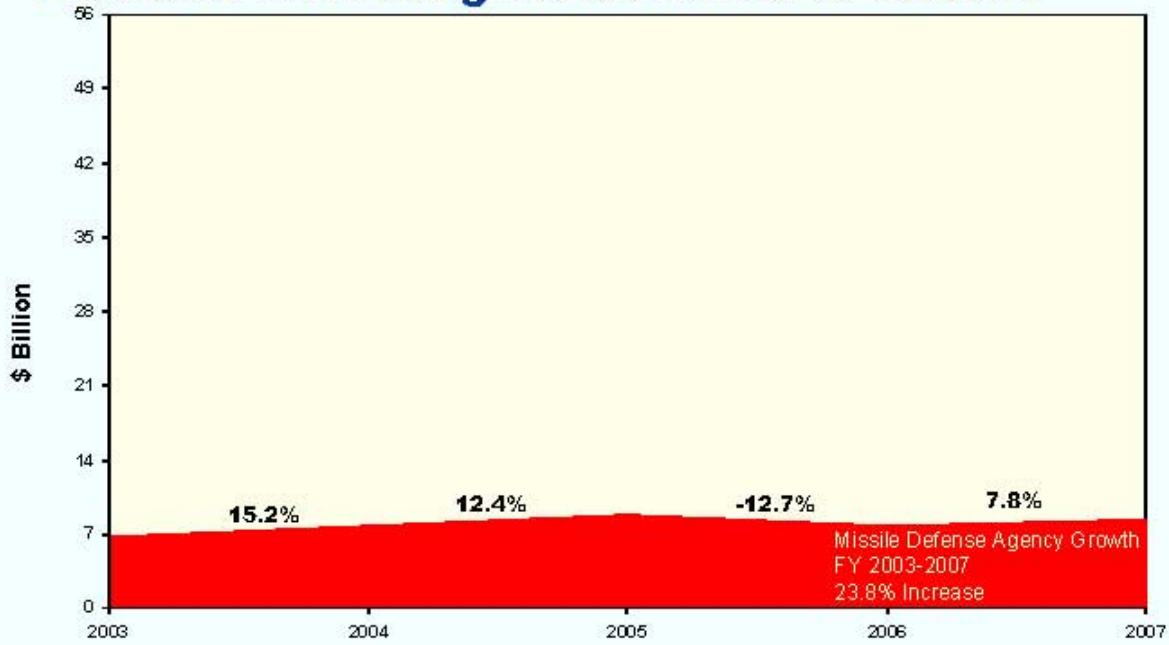
## Total Military Spending from FY03 – FY07



Source: President's FY 04 Budget Request



## Procurement Budgets Continue to Grow...

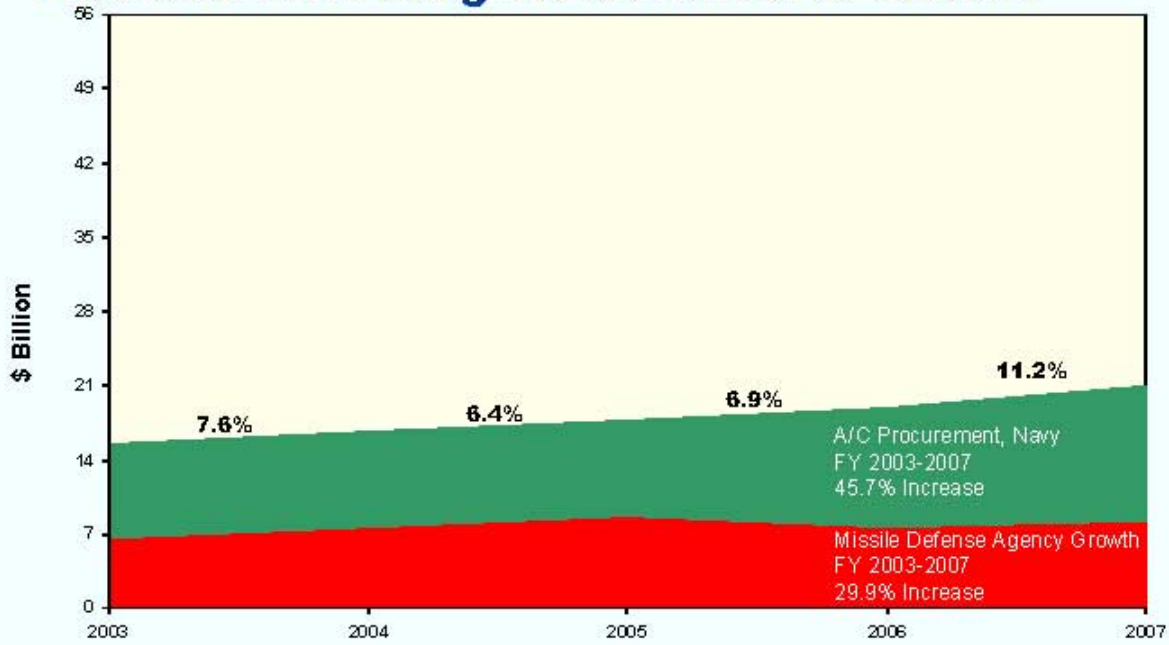


**Strongest Bi-Partisan Support Ever for Missile Defense**

Source: MDA FY04-05 Biennial Budget Press Release



## Procurement Budgets Continue to Grow...

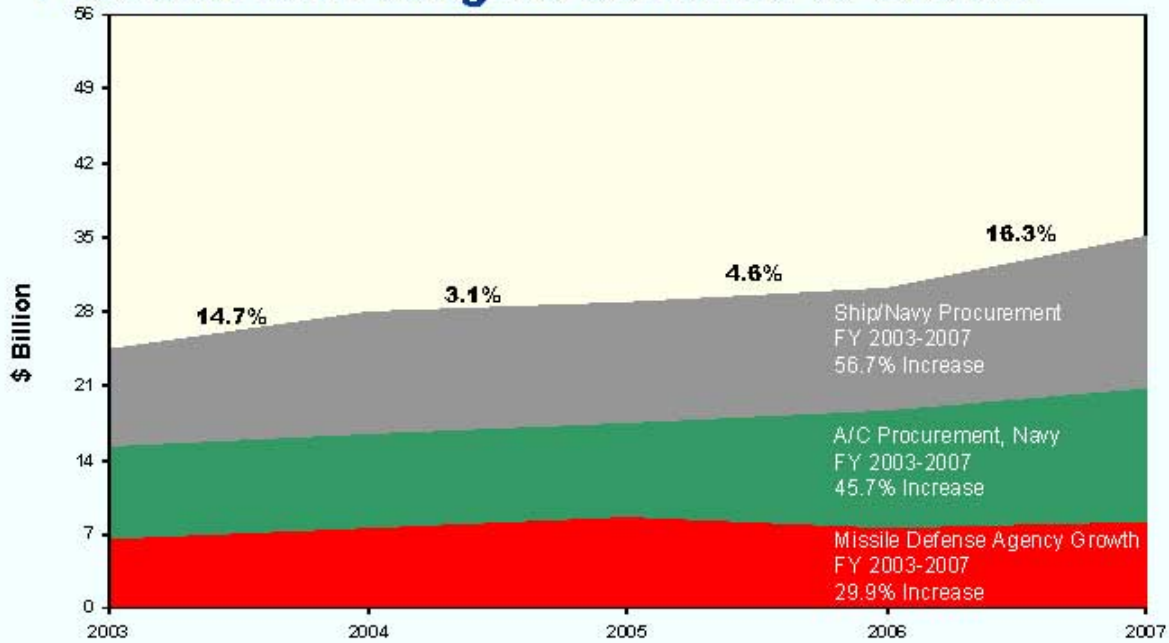


## Stable F-18 Funding and JSF Funding in Out Years

Source: President's FY04 Budget Request



## Procurement Budgets Continue to Grow...

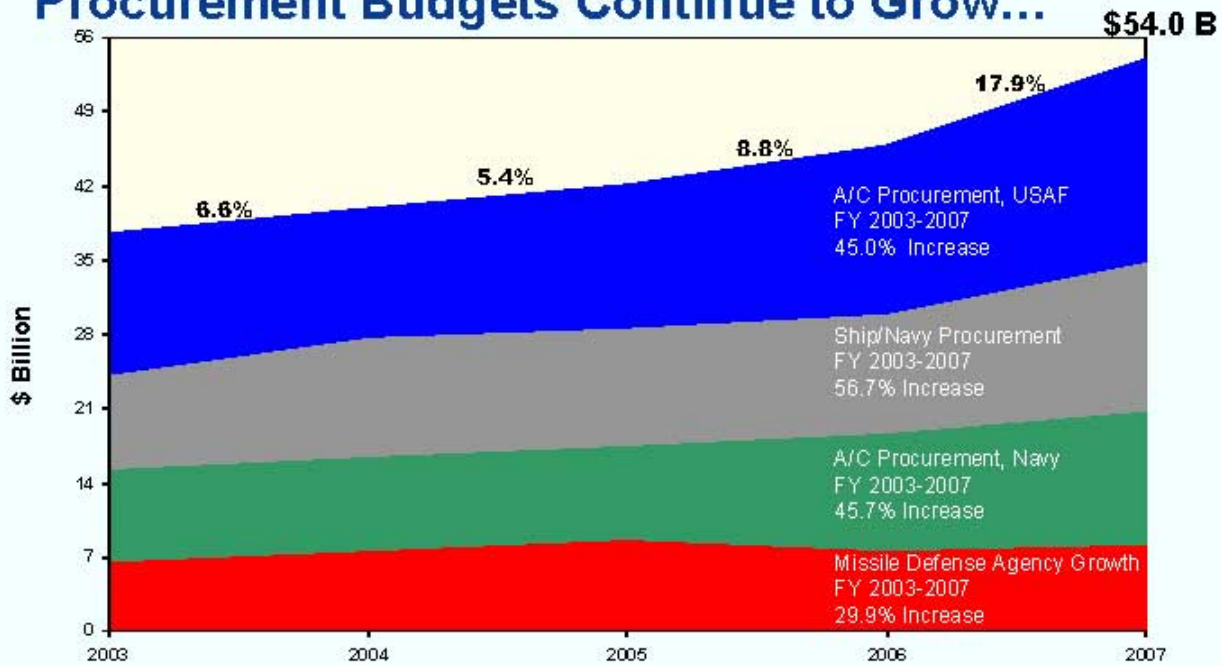


**CVN-21 Production, LHA(R) and 2 VA Class Submarines in FY 07**

Source: President's FY04 Budget Request



## Procurement Budgets Continue to Grow...



### **F-22 Acquisitions Dominate Air Force Procurement Budget**

Source: President's FY04 Budget Request





## Navy Shipbuilding from FY03 – FY09



**57 Total Ships Will Be Funded from FY03 – FY09**

## Navy Aircraft Funding

\$ Million

	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>
<b>F-35</b>	<b>\$2,171</b>	<b>\$2,226</b>	<b>\$744**</b>	<b>\$1,293</b>	<b>\$3,550</b>	<b>\$5,496</b>
Quantity			4	8	29	52
<b>F/A-18E/FIG</b>	<b>\$3,210</b>	<b>\$3,104</b>	<b>\$3,119</b>	<b>\$3,299</b>	<b>\$3,550</b>	<b>\$3,339</b>
Quantity	42	42	42	42	42	42
<b>E-2C Hawkeye</b>	<b>\$238</b>	<b>\$252</b>	<b>\$255</b>	<b>\$221</b>	<b>\$177</b>	<b>\$733</b>
Quantity	2	2	2	2	*	5
<b>BAMS***</b>	<b>\$25</b>	<b>\$224</b>	<b>\$299</b>	<b>\$242</b>	<b>\$205</b>	<b>\$225</b>
<b>Fire Scout</b>	<b>\$4</b>	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>
<b>Navy UCAV</b>	<b>\$57</b>	<b>\$172</b>	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>

\* DoD Data Not Yet Available

\*\* Joint procurement dollars with Air Force, FY06 – FY09

\*\*\* Based on NOC projection data



## Air Force Aircraft Funding

\$ Million

	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>
MC2C	\$363	\$550	*	*	*	*
Global Hawk	\$253	\$303	*	*	*	*
Quantity	4	4				
F-35	\$2,194	\$2,242	**	**	**	**
Quantity						
B-2 Upgrades	\$260	\$363	*	*	*	*
F-22	\$5,170	\$5,087	*	*	*	*
Quantity	22	24				

\* DoD Data Not Yet Available

\*\* Figures represented in previous Navy Aircraft Funding slide – Joint Air Force and Navy program



## Other Northrop Grumman Programs Faired Well in FY04 DoD Budget (RDT&E and Procurement)

<u>Program</u>	<u>FY04 Funding</u>
▪ Advanced Seal Delivery System (ASDS)	\$64.3M
▪ Large Aircraft Infrared Countermeasure (LAIRCM)	\$46.7M
▪ Apache Longbow	\$762.5M
▪ Comanche	\$1,079.0M
▪ High Energy Lasers	\$83.1M



## Northrop Grumman is a Major Contract Award Winner (Based on FY 2002 Data including Legacy TRW)

- **#1** for Navy prime contract awards
- **#1** provider of Federal Government IT Services
- **#3** for Air Force prime contract awards
- **#5** for Army prime contract awards

Source: DoD News Release, January 25, 2003

Note: The numbers reflect the most current rankings available from DoD based on FY02 numbers.



## Northrop Grumman's Programs are Fully Funded

### *Prime Contractor*

- DDG-51
- CVN 76 & 77
- DD(X)
- Deepwater (JV)
- EA-6B
- E-2C
- ICBM
- IR Counter-Measures
- NPOESS
- JWST
- LPD-17
- CVN 21
- LHD
- B-2
- Global Hawk
- Joint STARS
- IT Programs
- Aerial Common Sensor
- ASDS
- RTIP
- STSS
- Restricted Programs

### *Major Subcontractor*

- F/A-18E (Boeing)
- F-35 JSF (Lockheed/BAE)
- VA Class Subs (Electric Boat)
- AEHF
- F-22 Radar (JV with Raytheon)
- TCS
- SBIRS High
- Restricted Programs

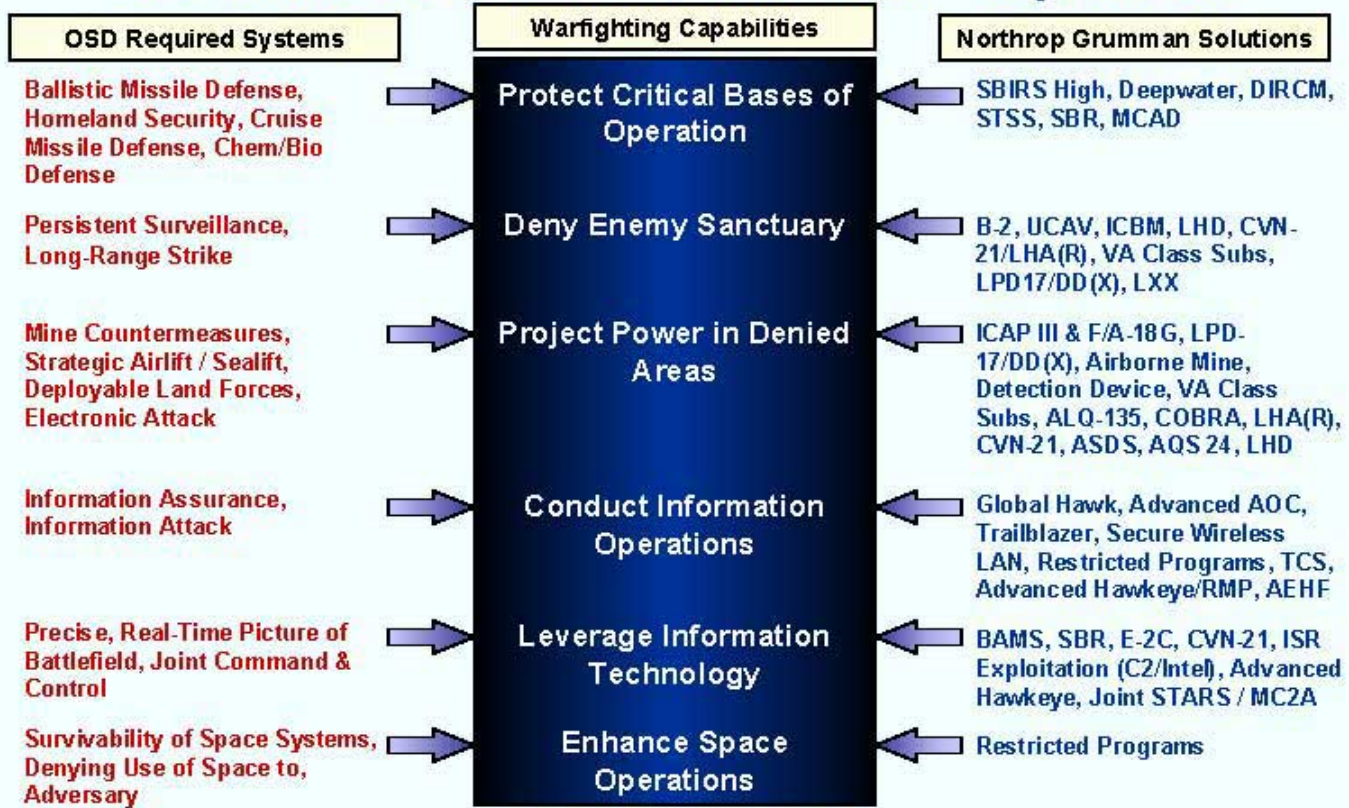


## Defense Spending Driven by Threat Perceptions

- The rise of regional hegemons
- Proliferation of weapons of mass destruction and the necessity for ballistic missile defense
- Terrorism domestically and abroad

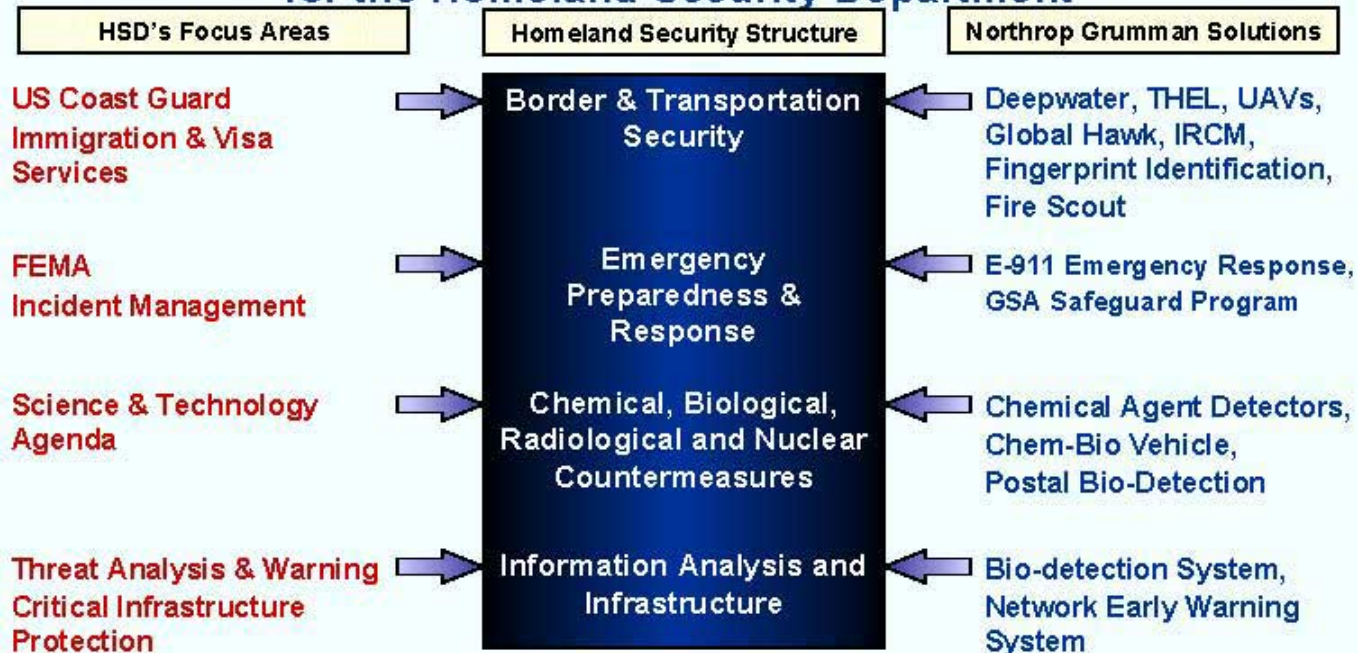
***DoD Budget Should Have Long-Term Sustainability***

## OSD's Focus is on "Transformational" Capabilities





## Northrop Grumman is Well Positioned to Provide Solutions for the Homeland Security Department



**FY04 Budget for Homeland Security Department Totals \$36.2 Billion**

Source: Dept. of Homeland Security



## **NOC is Well Positioned in Other Program Areas**

- **Information Technology**
- **Intelligence Community**
- **NASA**
- **National Oceanic and Atmospheric Administration (NOAA)**

## Summary

- DoD budget maintains strong growth through the five-year defense plan
- Threat of regional hegemons and war on terrorism continues focus on defense preparedness
- Northrop Grumman positioned for double-digit growth



**NORTHROP GRUMMAN**

DEFINING THE FUTURE



February 13, 2003



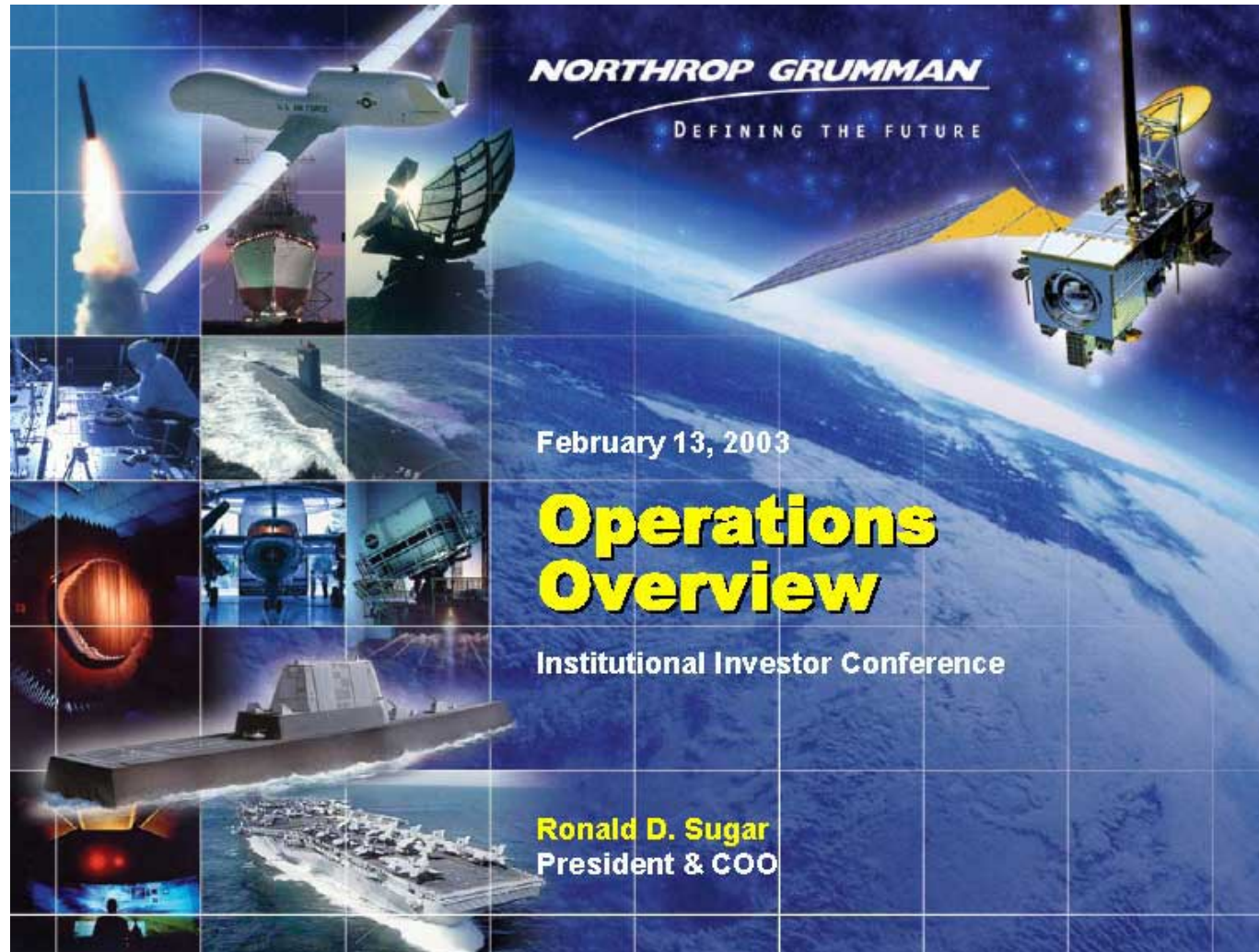
# Operations Overview



Institutional Investor Conference



**Ronald D. Sugar**  
President & COO





## Operations Overview

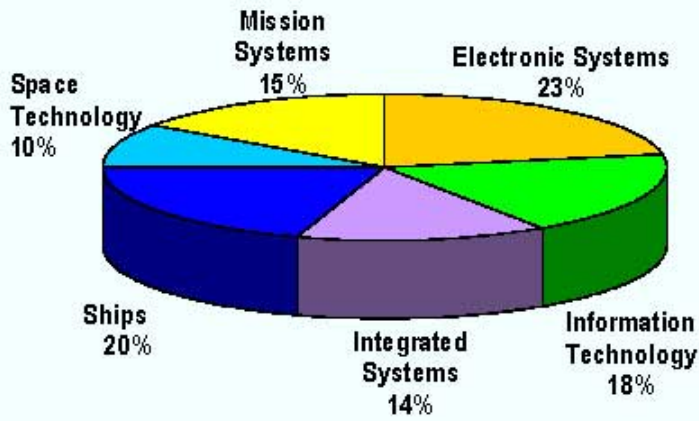
- **Powerful Portfolio**
- **Operating Focus**
- **Cross-company Leverage**
- **Strong Management Team**



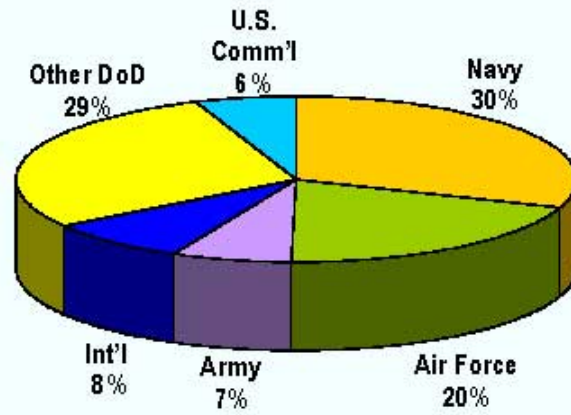


# Northrop Grumman Business Portfolio 2003E Revenues ~ \$25 - 26B

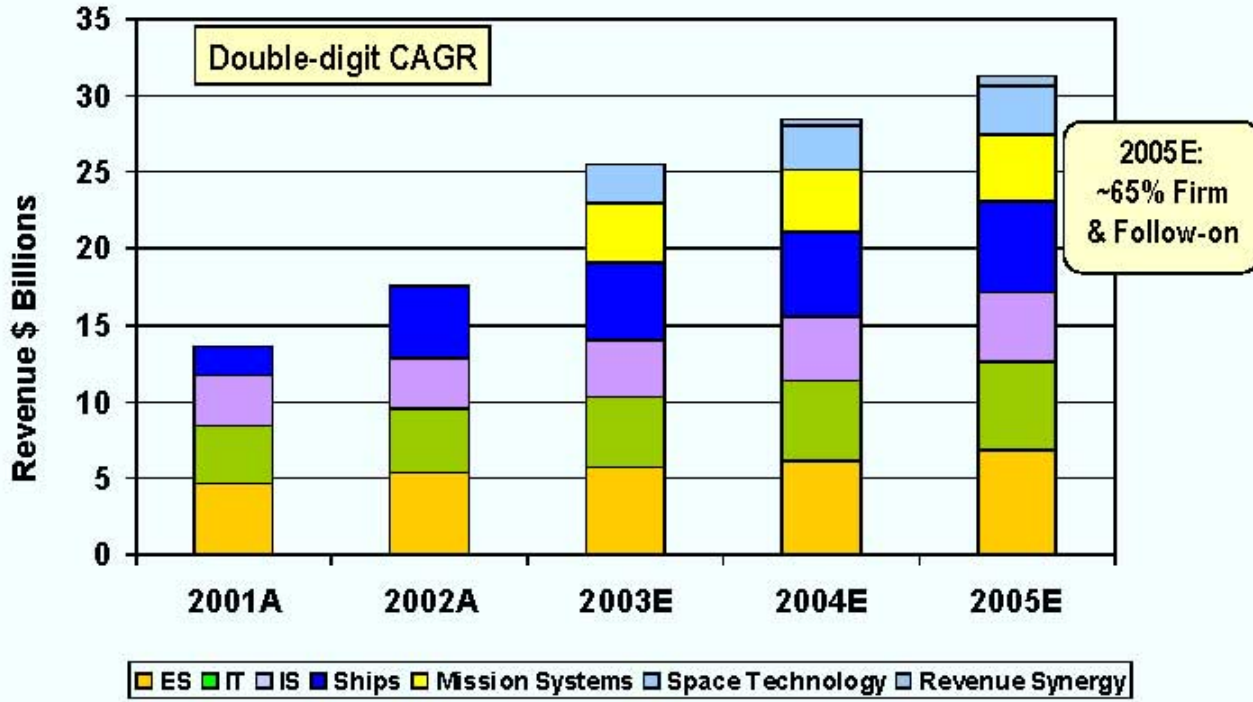
## By Sector



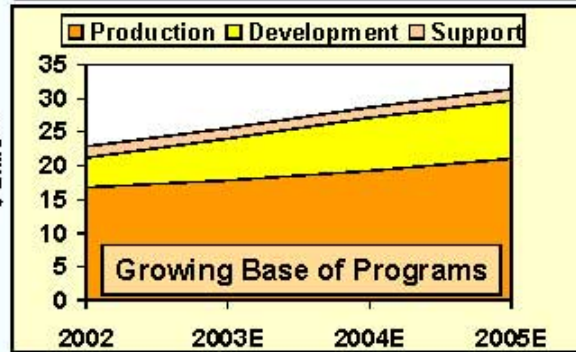
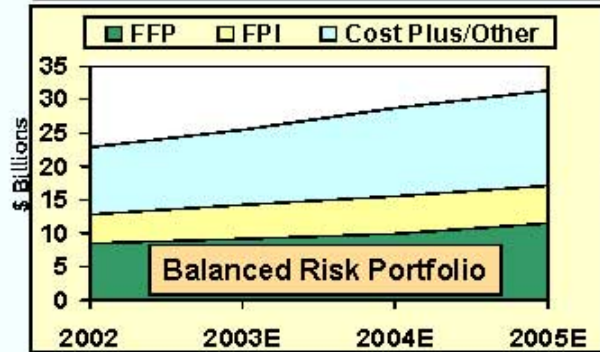
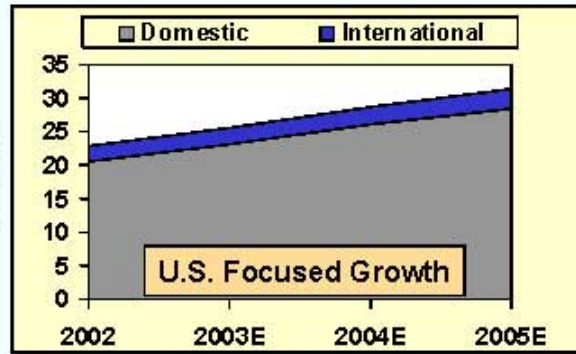
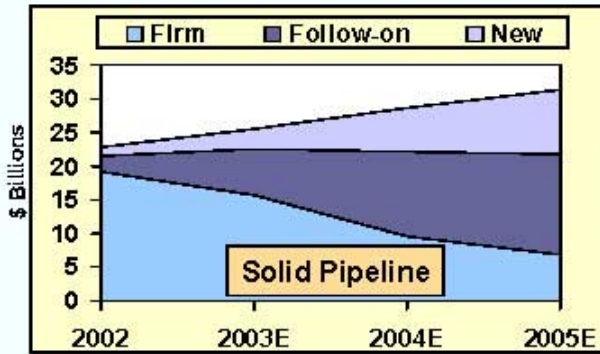
## By Customer



## Double-Digit Growth



## Positioned for Predictable Growth







## Best-Positioned Program Portfolio in the Industry

### Production Programs

- Aircraft carriers
- DDG-51
- F-18
- Submarines
- B-2
- LHD
- Fire control radars
- Surveillance radars
- Apache Longbow
- ICBM
- Surveillance satellites

### Growth Drivers

- F-35
- Global Hawk
- DD(X)
- Deepwater
- LPD
- International air defense
- Trailblazer
- Immigration Service
- SBIRS High
- STSS
- C<sup>4</sup>ISR Networked Systems
- NPOESS
- Force XXI BCBB

### Future Programs

- Advanced Hawkeye
- Space-Based Radar
- Littoral Combat Ship
- Navy UCAV
- NATO AGS
- International air defense
- Homeland Security
- Information operations
- Advanced laser weapons
- Major systems integration
- Advanced sensors

***Pipeline Drives Growth in Sales and Profits***



## Northrop Grumman's Strong National Presence



Virginia	29,041
California	26,066
Maryland	11,270
Mississippi	11,233
Louisiana	6,899
Florida	4,112
New York	2,555
Illinois	2,317

- 120,000 Employees
- All 50 States
- 25 International Offices



## Major Programs & Markets

	Electronic Systems	Information Technology	Mission Systems	Integrated Systems	Ship Systems/ Newport News	Space Technology
<b>2003E Revenue</b>	~\$6.1B	~\$4.7B	~\$3.9B	~\$3.7B	~\$5.2B	~\$2.5B
	<ul style="list-style-type: none"> <li>▪ F-16</li> <li>▪ F-22</li> <li>▪ F-35</li> <li>▪ AWACS</li> <li>▪ MESA</li> <li>▪ MP/RTIP</li> <li>▪ Longbow</li> <li>▪ Comanche</li> <li>▪ LAIRCM</li> <li>▪ Trailblazer</li> <li>▪ SBIRS High</li> <li>▪ STSS</li> </ul>	<ul style="list-style-type: none"> <li>▪ DoD</li> <li>▪ INS</li> <li>▪ GTN-21</li> <li>▪ Deepwater</li> <li>▪ DD(X)</li> <li>▪ Intelligence Agencies               <ul style="list-style-type: none"> <li>▪ NSA</li> <li>▪ NRO</li> </ul> </li> <li>▪ Civil / Federal</li> <li>▪ State / Local</li> <li>▪ Commercial</li> </ul>	<ul style="list-style-type: none"> <li>▪ ICBM</li> <li>▪ Missile Defense BMC3</li> <li>▪ JTRS</li> <li>▪ Joint National Integration Center</li> <li>▪ Treasury Communications</li> <li>▪ Centers for Disease Control</li> <li>▪ Force XXI BCBB</li> </ul>	<ul style="list-style-type: none"> <li>▪ F-18</li> <li>▪ F-35</li> <li>▪ MC2A</li> <li>▪ MP/RTIP</li> <li>▪ Advanced Hawkeye/RMP</li> <li>▪ E-2C Hawkeye</li> <li>▪ B-2 Upgrades</li> <li>▪ JSTARS upgrades</li> <li>▪ Global Hawk</li> <li>▪ FOSJ / ICAP III</li> </ul>	<ul style="list-style-type: none"> <li>▪ CVN</li> <li>▪ CVN(X)</li> <li>▪ SSN</li> <li>▪ DDG</li> <li>▪ DD(X)</li> <li>▪ Deepwater</li> <li>▪ LHD</li> <li>▪ LPD</li> <li>▪ TAK/R</li> <li>▪ Tankers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Advanced EHF</li> <li>▪ Restricted</li> <li>▪ F-22 CNI</li> <li>▪ F-35 CNI</li> <li>▪ NPOESS</li> <li>▪ JWST</li> <li>▪ STSS</li> </ul>



## Program Priorities for 2002 – Report Card

### Operating Focus

- ✓ F-35
- ✓ Global Hawk
- ✓ F-16 UAE
- ✓ F-22 Radar
- ✓ ICAP III
- ✓ SBIRS High
- ✓ MP-R TIP
- ✓ Wedgetail
- ✓ BAT P3I
- ✓ LPD 17
- ✓ Polar Tanker
- ✓ CVN 76

### New Opportunities

- ✓ DD(X)
- ✓ Deepwater
- ✓ Joint STARS Follow-on
- ✓ International Electronics
- ✓ International IT
- ✓ Homeland Security





## 2002 Integration Report Card

- **Litton**
  - Complete
  - Targets achieved
  - Internal systems on schedule
- **Aerojet**
  - Complete
- **Newport News**
  - Complete
  - Sector stand-up March 2002
  - Internal systems on schedule



***All Integration Activities are Complete***

## 2003 Operating Priorities

- Operating excellence
- Outstanding financial performance
- TRW integration
- TRW Auto and Component Technologies sale



***Execute and Integrate***



## Program Priorities for 2003

### Operating Focus

- F-35
- Global Hawk
- Advanced Hawkeye
- F-16 UAE
- Wedgetail
- SBIRS High
- CNV 76/77/21
- LPD 17
- DDX
- Deepwater
- Polar Tanker
- NPOESS
- STSS
- JWST
- ICBM
- Trailblazer

### New Opportunities

- Kinetic Energy Boost Phase Intercept
- Targets, Payloads and Countermeasures
- Information Warfare
- Infrared Countermeasures
- Classified space
- Joint-STARS follow-on (MC2A)
- Virginia-class follow-on
- Taiwan subs, destroyers, ATDL
- Littoral Combat Ship
- Homeland Security
- Watchkeeper

## Cross Sector Initiatives

	IS	ES	IT	SS	NN	MS	ST
• Taiwan ATDL	✓	✓	✓				
• UCAV-N	✓	✓			✓		
• DD(X)	✓	✓	✓	✓	✓		
• Littoral Combat Ship	✓	✓	✓	✓			
• Aerial Common Sensor	✓	✓	✓			✓	
• MC2A	✓	✓	✓			✓	
• KE Boost Phase Intercept	✓	✓	✓	✓		✓	✓
• Classified Satellites		✓				✓	✓
• Deepwater	✓			✓			
• F-35	✓	✓					✓
• Battlefield C <sup>4</sup> ISR	✓	✓	✓			✓	✓
• Space-Based Radar		✓				✓	✓
• Watchkeeper	✓	✓	✓				





## TRW Integration Plan

- Complete TRW Automotive sale
  - ✓ HSR approval
  - ✓ EU approval
  - Expected close - Q1 2003
- Stand up two new NG sectors by April 2003
  - Mission Systems (\$3.9B 2003E)
  - Space Technology (\$2.5B 2003E)
- Transition corporate functions by Q4 2003



***Integration is Straight Forward***



## Sector Standup Complete When...

- NOC management policies and procedures implemented by the sector management team
- Sectors meet NOC standards of financial, operational, legal and regulatory risk management
- NOC corporate office has visibility into sector financial and operational performance.
- All identified optimization opportunities, including synergies, are addressed
- Checklist of ~300 mandatory process steps

***Operation and Conduct Aligned With  
The Northrop Grumman Business Model***



## Program Risk Management Process

### Pre-Contract Phase

- Non-advocate review
- Independent cost evaluation
- Corporate office review

### Contract Performance Phase

- Risk management baseline
- Company-wide Earned Value Management System
- Program management visibility at all levels
- Regularly scheduled executive reviews

***Northrop Grumman Employs a Rigorous Review  
and Approval Process***



## Behaviors and Actions

- Live the company values
- Focus on operating excellence
- Act with speed
- Communicate openly
- Collaborate across the company

***The Right Behavior Creates Shareholder Value***

## Northrop Grumman Team:

### OFFICE OF THE CHAIRMAN

**Kent Kresa**  
CHAIRMAN AND CEO



**Ron Sugar**  
PRESIDENT AND COO



### SEVEN OPERATING SECTORS AND PRESIDENTS

#### Electronic Systems



**Bob Iorizzo**  
PRESIDENT

#### Information Technology



**Herb Anderson**  
PRESIDENT

#### Mission Systems



**Don Winter**  
PRESIDENT

#### Integrated Systems



**Scott Seymour**  
PRESIDENT

#### Newport News



**Tom Schievelbein**  
PRESIDENT

#### Ship Systems



**Phil Dur**  
PRESIDENT

#### Space Technology



**Wes Bush**  
PRESIDENT

- Very experienced incumbents
- Deep bench for the future
- Management compensation aligned with value creation

**NORTHROP GRUMMAN** DEFINING THE FUTURE  
*Electronic Systems*

February 13, 2003

# **Electronic Systems Overview**

Institutional Investor Conference

**Bob Iorizzo**  
President  
Electronic Systems





## Electronic Systems ... A Stronger Sector

**\$ 2.3B**  
**1996**

• NOC buys Westinghouse ES

**\$ 2.7B**  
**1999**

• California Microwave & Navia acquisitions  
• Defensive Systems realigned with ES Sector

**\$ 2.9B**  
**2000**

• Comptek Research acquisition

**\$ 4.7B**  
**2001**

• Litton, Aerojet and Solystic acquisitions add \$ 1.7B to ES Sector sales

**\$ 5.3B**  
**2002**

• EDD / Ruggedized Displays divestiture  
• Gov't Systems Division Formed

**\$ 6.1B**  
**2003E**

• Dramatic portfolio expansion





## Electronic Systems ... From Underseas to Outerspace

- ✦ ~\$6.1B - 2003E Sales
- ✦ 24,000 Employees
- ✦ 51 Major Operating Locations
- ✦ 19 International Offices
- ✦ 34% International
- ✦ Over 200 Key Programs
- ✦ More than 12,000 Active Contracts

***\$6B Backlog Across Product Base***







## Proven Leader in Defense Electronics

### Systems Development

Incubator for the Future



### Navigation Systems

Civil Airlines,  
C-17, F-18, Comanche & Other Helos



### Combat Avionics

F-16, F-22, F-35



### Undersea Systems

Trident, Virginia, SSGN,  
ASDS, UUVs



### Airborne Surveillance

AWACS E-3A, Wedgetail,  
Joint STARS, MP-RTIP



### Ship Systems

Carriers, LHD-8,  
CG-47, DDG-51 and LPD-17



### Infrared Countermeasures

C-17, C-130, MH-53



### Space

STSS, SBIRS High, NMD, DSP



### Land Combat Systems

Apache Longbow, Comanche,  
BAT P<sup>3</sup>I



### Command & Control

Airspace Management,  
Tactical Exploitation System





# Electronic Systems Leadership

## Functional Support



**International Operations & Marketing**  
Lloyd Carpenter



**Business Operations**  
TW Scott



**Engineering & Manufacturing**  
Wayne Snodgrass



**President**  
Bob Iorizzo



**Defensive Sys.**  
John Chino



**C4ISR & Naval Sys.**  
Geo. Perkins



**Aerospace Sys.**  
Jim Fitts



**Navigation Sys.**  
Bill Allison



**SD&T**  
Taylor Lawrence



**Space Sensor Sys.**  
Carl Fischer



**Logistics Sys.**  
John Mesamore



**Government Sys.**  
Suzanne Jenniches

## Shared Services



**CFO & Business Management**  
Wylie Smith



**Human Resources & Administration**  
Jim Cassidy



**Procurement & Mat'l Management**  
Katie Gray

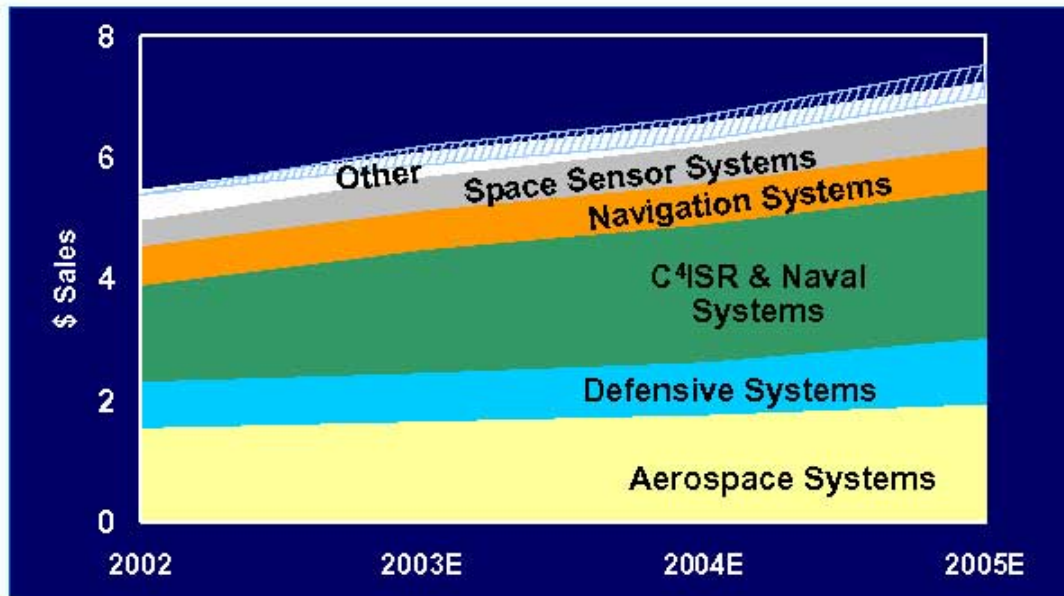


**Analysis & Planning**  
Chip Pickett

**Operational Excellence Through Collaboration**



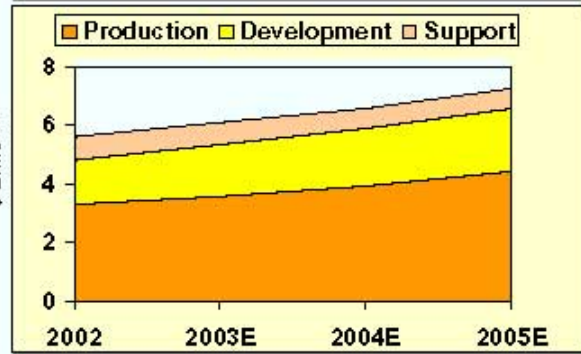
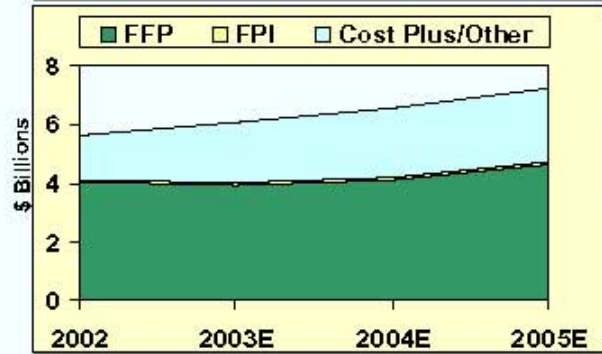
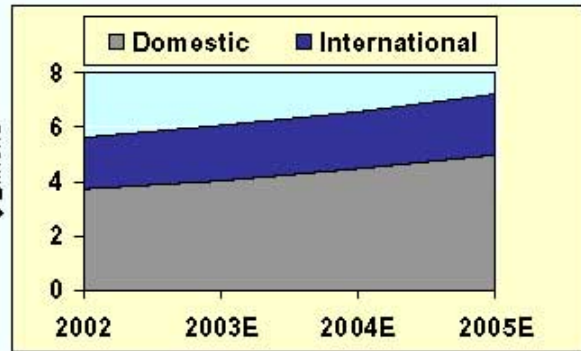
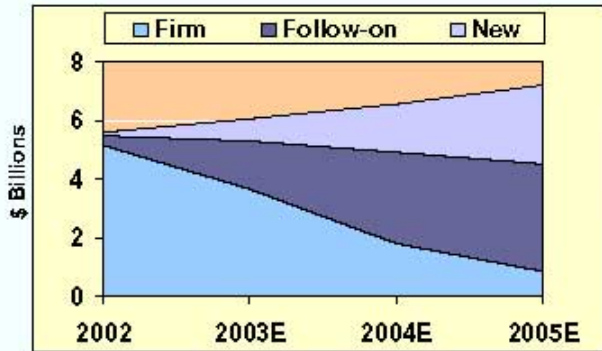
## Profitable Growth... CAGR ~10%



Note: 2002 & CAGR adjusted for EDD & San Diego Divestiture



# Sales Mix





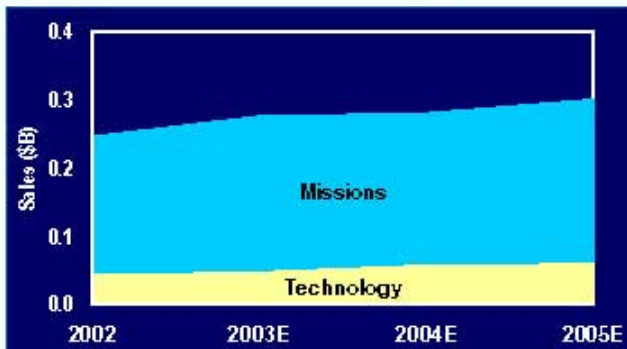
## Strategic Actions

- ✍ **Customer satisfaction (presently 94% blue / green)**
- ✍ **Preserve lead position in key markets**
- ✍ **Strongly participate in missile defense & homeland security**
- ✍ **Transition development programs to production**
- ✍ **Double digit profitability**
- ✍ **Manage the portfolio (43 businesses)**
- ✍ **Support the new Northrop Grumman**

***Double-Digit Growth & Profitability***



## Systems Development & Technology



'02 Win Rate . . . 80%

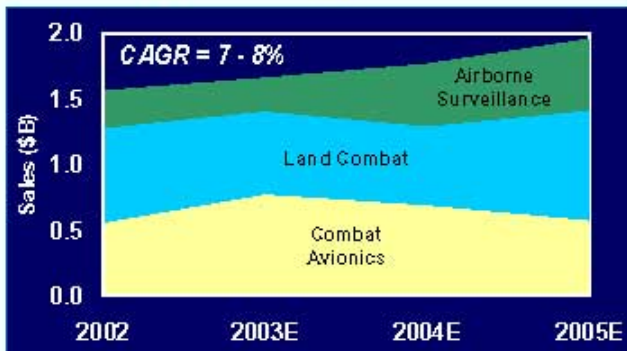
- ✦ Intelligence, Surveillance & Reconnaissance
- ✦ Strike and Combat
- ✦ Electronic Warfare
- ✦ C<sup>4</sup> and Cyberspace
- ✦ Homeland Security



*Securing Our Future*



## Aerospace Systems



### Key Programs

- ✎ F-16
- ✎ F-22
- ✎ F-35
- ✎ AWACS
- ✎ Wedgetail
- ✎ JSTARS
- ✎ MP-RTIP
- ✎ Longbow
- ✎ Comanche
- ✎ Classified



***Strong Heritage . . . Bright Future***



## F-16 Block 60 Program Update



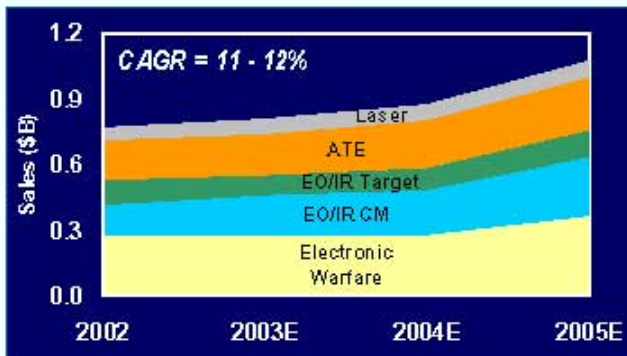
- ✍ Program on track
- ✍ Financial reserve holding
- ✍ 1st EMD radar system delivered Jan '03
- ✍ 1st EMD EO system scheduled for delivery 1st Qtr '03
- ✍ 1st EMD EW system scheduled for delivery 4th Qtr '03
- ✍ Flight test (ABR & EO) 1st Qtr '03

***Customer Satisfaction High***





## Defensive Systems



### Key Programs

- |              |                 |
|--------------|-----------------|
| ✦ MH-53 IRCM | ✦ Laser Systems |
| ✦ LAIRCM     | ✦ ICAP III      |
| ✦ F-35 EW    | ✦ ALQ-135       |
| ✦ LITENING   | ✦ ALQ-131       |

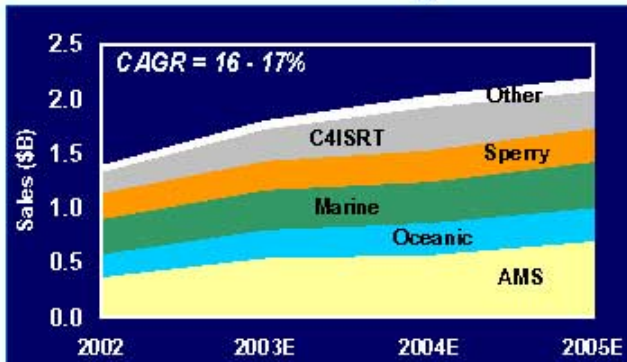


Note: 2002 & CAGR adjusted for EDD Divestiture

**Proven Defense**



## C<sup>4</sup>ISR & Naval Systems



### Key Programs

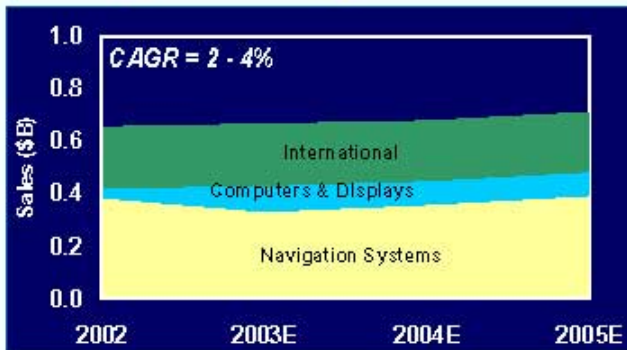
- ✂ Int'l Air Defense
- ✂ ASDS
- ✂ TES / NFN
- ✂ Virginia Class Sub
- ✂ Trident / SSGN
- ✂ CVN-77 / CVN-21
- ✂ Ship Mgmt Systems
- ✂ DD(X)
- ✂ C<sup>4</sup>ISR Networks
- ✂ DDG



**Strong Competitor**



## Navigation Systems



### Key Programs

- ✦ SBIRS
- ✦ Civil Aviation
- ✦ Eurofighter
- ✦ Helicopter Cockpits
- ✦ Identify Friend or Foe

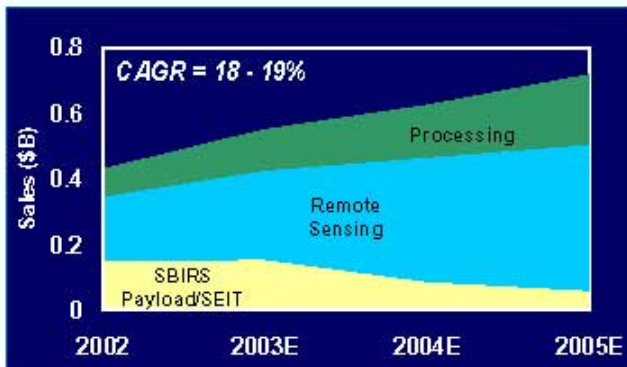


***Proven Military & Commercial Solutions***

Note: 2002 & CAGR adjusted for San Diego Divestiture



## Space Sensor Systems



### Key Programs

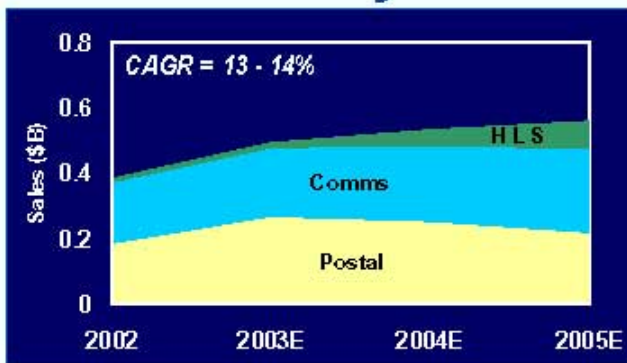
- ✦ Space Tracking & Surveillance System (STSS)
- ✦ SBIRS High
- ✦ Defense Meteorological Satellite Program
- ✦ NPOESS Weather Satellite
- ✦ Classified Payloads



*Payloads of the Future*



## Government Systems



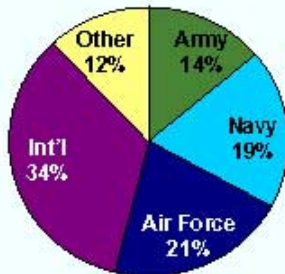
### Key Programs

- ✦ Advanced Flats Sorting
- ✦ International Mail Sorting Centers
- ✦ Bio-Detection Systems
- ✦ Voice / Data Switching
- ✦ Ground-to-Air Comms
- ✦ Secure Comms
- ✦ Homeland Security (HLS)

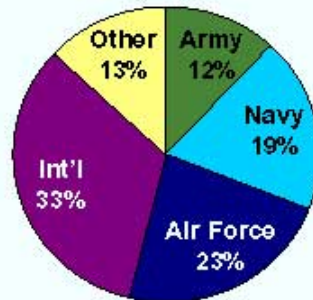
***Automation & Communications for the Future***



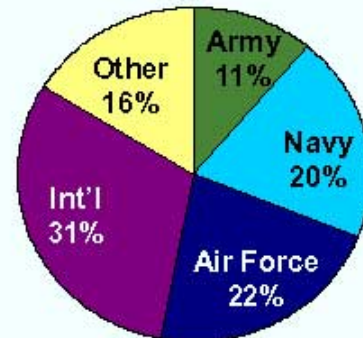
## A Diverse and Broad Portfolio



2002 - \$ 5.3B



2003E - \$ 6.1B



2005E - \$ 7.2B



## \$6B in 2002 Acquisitions

- ✦ Trailblazer
- ✦ Int'l Air Defense
- ✦ STSS
- ✦ TES / NFN
- ✦ Aerial Common Sensor
- ✦ USPS Bio-Detection Demo
- ✦ Other Classified
- ✦ LITENING ER
- ✦ Solystic Material Handling
- ✦ F-15K ALQ-135





## Pipeline Remains Healthy

### In Production

- F-22 Radar
- F-16 V-9
- AWACS RSIP
- Joint STARS Radar
- Longbow
- DIRCM / LAIRCM
- TES
- Base BAT
- Virginia Class Sub
- ASDS
- SPQ-9B
- Blue Storm
- MH-53 IRCM
- MH-60



### In Development

- F-35
- CVNX
- STSS
- SBIRS High
- BAT P<sup>3</sup>I Seeker
- F-16 Block 60
- Wedgetail
- MP-RTIP
- Comanche
- E-2C RMP
- Trailblazer
- LSI 2000
- SSGN MAC Launcher
- Classified



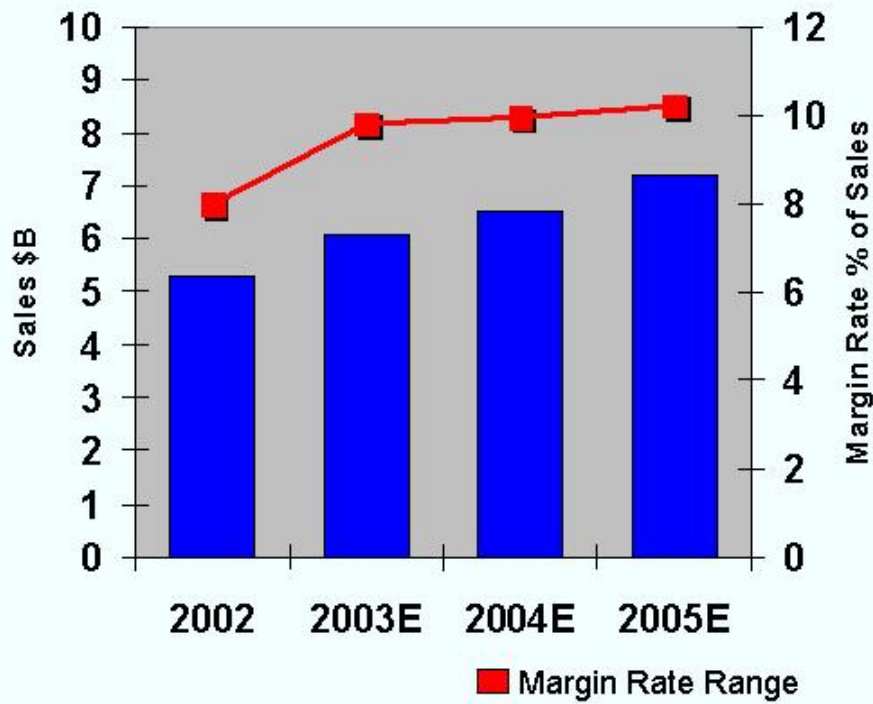
### Key Opportunities

- 737 AEW&C (Turkey)
- Aerial Common Sensor
- IRCM P<sup>3</sup>I
- Homeland Defense
- BMDS - Boost Phase
- DD(X)
- BMC<sup>4</sup>I
- Common Missile
- BAMS
- SBR
- Bio-Detection
- Deepwater
- EMALS
- Classified





## A Solid Financial Future





## A Growing Base ...

- ✦ **\$6B in backlog across product base**
- ✦ **Right products on the right platforms**
- ✦ **Litton and Aerojet integrations complete**
- ✦ **Focused on operational execution to increase profit**
- ✦ **Well positioned for DoD budget trends**



*... and an Expanding Future*

**NORTHROP GRUMMAN** DEFINING THE FUTURE

*Newport News*

February 13, 2003

# Newport News Overview

Institutional Investor Conference

**Tom Schievelbein**  
President  
Newport News



## Newport News Overview

- ✎ **Sole designer, builder and refueler of Navy aircraft carriers**
- ✎ **One of two companies that build nuclear submarines**
- ✎ **Leading provider of engineering and design services**
- ✎ **Growing fleet maintenance business**
- ✎ **Over 18,000 employees; 4,500 engineers and designers**





# A Strong Management Team



Operations  
John Shephard, SVP



**President**  
Tom Schivelbein



Human Resources  
Administration and  
Trades  
Mike Peters, VP



Business and  
Technology  
Development  
Irwin Edenson, VP



Aircraft Carrier  
Program  
Bob Gunter, SVP



Strategic Planning  
and Integration  
Dan Arczynski, VP



Waterfront Nuclear  
Engineering and Test  
Rolf Bartschi, Dr.



Continental  
Maritime  
Dave McQueary, Pres.

CVN 77 Program  
Scott Stabler, VP



Business Management  
and Chief Financial  
Officer  
Linda Leukhardt, VP



Ship Repair Program  
Becky Stewart, Dir

CVN 21 Program  
Matt Mulhern, VP



Contracts  
Ron Ward, VP



Quality and  
Technical Services  
Bob Hardison, Dr.



Submarine  
Program  
Don Check, VP



Chief  
Information Officer  
Leni Kaufman, CD



Sector Counsel  
Bill Mitchell, VP



Internal Audit  
Garth Wallis, Mgr.

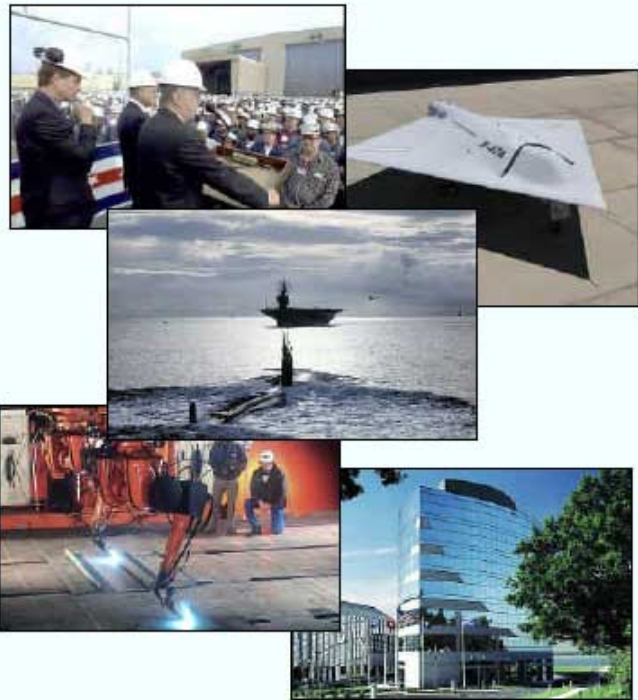


Communications  
Jerri Dickseck, Dr.



## 2002 Highlights

- ✍ **Record year for sales, cash flow, environmental compliance and safety**
- ✍ **Sector stand-up and integration complete**
- ✍ **Cross-sector synergy opportunities emerging**
- ✍ **Cost savings initiatives ahead of plan**





## Strategic Wins: CVN 21

- ✍ Reaffirmed Navy and DoD commitment to large deck, nuclear powered aircraft carriers
- ✍ \$4.5 billion engineering and \$7 billion ship construction estimate
- ✍ Ship delivers 2014
- ✍ First new aircraft carrier class in 40 years



CVN 21 Illustration



## Strategic Wins: CVN 21

- ✍ **Major transformational technologies**
  - Improved nuclear plant
  - Improved sortie rate
  - Improved weapons handling
  - Reduced manning
  - Additional electric power for new transformational weapons



CVN 21 Illustration





## Strategic Wins: *Virginia*-class Submarine

- ✍ DoD/Navy decisions
  - Fully fund the next flight of submarines
  - Authorize multiyear procurement
  - Increase submarine construction to two per year beginning in 2007



*Virginia* (SSN-774) Bow Section



## Navy SCN Budget Supports Newport News Programs

(\$ Millions)	<u>2003*</u>	<u>2004*</u>
CVN 21	484	1,187
Virginia-Class	2,427	2,787
CVN Refueling	217	368
SSGN	996	1,167
SSN Refueling	490	164
Total Nuclear Shipbuilding	<u>4,614</u>	<u>5,673</u>
Non-Nuclear / Other	4,459	5,766
Total SCN	9,073	11,439

Blue = Newport News Programs

\* Navy February 2003 P-1 Budget Document



## 2003 Focus: *Enterprise/Reagan*

### *Enterprise* (CVN 65)

- ✍ **\$219 million maintenance contract**



*Enterprise* (CVN 65)

### *Reagan* (CVN 76)

- ✍ **\$3.4 billion construction contract**



*Reagan* (CVN 76)



## 2003 Focus: Aircraft Carrier Refueling and Overhaul

- ✍ **\$1.5 billion contract on *Eisenhower* (CVN 69) with redelivery in 2004**
- ✍ **\$2 billion contract planned for *Vinson* (CVN 70) from 2004 to 2007**
- ✍ **Future *Nimitz*-class refueling overhauls represent a hidden backlog of \$12-15 billion**



*Eisenhower* (CVN 69)



## 2003 Focus: CVN 77 *George H. W. Bush*

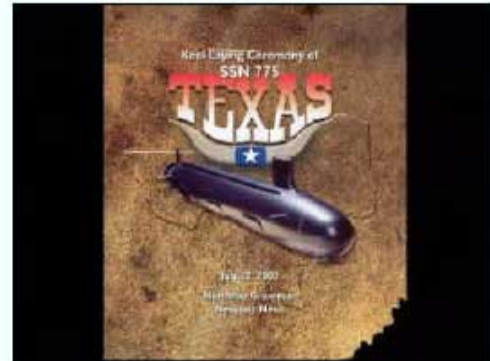
- ✍ **\$3.7 billion construction contract**
- ✍ **Ship delivers 2008**
- ✍ **Tenth and final *Nimitz*-class nuclear aircraft carrier**





## 2003 Focus: *Virginia*-class Submarine

- ✍ **\$2.6 billion construction contract for first four submarines**
- ✍ **FY 2003 submarine is fully funded**
- ✍ **Contract for next five *Virginia*-class submarines and two options with a \$3-5 billion value – expected by 3<sup>rd</sup> quarter 2003**
- ✍ **Co-production partnership between Newport News and GD's Electric Boat**





## 2003 Focus Area: Fleet Maintenance

- ✍ ***Minneapolis St. Paul (SSN 708)***  
is first submarine maintenance  
availability at Newport News in  
10 years
- ✍ **Newport News manages aircraft  
carrier availabilities on both  
coasts**
- ✍ **\$300 million annual revenues**



*Minneapolis St. Paul (SSN 708)*



*Nimitz (CVN 68)*



## Cross Sector Collaboration

- ✍ Platform integration/centers of excellence
- ✍ Shipyard operations/cost savings
- ✍ Sharing best practices between sectors
- ✍ Provide opportunities for other sectors to participate in CVN 21
- ✍ Modeling and simulation of flight deck operations
- ✍ Developing DDX electric drive propulsion system



Pegasus UCAV



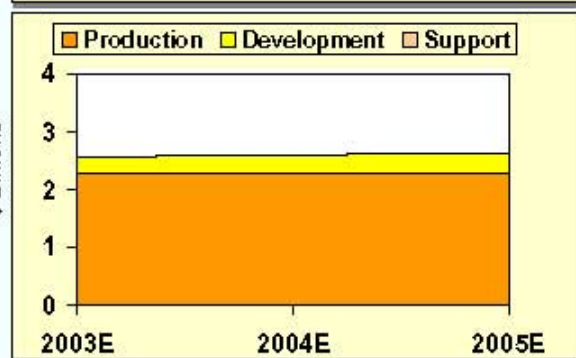
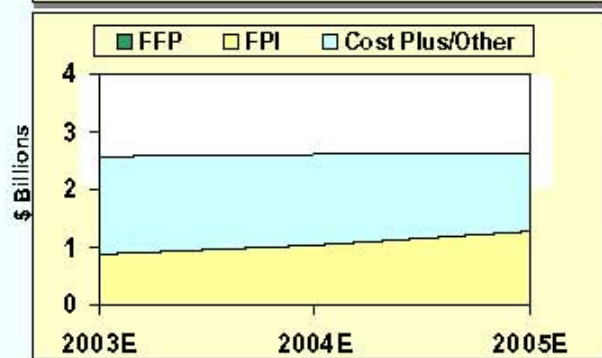
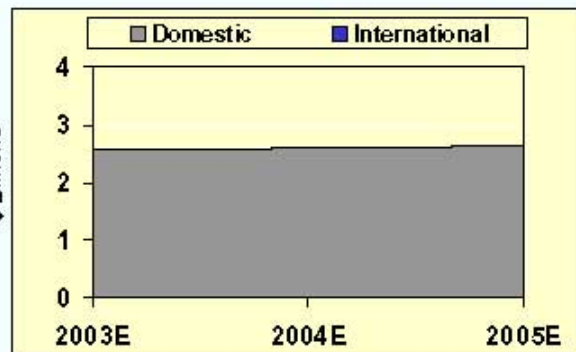
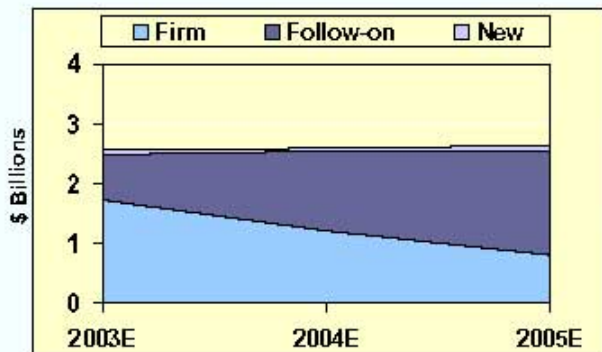
DDX Concept







## Sales Mix





## Great Results



- ✍ **Core programs deliver stable high, quality earnings**
- ✍ **Consistent excellent cash flow**
- ✍ **Operating margin performance outpacing sales growth**



## Building Shareholder and Customer Value

- ✍ **Securing programs for our future**
- ✍ **Driving improved efficiencies and cost reductions**
- ✍ **Continued excellent cash and earnings performance**



**NORTHROP GRUMMAN** DEFINING THE FUTURE

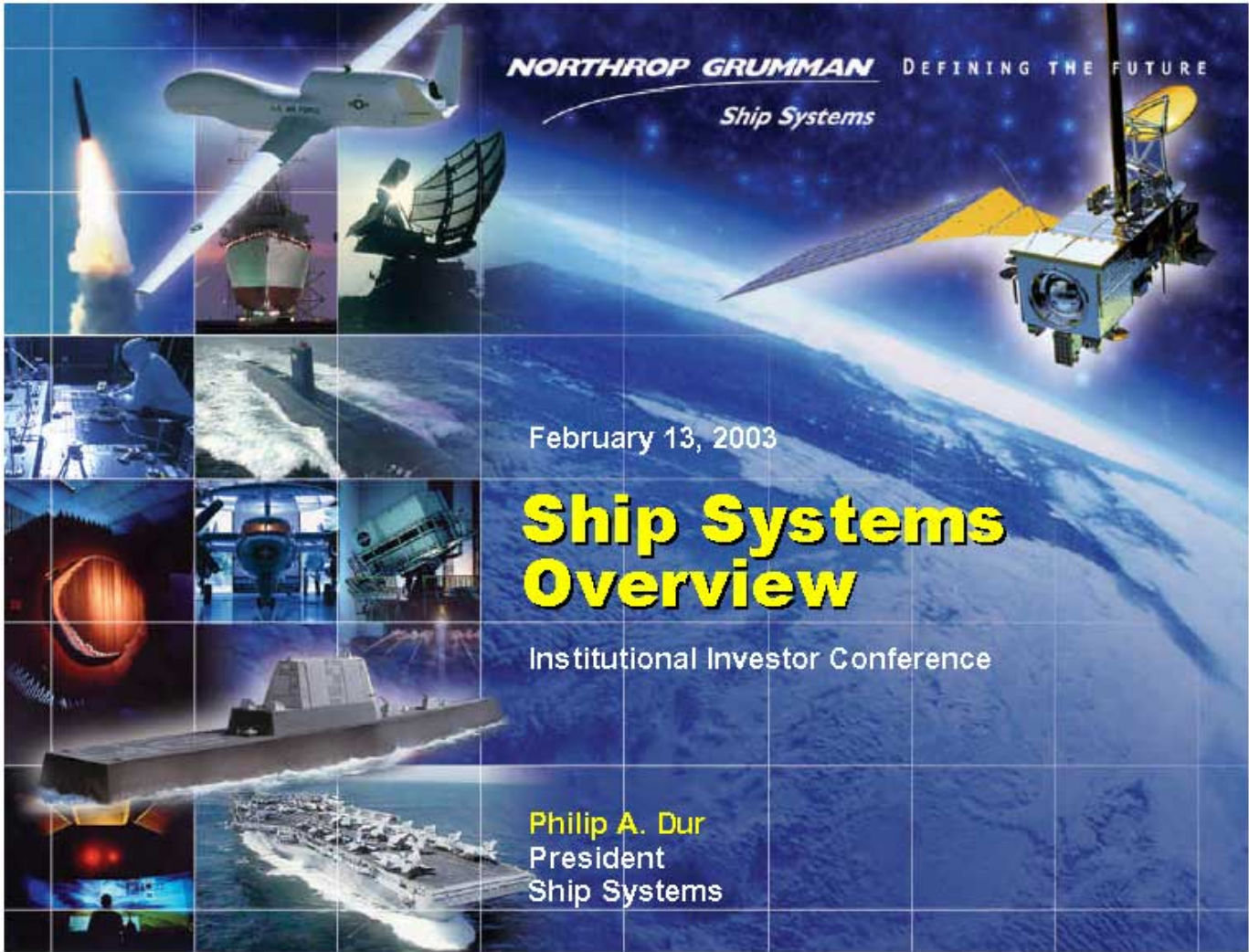
*Ship Systems*

February 13, 2003

# Ship Systems Overview

Institutional Investor Conference

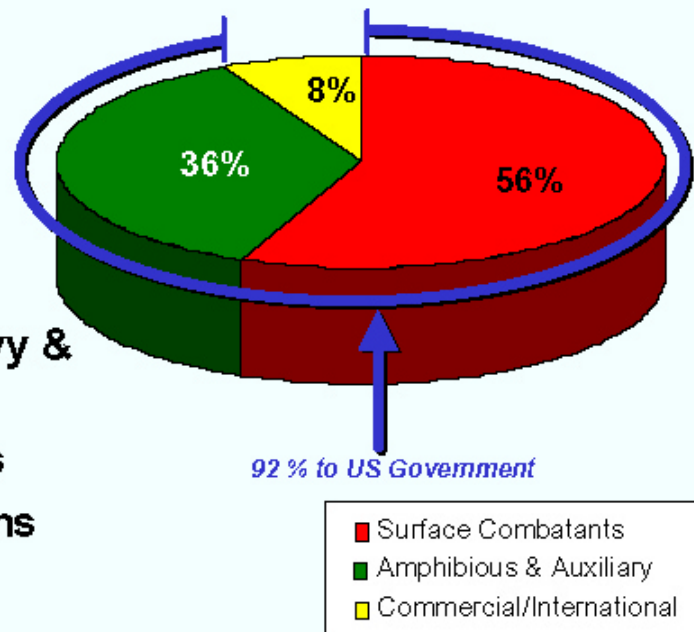
**Philip A. Dur**  
President  
Ship Systems





## Ship Systems at a Glance ...

- ✍ ~\$2.6B – 2003E sales
- ✍ 17,500 employees
- ✍ 3 major sites....  
110 miles apart
- ✍ Primary customer: US Navy & Coast Guard
- ✍ Four production programs
- ✍ Two development programs



**\$5.6 B Backlog Across Product Base**



# Ship Systems Leadership

## Functional Support



**Advanced Ship Technologies**  
Corky Graham



**Ingalls Operations**  
Paul Robinson



**Avondale Operations**  
George Yount



**Gulfport Operations**  
Jay Foley



**Engineering**  
Arnie Moore



**President**  
Phil Dur

## Shared Services



**Materiel**  
Richard Schenk



**Business Management**  
Bob Spiker



**Quality/ Process Improvements**  
Steve Strom



**Human Resources & Administration**  
Ann Fortenberry



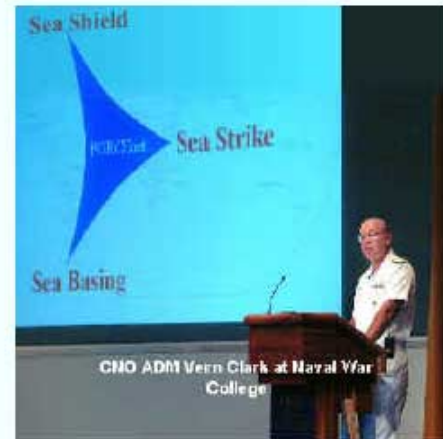
**Becoming the Premier Full Service Provider of Naval Ships**



## Business Environment

- ⌘ Sea power 21: CNO's vision for future navy
  - Sea Strike : Projecting offensive power
    - ⌘ DD(X), LHD 8 / LHA(R), LPD 17, DDG 51
  - Sea Shield: Projecting defensive assurance
    - ⌘ Littoral Combat Ship, Aegis CG 47 Cruisers, Coast Guard Deepwater, CG(X)
  - Sea Basing: Projecting operational independence
    - ⌘ LHD 8, LPD 17, LHA(R), MPF(F), TAOE(X), Sealift
- ⌘ No new commercial business in plan

⌘ Current Programs    ⌘ Future Programs







## NGSS Ship Profile Planning Assumptions

Program	03	04	05	06	07	08	09	Total
DDG 51	1	1	1	1	0	0	0	4
Surface Combatant DD(X)	0	0	1	0	1	1	2	5
Littoral Combat Ship	0	0	1	0	0	1	2	4
LPD 17	1	1	AP	2	2	2	0	8
LHD 8	1	IF	IF	IF	0	0	0	1
LHA(R)	0	0	0	0	AP	1	1	2
MPF(F) / JCC(X) Combo	0	0	0	0	0	1	1	2
T-AOE(X)	0	0	0	0	0	1	1	2
<b>Total SS New Navy Build</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>7</b>	<b>7</b>	<b>28</b>
Cruiser Conversion	0	Test	0	0	2	2	0	5
Coast Guard Deepwater	0	1	1	1	1	1	1	6

■ POM   
 ■ NGSS Assumption   
 AP=Advanced Procurement   
 IF=Incremental Funding



## Operating Strategies

- ⌘ Execute current programs - increase efficiencies
  - Reduce Avondale operations turnover
  - Capitalize on workstation management at Avondale operations – implemented in 2002
  - Optimize workforce across sector
  - Extend lean / 6 sigma
  - Maximize cross-site modular construction
- ⌘ Increase diversity of management team
- ⌘ Continue inter & intra sector synergies
  - Consolidated purchasing
  - Safety
- ⌘ Recapitalize & modernize with state cost share



## Operating Strategies

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  - Safety
- ⌘ Recapitalize & modernize with state cost share





## 2002 Accomplishments

- ✦ Major awards in 2002
  - DD(X) – \$2.9B
  - Deepwater – \$4.5B
  - LHD 8 construction – \$1.4B
  - DDG 51 multiyear – \$1.9B
  - Contracted R&D – \$ 15.7M
- ✦ Sector consolidation
  - Program centric
  - Single, integrated business unit
  - Common systems – implemented September 2002





## Polar Tanker Program

- ✦ 3 ships under contract / 2 ships delivered
  - First environmentally safe, OPA '90 compliant design
  - Trans-Alaskan pipeline system trade
- ✦ \$87M charge in 2002
  - Labor turnover and churn at Avondale operations
  - Limited production tracking system until common systems implementation (September 2002)
- ✦ Program stabilization & improvement
  - Human resource retention initiatives (28% reduction in turnover)
  - Common systems implementation
  - Recapitalization and modernization plan



**Financial Reserve Holding**

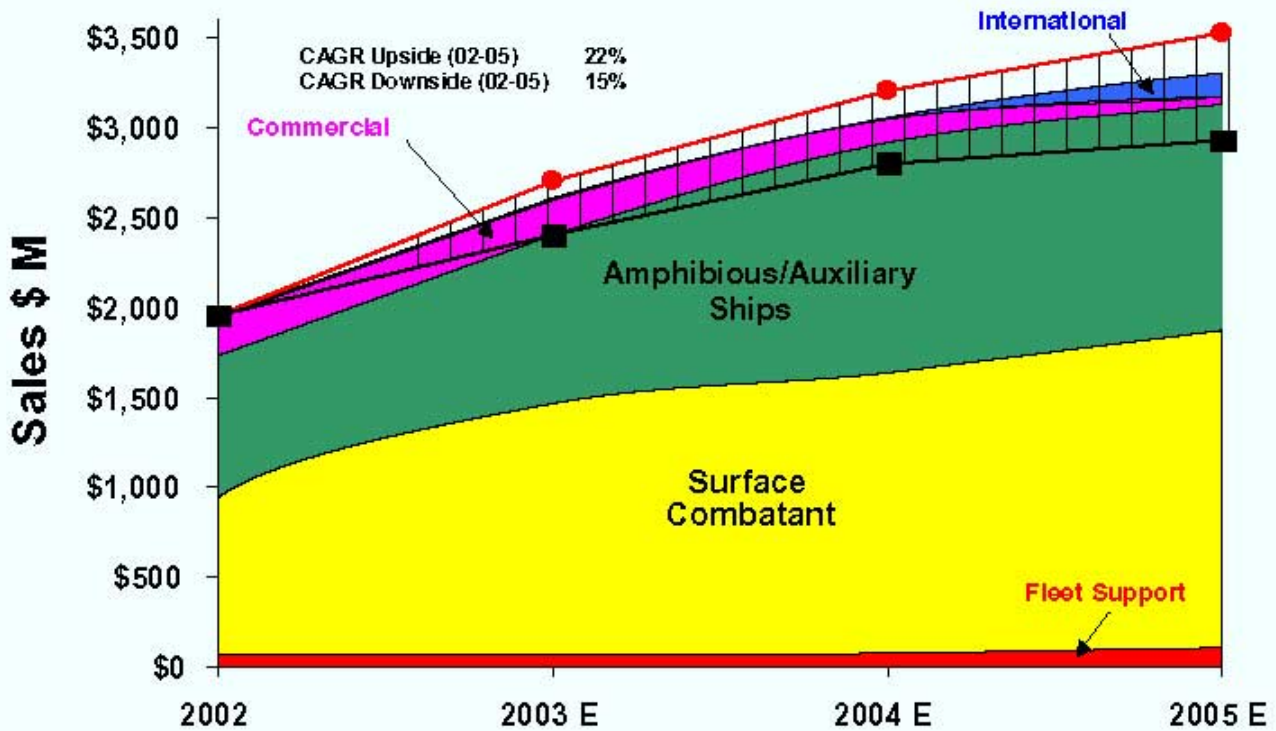


## Recapitalization and Modernization Program

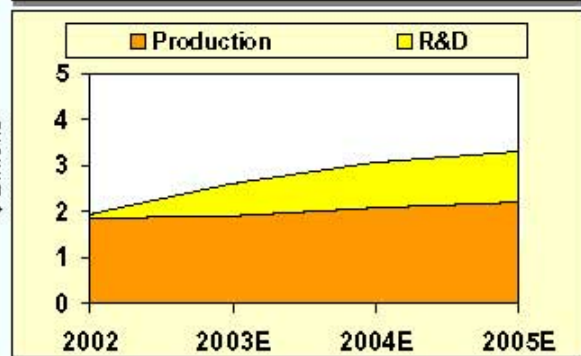
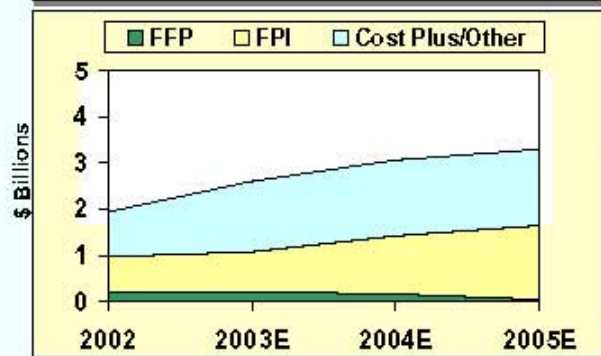
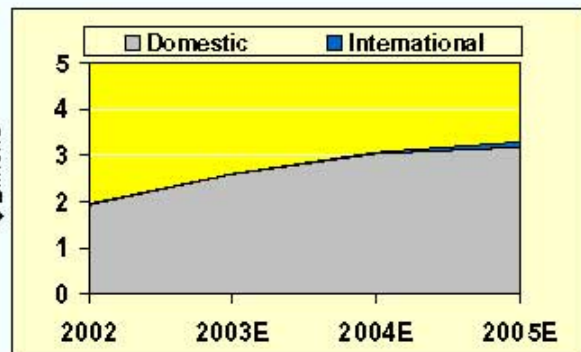
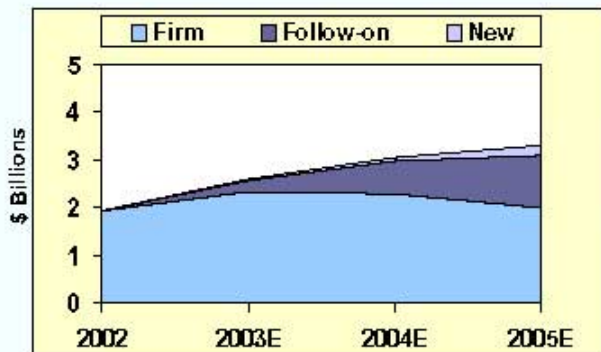
- ⌘ Targeted to improve
  - Safety/environmental
    - ⌘ Electrical systems/ blast and paint hall
  - Production efficiency
    - ⌘ Cranes/ automated steel fabrication
  - Capacity
    - ⌘ Track extensions/ composite facilities
- ⌘ 2003 to 2007 modernization
  - 50/50 cost share with state governments



## Sales Projections... 74% Under Contract



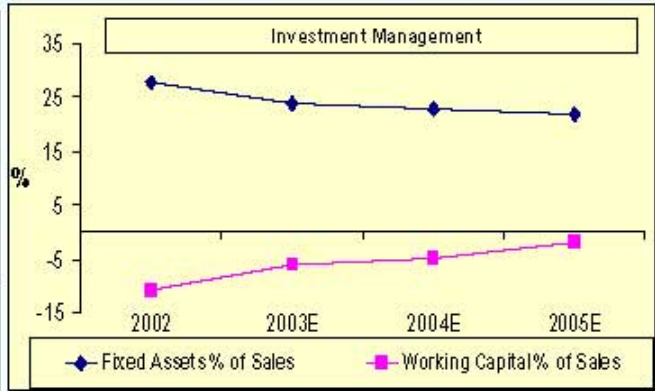
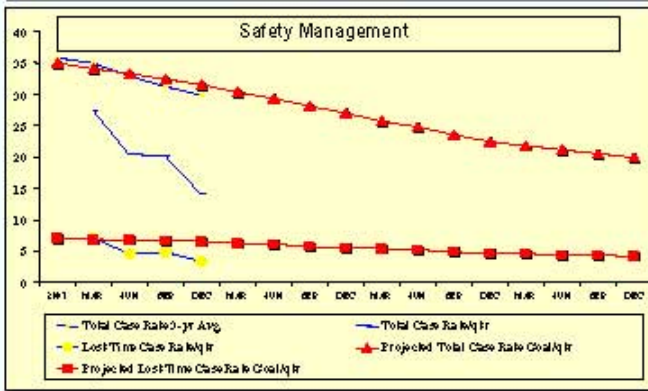
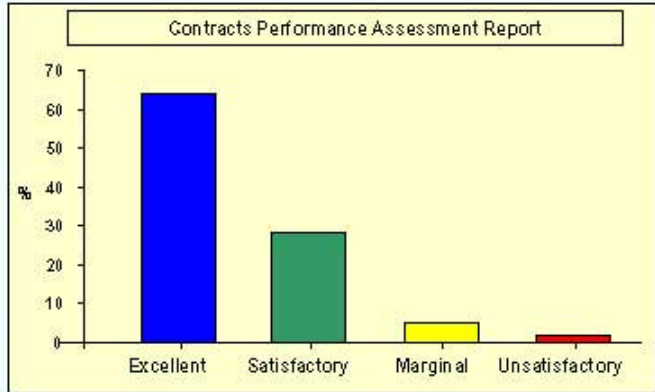
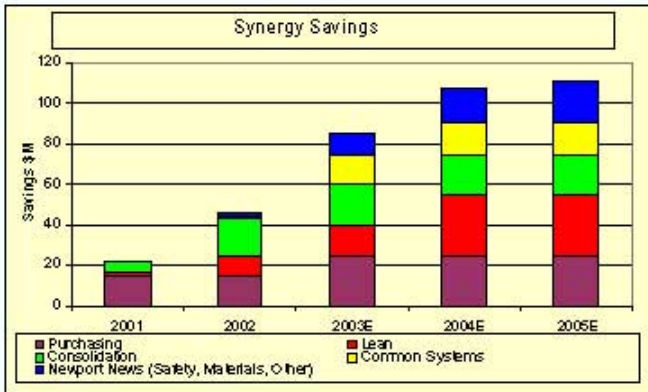
# Sales Mix



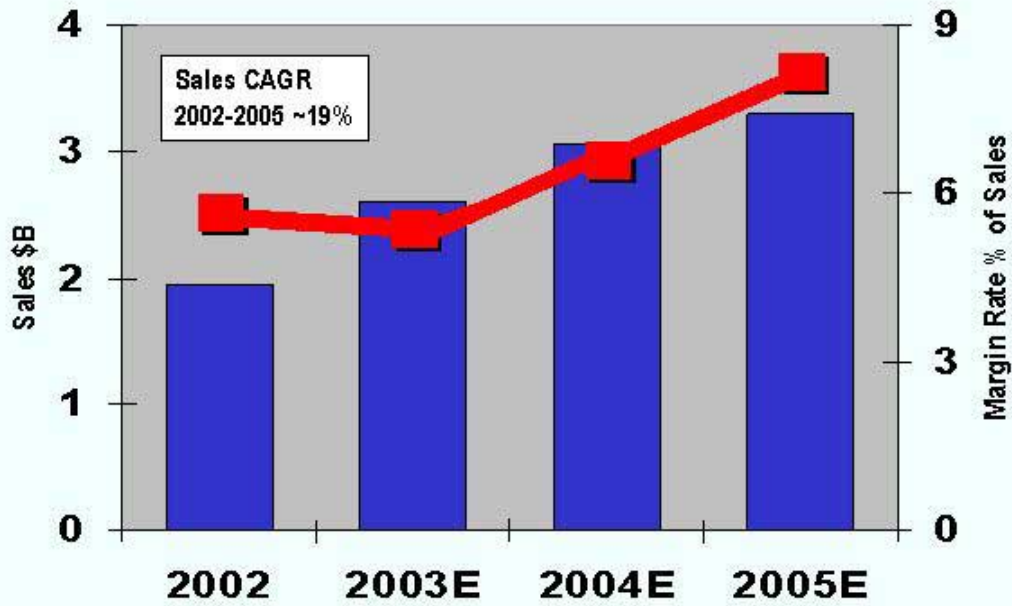




# Operational Metrics



## Sales – Major Wins Drive Growth



■ Margin Rate Range

***Positioned for Long-Term Growth***



## \$5.6B Backlog with Solid Growth Prospects Ahead

### In Production

- **11 x DDG 51**
  - Arleigh Burke Class Aegis Guided Missile Destroyer
- **1 x LHD 8**
  - Wasp Class Amphibious Assault Ship
- **4 x LPD 17**
  - San Antonio Class Amphibious Landing Dock
- **1 x TAKR**
  - Bob Hope Class Strategic Sealift Ships
- **3 x Polar Tankers**
  - Environmentally Safe Design for Alaskan Trade



### In Development

- **DD(X) Family of Surface of Combatants**
  - Engineering Development Modules
  - Design
- **US Coast Guard Deepwater**
  - National Security Cutter
  - Offshore Patrol Cutter
- **Israeli Navy SA'AR 5 Enhanced**
  - Leveraging Successful SA'AR 5 Design



### Key Opportunities

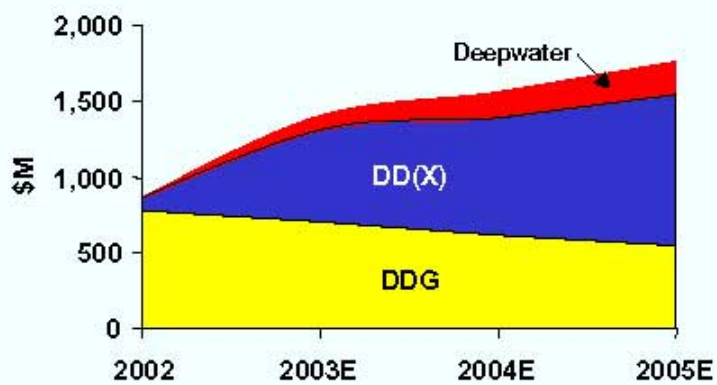
- **Littoral Combat Ship**
- **LHA(R)**
- **MPF(F)**
- **TAOE(X)**
- **CG(X)**
- **Cruiser Conversion**
- **Composite HSF**
- **Israeli Corvettes**
- **Non Nuclear Submarines**
- **R&D Efforts**
  - Advanced Composites
  - Integrated Propulsion Systems
  - Transformational Hull Forms



## Surface Combatant Ships

- Central to USN's *Sea Strike & Sea Shield* Capabilities
  - DDG 51 / Arleigh Burke Class
  - DD(X) Family
  - Deepwater Cutters

Sales





## DDG 51 Program Milestones

- 11 Ships Under Contract
- FY '02 Multiyear Contract
  - 4 Ships - \$1.9B
- DDGs for LPD Swap
  - MOU Signed June 2002
- NGSS Award Fees
  - 2002 > 90%
- USS Cole
  - Returned to Fleet April 2002
  - NGSS Received 100% Award Fee





## DD(X): Transformation of USN Surface Combatants

- ⌘ \$2.9B contract
  - National team (NOC, GD, RTN, LM, UDI)
  - NGSS prime
  - Raytheon electronic systems integrator
- ⌘ Family of surface combatants
  - Design agent for future surface combatants
  - Spirals to CG(X)
- ⌘ Key events timetable
  - Preliminary design review - Jan '04
  - Integrated propulsion system testing - May '05
  - Critical design review - July '05
  - Lead ship award - FY '05



*DD(X): Potential to  
Equal DD 963  
Class...*

**Key Ship Systems 2002 Win**



## Deepwater Program JV with Lockheed Martin

NOC work scope

- ✦ Recapitalization of Coast Guard cutter fleet – ship assets \$4.5B
- ✦ Congressional support for Homeland Security
- ✦ Collaborative effort with Navy LCS program
- ✦ FMS derivatives



Offshore Patrol Cutter (OPC) and National Security Cutter (NSC)

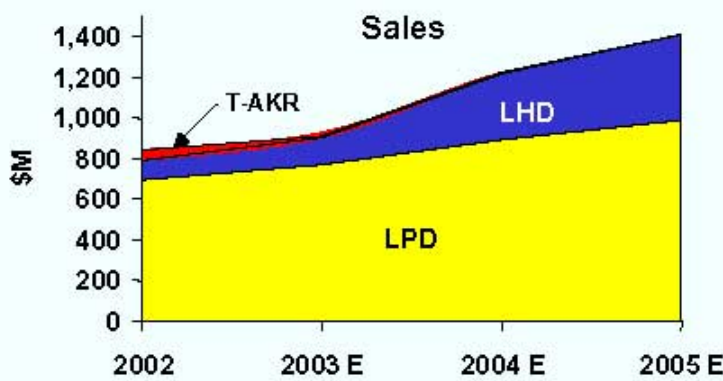


**Key Ship Systems 2002 Win**

## Amphibious / Maritime Prepositioning Ships

Central to Sea Power 21's  
Sea Basing Capability

- LPD 17
- LHD 8
- T-AKR







## LHD 8 Program

- ✈ \$1.4B ship construction contract
  - Awarded 19 April '02
  - Contract delivery '07
- ✈ Emerging technology
  - Hybrid gas turbine propulsion
  - C<sup>4</sup>ISR improvements
- ✈ Baseline for LHA(R)
  - Potential – 4 ships
  - LHD derivative most likely solution
  - NGSS awarded \$2.8M study contract



## LPD 17 Program

- ✦ 12 ship program /
  - 4 ships under contract
    - LPD 17 - 55% complete
    - LPD 18 (New Orleans) – 13% complete
    - LPD 19 (Pascagoula) – 9% complete
    - LPD 20 (New Orleans) – material procurement
    - LPD 21 & 22 long lead time material received
- ✦ Cross yard effort
- ✦ LPD 21 named New York
  - Will incorporate 10 tons of WTC steel





## Summary

- ✦ Vision and strategies clear
  - Program centric organization
  - Responding to customer's requirement for transformational capabilities
- ✦ Military shipbuilding is core
  - US Navy & Coast Guard
  - International navies & profitable commercial work
- ✦ Programs / advanced programs
  - 20 ships under contract
  - 4 ship development / design programs under contract

***Program Execution is Our Focus***

**NORTHROP GRUMMAN** DEFINING THE FUTURE

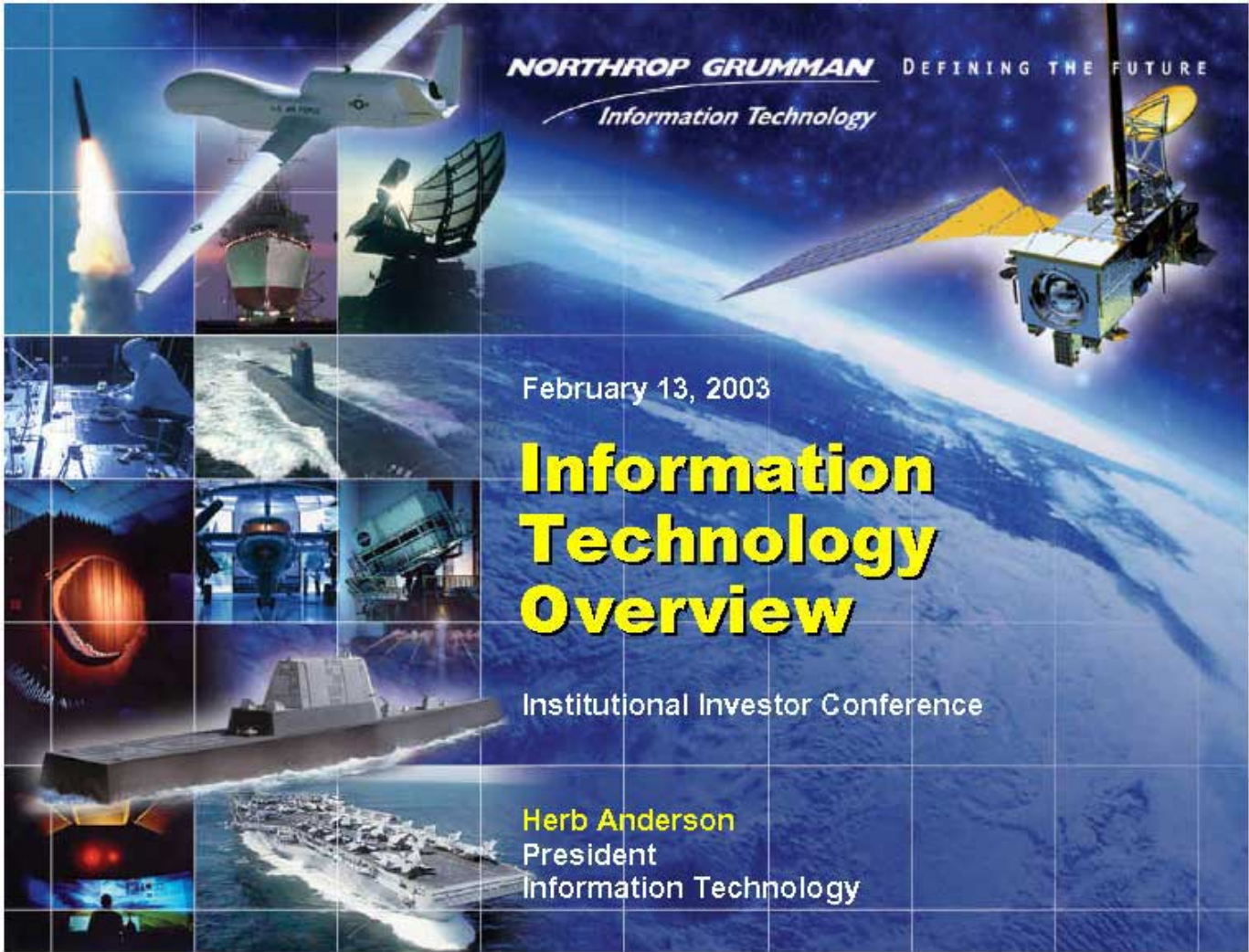
*Information Technology*

February 13, 2003

# Information Technology Overview

Institutional Investor Conference

**Herb Anderson**  
President  
Information Technology





## Information Technology ...

- ✍ ~\$4.7B - 2003E sales
- ✍ Over 22,000 employees
- ✍ Over 300 separate operating locations
- ✍ 17 international offices
- ✍ More than 8,000 active contracts



**Backlog > \$10B Across Sector**



## Information Technology Summary

- **Trusted leader in information-based systems, integration, solutions & services**

- Mission
- Enterprise
- Infrastructure
- Security

- **Differentiated by:**

- Incumbency & geographic reach
- People, their technical knowledge, clearances, and domain expertise
- Ever-improving business and technical processes (CMM, CMMI Level 5, ISO)
- Technology in emerging markets (e.g., biometrics, secure wireless, and smart cards)



- **Strategic actions to sustain competitive advantage**

- Continued excellent program performance
- Business model refinement for efficiency
- Recruiting, training, & retention of people
- Cross-sector collaboration
- Aggressive cost management
- Mature BD & account management processes
- Providing enabling infrastructure for network-centric warfare
- Expanding CMMI Level 5 certification



## A Full Service Provider



### Approach and Characteristics

- ✧ Address multiple markets to meet earnings and cash flow objectives
- ✧ Improve competitiveness and operational effectiveness
- ✧ Leverage breadth of organization and the Corporation
- ✧ Expand and optimize Sector offerings
- ✧ Continuously reduce the cost of doing business
- ✧ Flexibility to adapt to new markets



# Information Technology Leadership



**Operational Excellence Through Collaboration**





# Major Locations

*Over 22,000 Employees  
Over 300 Separate Locations  
49 States and 17 Foreign Countries*





## Overall Sector Position in Today's Marketplace

- ✦ #1 in top 25 IT systems integrators (Federal Computer Week)
- ✦ #1 Non-OEM supplier to the Federal Government under GSA schedule (GSA)
- ✦ #1 Federal Government computer hardware reseller (Government Executive)
- ✦ #1 Government-wide Acquisitions Contract vendor (Washington Technology)
- ✦ #2 Top 100 Federal IT prime contractors (Washington Technology)
- ✦ Quality supplier award winner for USPS selected over 2,000 companies
- ✦ Capability Maturity Model Integration (CMMI™) Level 5 in one Northrop Grumman IT business unit and Software Engineering Institute (SEI) CMM Level 3 certified across Sector
- ✦ ISO9001 certified at several sites
- ✦ Customer satisfaction blue/green
- ✦ 72% college degrees; 60% employees with security clearances; voluntary attrition <10%



## Business Highlights in 2002

### Key Wins

- INS TEAMS Managed Services
- Several restricted programs (NRO, NSA)
- NASA Base Support Follow-on at Kennedy and Patrick AFB
- Army Land Information Warfare
- Air Force Global Transportation Network for the 21<sup>st</sup> Century (GTN-21)
- Multiple States – Electronic Benefits Systems Integration and others

### Notable New Customer Penetrations

- Federal Government: INS, U.S. Coast Guard, Navy (DD(X) Program)
- New states and localities (IL, ME, AK, LA, CA, Fairfax County, VA)

### Important contracts in almost all agencies migrating to the Department of Homeland Security

- With integration of Litton now complete, well positioned to maximize revenue in many markets, especially homeland security and network-centric warfare
- Improved business systems (BD, Financial, HR, account management)
- Excellent program performance across the board
- Record backlog, bookings, and excellent cash improvement during 2002 which was earmarked as a re-branding year from Logicon to Northrop Grumman IT





## Improved Operational Efficiencies

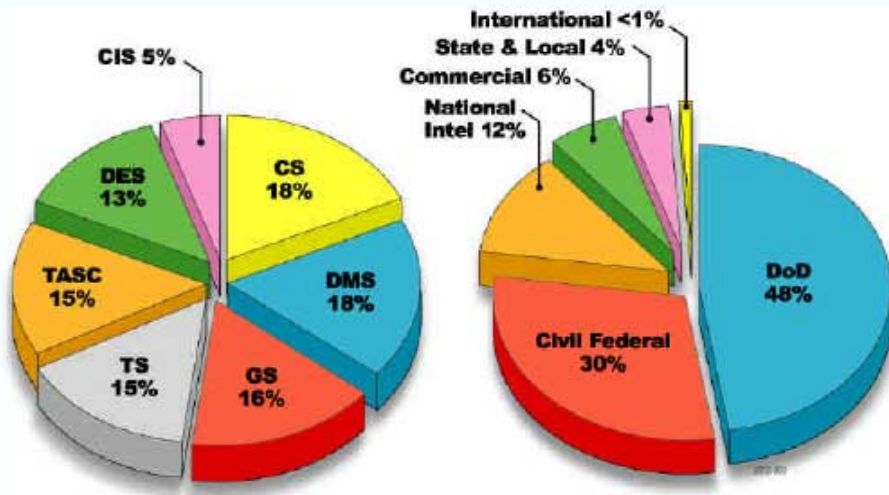
- ✦ Integration processes
- ✦ SEI capability maturity model integration level 5
- ✦ Uniform business development acquisition process across sector
- ✦ All major programs blue/green
- ✦ Common ERP system
- ✦ Sustained/low voluntary turnover rate
- ✦ Eliminated 2/3 of legal entities



## 2002 Sales Overview

**Business Unit**

**Customer**



**Balanced Portfolio by Business Unit and Customer**

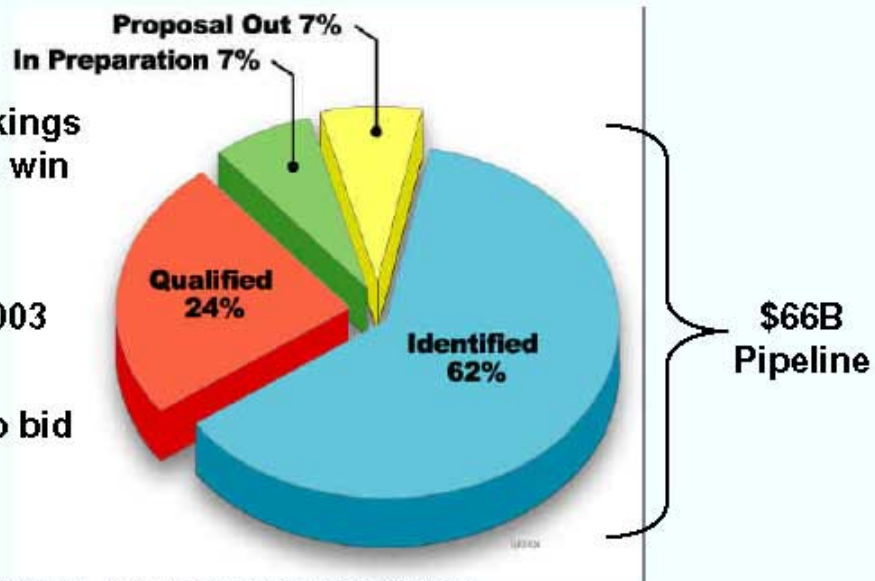


## Strong & Growing Business Development Pipeline

**2002:** \$6B bookings for \$4.2B sales; win rate 53%

Expect same proportion in 2003 and beyond

**2003:** Expect to bid \$15.4B



**Identified:** Opportunity determined suitable for continued pursuit

**Qualified:** Opportunity approved for bid at Evaluation Board

**Backlog > \$10B (Funded, > \$1B; Unfunded, > \$8.4B)**



# IT Market Trends

% 2002 Sales	Customers	Markets			
		Mission	Enterprise	Infrastructure	Security
48%	DEFENSE				
12%	INTELLIGENCE				
30%	CIVIL FEDERAL				
6%	STATE & LOCAL				
4%	COMMERCIAL				
<1%	INTERNATIONAL				

Growing Rapidly  
 Growing  
 Neutral  
 Declining  
 Serious Decline

**Northrop Grumman IT Well Positioned in all Growth Markets**



## 2003 Overview

### Information Technology's Objectives

- Deliver double-digit sales and solid earnings growth with strong cash flow

### Overall Strategy

- Be the trusted leader in systems integration, solutions, and services for our evolving customer set as well as for the Northrop Grumman Corporation

### Major Themes

- Sustained program performance
- Build network-centric and information warfare capabilities
- Exercise strong (#1) leadership position with flexible contract vehicles
- Maximize revenue/margin across all IT business models
- Keep voluntary attrition below 10%
- Aggressively manage costs
- Maximize sales in growth areas
- Optimize cross-sector business development

**Sustained Commitment to Profitable Growth**





## 2003 Homeland Security Outlook

### Market expertise in core Homeland Security requirements

- Enterprise infrastructure
- Command & Control
- Communications
- First Responders (E911)
- Intelligence

### Extensive Homeland Security customer base

- Homeland Security – Civil Federal, State & Local, Commercial
- Homeland Defense – DoD, National Intelligence

### Capability breadth

- Across all Homeland Security missions

### Market

- Optimistic, but watchful
- Many contract vehicles already in place

Government Defined Missions	Civil Federal	DoD/ Intelligence	State & Local	Private Industry	International
Intelligence & Warning					
Border & Transportation Security				N/A	
Domestic Counter Terrorism				N/A	N/A
Protecting Critical Infrastructure					
Defending Against Catastrophic Terrorism				N/A	
Emergency Preparedness & Response					



Some Capability



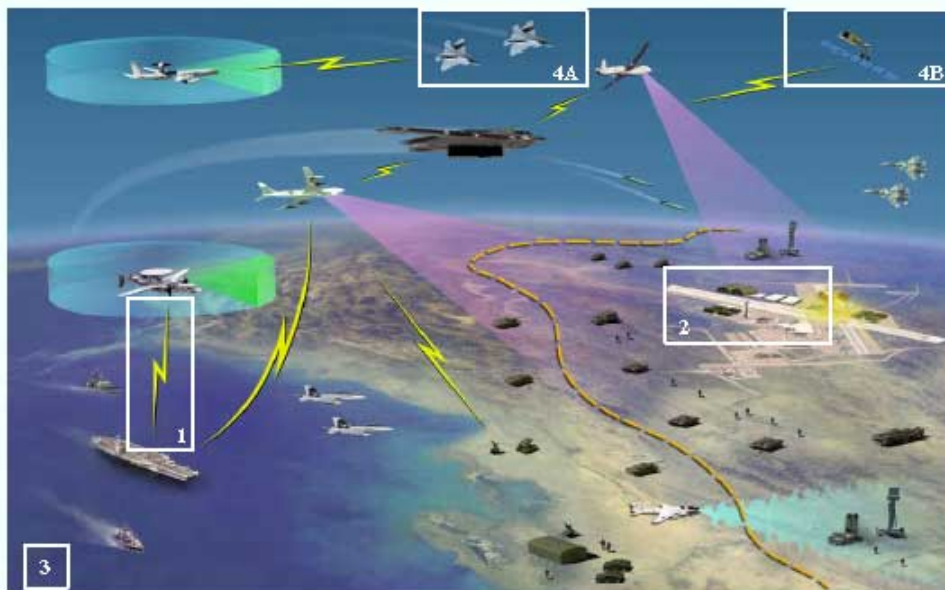
Growing Capability



Solid/Relevant Capability



## Network Centric Warfare



### 1 Tactical Data Links

- ROBE
- NILE

### 2 Command & Control

- USMC C<sup>4</sup>I
- Army LWA

### 3 System Architectures

- GTN-21
- CECOM SSES

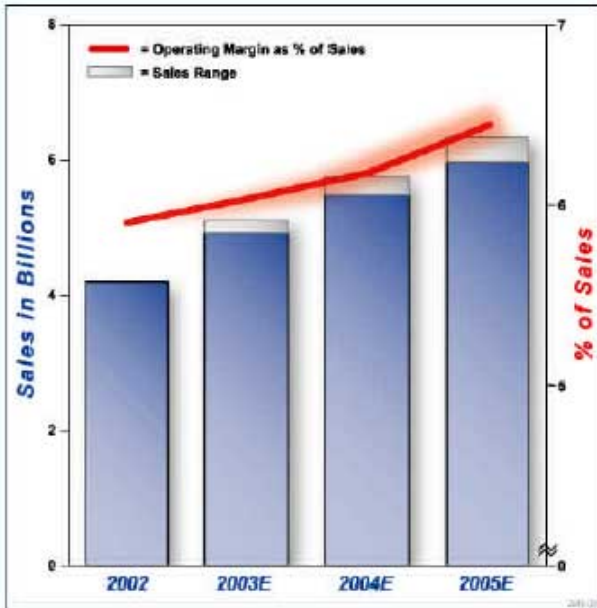
### 4 Mission Planning

- A – JMPS
- B – SOMMS

**Across the Conflict Spectrum, Northrop Grumman IT Provides State-of-the-Art Network Centric Warfare Solutions for all Military Constituents**



# Financial Performance

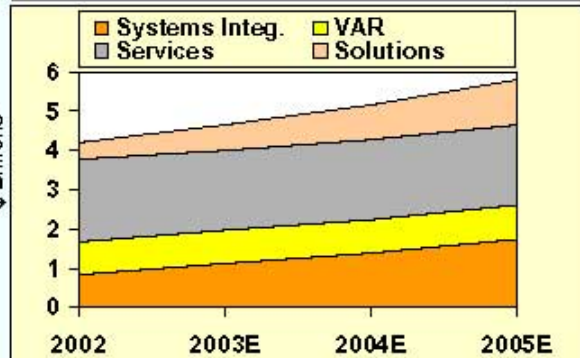
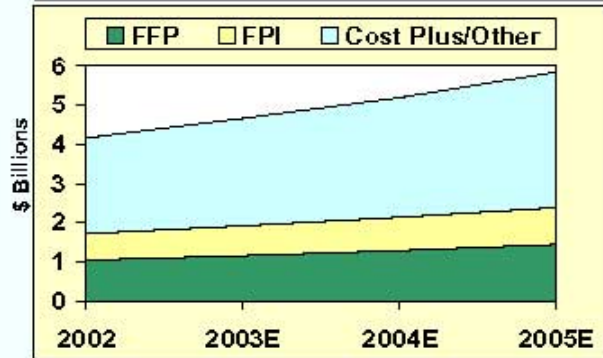
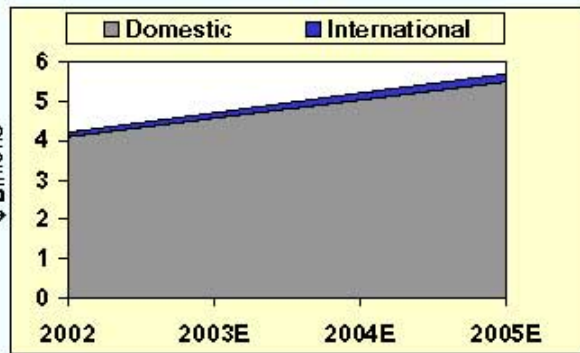
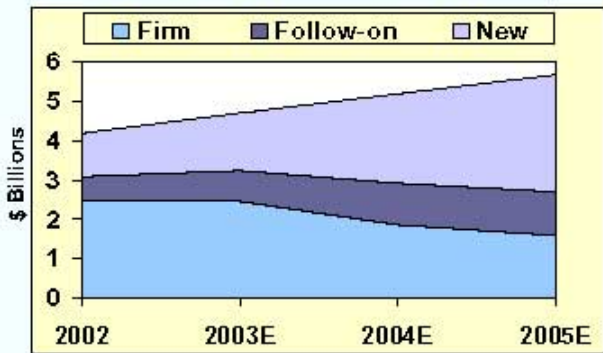


	Margin Range										% of Sales
	0	1	2	3	4	5	6	7	8	9	
<b>NGIT</b>											
<b>GIT</b>											<b>60%</b>
<b>CIT</b>											<b>5%</b>
<b>TS</b>											<b>15%</b>
<b>CS</b>											<b>20%</b>

Shaded area represents margin range

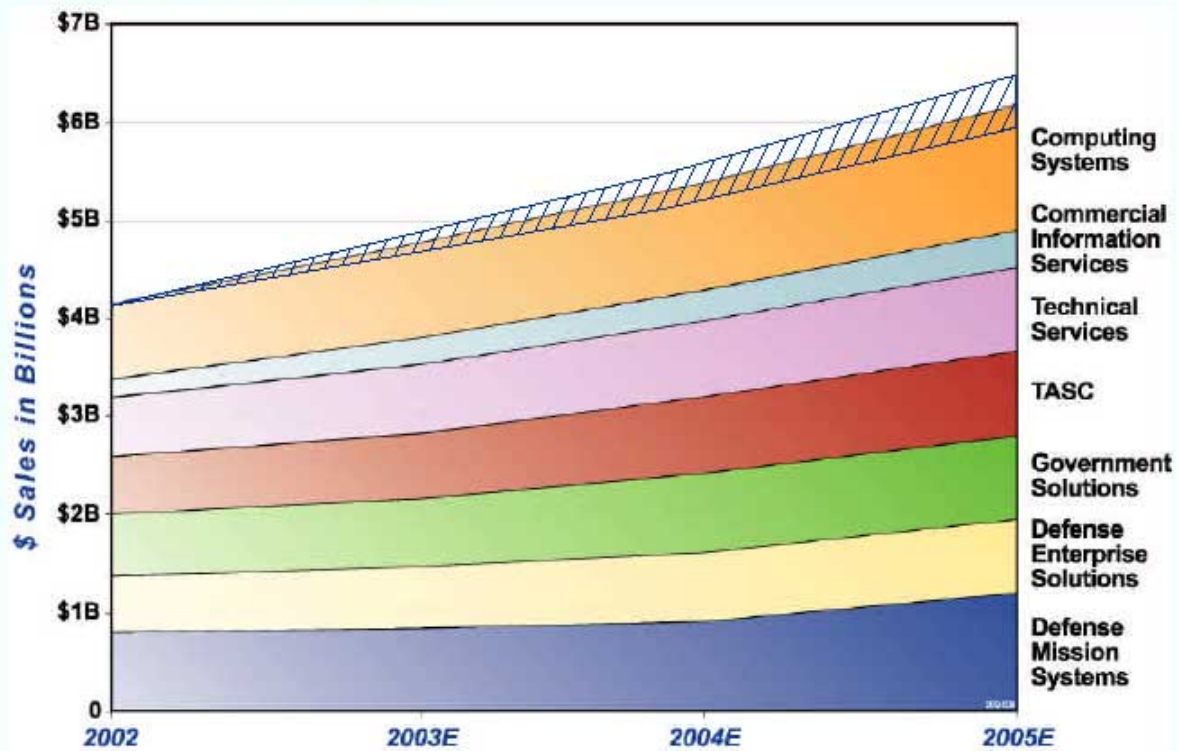


# Sales Mix





## Profitable Growth





## Strategic Opportunities

### Customer Domain:

Defense/National Intel

### Major 2003/04 Opportunities:

- Defense-wide single HR system: \$500M
- Air Force Advanced Technology Air and Space Operations Center (AT-AOC): \$800M
- Taiwan Advanced Tactical Data Link: \$750M
- Significant restricted opportunities
- Air Force Arnold Engineering Development: \$2.0B

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Civil Federal

- NASA Program Information Systems Mission Services (PRISMS): \$1.6B
- DoJ/INS Entry/Exit National Border Surveillance/Protection: \$400M
- NASA Marshall Space Flight Center Operations: \$100M
- DHS Network, E-mail, system Infrastructure

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State & Local

- NYC Metropolitan Transit Authority Security: \$200M
- Virginia Data Center Consolidation: \$100M
- Texas Outsourcing: \$50M

***Win Large/Strategically Important Targets***



## Inter-sector Synergy

- **Border Surveillance & Control System**
- Unattended Ground Sensors
- North African Programs
- Missile Defense
- Precision Targeting
- Trailblazer
- BAE C<sup>4</sup>ISR/Logistics
- Logistics Systems Support USN/USA
- Defense Messaging System (DMS)
- Asset Supply Chain Management
- Test Interface Software Effort
- EADS France C<sup>4</sup>ISR/Logistics
- "Next Generation" BGPHERS
- Side-looking Sonar Studies
- Saudi Peace Pulse XI
- Om nibus 2000
- Virginia Sub
- UAE NOC
- C<sup>3</sup>TE&I
- DIRCM
- DIWTA
- TRADS Phase 2
- Advanced LADAR
- Canadian R/SAOC
- Integrated Logistics
- HOGGAR
- MMSa
- Blue Storm
- DACS
- HLS – Chicago C<sup>3</sup> Center
- **Taiwan Advanced Tactical Data Link System**



- LCS
- DD (X)
- Deep Water
- **Taiwan Advanced Tactical Data Link System**

- **Battle Management/C<sup>4</sup>ISR**
- **Communications Programs**
- **Modeling and Simulation**
- **Mission Planning**
- **Fleet Battle Experiments**
- **FMS Advanced Tactical Data Link**
- **BAMS/MMA Development**
- **MP-RTIP Development**
- **MC2A Constellation**
- **Taiwan Advanced Tactical Data Link System**
- **Homeland Security**

- ACS
- MC02
- LCS
- JWARN
- ROBE Production
- GCC2/DCGS-A
- MC2C/MC2CA
- DJC2
- ARGUS
- AT-AOC
- R2 IDIQ
- DD (X)
- TPED
- Space-based Radar
- Tailored Access Org
- **Homeland Security**

**Northrop Grumman  
Mission Systems and  
Space Technology in  
progress**



## Well Positioned for Double-Digit Growth

		<i>Business Unit</i>	<i>Principal Markets</i>		2002 Sales
GIT	}	<b>Defense Mission Systems</b>	<b>C4I</b>	<b>HOMELAND SECURITY</b>	<b>\$800M</b>
		<b>Defense Enterprise Solutions</b>	<b>Enterprise/Infrastructure Systems and Services</b>		<b>\$550M</b>
		<b>Government Solutions</b>	<b>Civil Federal Systems Integration &amp; Services</b>		<b>\$650M</b>
		<b>TASC</b>	<b>National Intelligence Systems Support &amp; Services</b>		<b>\$650M</b>
		<b>Technical Services</b>	<b>Base &amp; Range Support; State &amp; Local Information Systems</b>		<b>\$650M</b>
		<b>Commercial Information Services</b>	<b>Commercial Systems &amp; Services</b>		<b>\$200M</b>
		<b>Computing Systems</b>	<b>Value-Added Reselling &amp; Enterprise Architecture</b>		<b>\$750M</b>





## Defense Mission Systems (GIT)

### Market

- Network-centric warfare
- Command and control
- Military Intelligence
- Military communications
- Information warfare systems engineering
- C<sup>4</sup>I systems and interoperability engineering

### Products/Offerings

- C<sup>3</sup>I systems development and integration
- Battle management and mission planning systems
- Intelligence support to operations; intelligence data correlation and fusion applications; combat information systems
- Military communications solutions: Tactical data links products; Secure wireless network solutions
- Warfare systems & platforms engineering, T&E, and life-cycle support

### Key Customers

- U.S. Navy: NAVSEA, SPAWAR, NSWC
- U.S. Air Force: ESC, ACC
- DoD and Joint agencies: DISA, MDA, STRATCOM, TRANSCOM

2002 Total Sales:

**\$800 M**

### Major Programs

- National Missile Defense:  
Ground-based Midcourse  
Defense Command Launch  
Equipment C<sup>2</sup> segment
- GTN-21
- AEGIS Test & Evaluation (T&E)
- DISA NEXGEN
- JITC
- GCCS & COE

### Key Differentiators

- C<sup>4</sup>I systems integration and interoperability engineering
- Network centric environment services/frameworks tactical data links integrations
- Combat systems support



## Defense Enterprise Solutions (GIT)

**2002 Total Sales:**
**\$550 M**

### Market

- Infrastructure systems and services
- Applied sciences and technology
- Public safety and citizen services Information systems

### Products/Offerings

- Information assurance
- Enterprise communications and Infrastructure systems
- Simulator/Simulation development
- Training support services
- Logistics and mission support systems
- WMD threat reduction
- Laser and Imaging systems
- High performance computing
- Systems analysis and modeling

### Key Customers

- U.S. Air Force, Army, and Navy
- DoD (DLA, DISA)
- GSA

### Major Programs

- Information Technology Services (GSA Blanket Purchase Agreement)
- Defense Threat Reduction Agency, Advisory and Assistance Services (DTRA AS&S)
- Joint Analytical Support Program (JASP)

### Key Differentiators

- Leading provider of smart-cards
- CMMI Level 5
- Standardized and mature processes, methods, and tools for Infrastructure modernization and enterprise transformation
- Best-of-breed asset management solutions, training & simulation
- 15 years of strong performance in military HR system migration/support
- Over 30 years of WMD threat reduction experience



## Government Solutions (GIT)

2002 Total Sales: **\$650 M**

### Market

- Homeland security
- Emergency management systems/public safety
- Health Information systems and solutions

### Products/Offerings

- IT managed services
- Altaris™ emergency management systems
- PeopleSoft and SAP ERP system Implementations
- *Perceptics* license plate reader, cargo container scanning and underbody vehicle inspection systems
- Weather Information Integration systems
- Integrated smart-card, biometrics and physical security Identification/authentication solutions

### Key Customers

- All CIVIL Federal agencies

### Major Programs

- INS TEAMS – Managed services
- IRS PRIME – IT services and Integration
- Treasury HR Connect – PeopleSoft HR ERP system
- ITSS – USPS IT support
- AWIPS – Software Integration and life-cycle support for the National Weather Service, Dept. of Commerce

### Key Differentiators

- Integrated smart-card, biometrics and physical security solutions
- Altaris™ emergency management systems
- Managed services best practices
- CMM/CMMI/SA level 3
- Port and border security solutions (license plate, cargo container and underbody readers/scanners)



## TASC (GIT)

2002 Total Sales: **\$650 M**

### Market

- Strategic security
- National Intelligence, Surveillance, and Reconnaissance (ISR) solutions and services

### Products/Offerings

- Systems engineering
- Systems Integration
- Information operations and assurance
- Signal processing
- Intelligence operations support

### Key Customers

- National Reconnaissance Office (NRO)
- NSA
- U.S. Air Force
- U.S. Army

### Major Programs

- RHAPSODY (NRO)
- VOYAGER (NRO)
- Land Information Warfare for the Army (LIWA)

### Key Differentiators

- High-end systems engineering services/solutions
- Strong technology base (computer network, software, data information and knowledge management, modeling & simulation)
- Systems technologies (communications, remote sensing, signal processing, visual computing, and security)
- Branded processes (InfoShield™, Lightning Solutions<sup>SM</sup>, Accelerated Process Improvement)



## Technical Services

2002 Total Sales: **\$650 M**

### Market

- Federal
  - Operations & maintenance
  - Training & simulation
  - Technology services
- State & Local
  - Information technology support services

### Products/Offerings

- Base & range operations support
- Logistics support services
- Training support services
- Aerospace technology services
- Information technology resource management

### Key Customers

- Department of Defense (U.S. Air Force, U.S. Army)
- Civil Federal (NASA)
- State & Local (TX, IL)

### Major Programs

- U.S. Air Force/NASA Joint Base Operations Support Contract (J-BOSC)
- U.S. Army battle command training
- NASA sounding rocket operations contract
- Illinois electronic benefits transfer

### Key Differentiators

- Cost competitiveness
- Efficient resource utilization
- Innovative bidding models
- Developed training methodologies
- Innovative application of key technologies



## Commercial Information Services

2002 Total Sales:

**\$200 M**

### Market

- IT outsourcing
- IT Infrastructure support services

### Products/Offerings

- IT managed services (outsourcing)
- Help desk services
- Network operations and management
- Field support (hardware maintenance, desk-side software support)
- Data center services
- IT architecture consulting

### Key Customers

- Federal agencies (INS)
- Commercial (Vought Aircraft, Unocal, Hewlett-Packard)
- State & Local (TX, LA)

### Major Programs

- INS TEAMS Support
- Vought Aircraft Industries
- State of Texas Protective and Regulatory Services

### Key Differentiators

- Northrop Grumman brand and values
- Ability to leverage Northrop Grumman IT technical solutions (Information assurance, systems engineering, etc.) to commercial marketplace
- Quality service track record with commercial and government accounts and high customer satisfaction ratings



## Computing Systems

2002 Total Sales:

**\$750M**

### Market

- Networking and security
- Computing systems
- Storage solutions

### Products/Offerings

- Cisco (networking)
- Sun Microsystems (computing systems)
- Hewlett Packard (computing systems)
- Oracle (software)
- EMC Corporation (storage)

### Key Customers

- U.S. Army
- Dept. of Treasury
- Social Security Administration

### Major Programs

- Multiple Government-wide contracts for DoD and Civil Federal (e.g., SEWP III, ECS III, SSA BPA)

### Key Differentiators

- Qualified, highly certified technical staff
- Best in class partnerships
- Strong past performance across a broad customer base



## Northrop Grumman IT Positioned to Meet Growth Goals

- ✍ Litton integration complete with outstanding results
- ✍ Domain expertise across the board in all growth markets
- ✍ Provide customer flexibility through various contract vehicles
- ✍ Technology and process leadership
- ✍ Sustained, superb program performance
- ✍ Excellent people with low turn-over
- ✍ Seasoned management team that delivers
- ✍ Significant cross-sector cooperation and business growth

***Glue for Network Centric Warfare***

***Will Deliver Double-digit Sales and Margin Growth***



**NORTHROP GRUMMAN** DEFINING THE FUTURE

*Mission Systems*

February 13, 2003

# Mission Systems Overview

Institutional Investor Conference

**Donald C. Winter**  
President  
Mission Systems





## Mission Systems ... End-to-End Solutions

- ✍ ~\$3.9B - 2003E sales
- ✍ 15,000+ employees
- ✍ Diverse business base
  - ✍ Presence in over 20 countries and 50 states
  - ✍ 2,000 active contracts and task orders



Treasury Communications System

Intercontinental Ballistic Missile Program



Guardrail

**Leading Integrator of Complex, Mission-Enabling Systems**



**Business Development & Resources**  
Sally Sullivan



**Northrop Grumman Mission Systems**  
Donald Winter



**Intelligence & Information Superiority**  
William Studeman



**Planning & Development**  
Larry Edelman



**Finance & Business Operations**  
Mark Gagen

**Command, Control & Intelligence**  
Richard Witton



**Tactical Systems**  
Otto Guenther



**Programs**  
David Barakat



**Human Resources**  
Robert Waters

**Missile Defense**  
Jerry Agee



**ICBM Prime Integration Contract**  
John Clay



**Six Sigma**  
Linda Mills



**Information Systems**  
Diane Murray

**Information & Technical Services**  
Pamela Sullivan



**Enterprise Management Services**  
Thomas Fintel



**Technology**  
Neil Siegel



**Legal**  
Marsha Klontz

**Civil Systems**  
David Zofet



**Information Technology**  
Wood Parker



**Washington Office**  
Darryl Fraser

# Mission Systems Leadership



## Business Highlights in 2002

- ✧ Won Centers for Disease Control Information Technology support contract
- ✧ Won prime integrator roles on three major procurements
  - Joint National Integration Center
  - Space Control Mission Area Prime Integrator Contract
  - Air Force Airborne Signals Intelligence
- ✧ Established significant positions with new customers (e.g., U.S. Marine Corps, U.S. Coast Guard, Air Force Weather Agency)
- ✧ Successful BMC3 role on Missile Defense team
- ✧ ICBM full rate production ramp-up
- ✧ CMMI and Six Sigma implementation



## Operational Effectiveness

<b>CMMI</b> <i>(Capability Maturity Model Integration)</i>	<b>Six Sigma</b>
<i>Process improvement models for product and service development and maintenance</i>	<i>Disciplined, data driven methodology for decision making and process improvement</i>
<ul style="list-style-type: none"> <li>⌘ A competitive discriminator</li> <li>⌘ We have made great progress:                             <ul style="list-style-type: none"> <li>– Process assets in place</li> <li>– Successful external Level 3 assessments</li> <li>– Initial Level 4 assessments complete</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>⌘ Incorporated into “the way we work” at Mission Systems                             <ul style="list-style-type: none"> <li>– Dashboards, quarterly reviews, strategic plan, etc.</li> </ul> </li> <li>⌘ Excellent customer participation and value</li> </ul>
<p><u>Future Focus</u></p> <ul style="list-style-type: none"> <li>– Leveraging Six Sigma projects to achieve Levels 4 and 5</li> <li>– Complete external assessments</li> </ul>	

***Process Improvements Are Key to Operational Effectiveness***



## Business Environment/Market Trends

### **Defense/Intelligence**

- Net increases in spending with solid funding in Mission Systems legacy/expansion markets (e.g., ICBM, Missile Defense)
- Some customers engaged in major changes (e.g., NORTHCOM, STRATCOM, Department of Homeland Security)

### **Civil Federal**

- Selected growth areas, focused in security-related niches

### **State & Local**

- Recession has/will reduce civil, state & local expenditures over next few years
- Expected flow of federal funding has yet to occur

***Balancing Portfolio Is Key to Continued Success***



## Mission Systems Objectives

- ✦ Deliver long-term double-digit annual sales and earnings growth with strong cash flow

## Overall Strategy

- ✦ Be a leading global system integrator of complex, mission-enabling systems

## Major Themes

- ✦ Meet commitments
- ✦ Pursue new business opportunities with vigor
- ✦ Cross-sector collaboration
- ✦ Move forward with process improvement initiatives



***Sustained Commitment to Performance***



### Legacy Markets

(55% of Mission Systems in 2002)

- ✦ Ballistic Missiles
- ✦ Defense
- ✦ Civil Federal
- ✦ State & Local Information Technology
- ✦ Services
  
- ✦ Continue superior program performance
- ✦ Protect and expand market position

### Expansion Markets

(40% of Mission Systems in 2002)

- ✦ Missile Defense
- ✦ Intelligence
- ✦ Battlefield Systems
- ✦ Unmanned Aerial Vehicles
- ✦ Command & Control
- ✦ Public Safety
- ✦ United Kingdom and Europe

### Emerging Markets

(5% of Mission Systems in 2002)

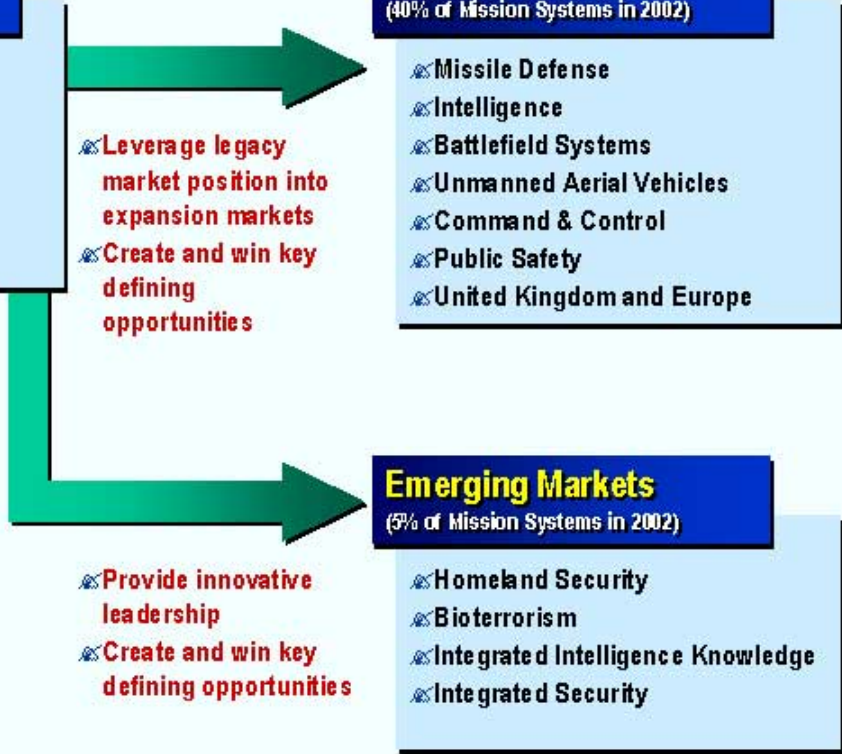
- ✦ Homeland Security
- ✦ Bioterrorism
- ✦ Integrated Intelligence Knowledge
- ✦ Integrated Security

➤ **Leverage legacy market position into expansion markets**

➤ **Create and win key defining opportunities**

➤ **Provide innovative leadership**

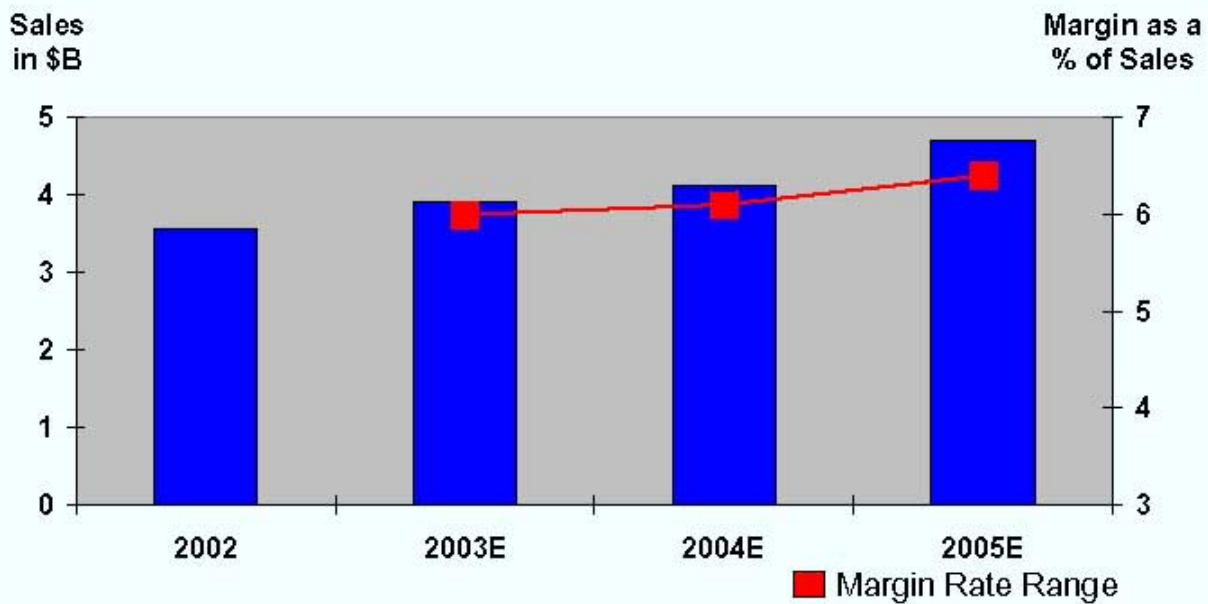
➤ **Create and win key defining opportunities**







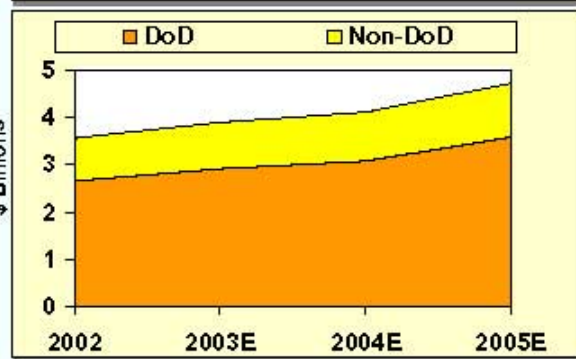
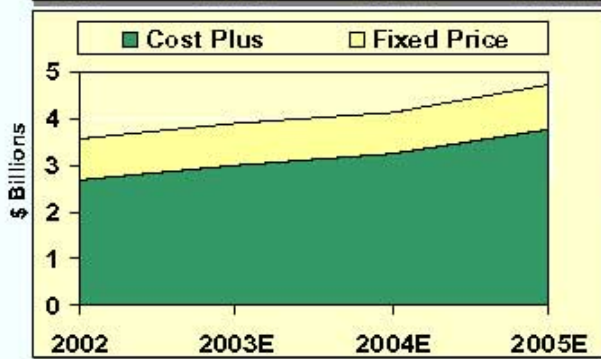
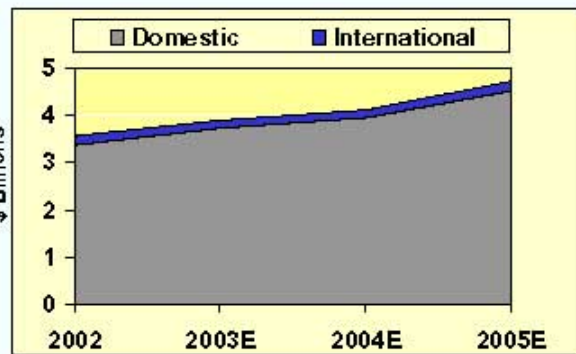
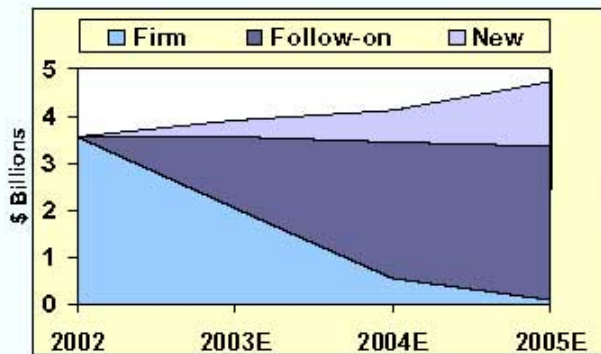
## Financial Performance



**Double-Digit Growth in Both Sales and Operating Margin**



## Sales Mix



## Sales Projections by Business Area



## Command, Control & Intelligence

### Market

- Command, Control, & Intelligence Systems

### Products/Offerings

- Signals Intelligence & Exploitation Systems
- Data Collection Modeling & Product Generation
- System Engineering; Simulation, Integration & Test
- Spacecraft C2 Systems & Payload Software



### Key Customers

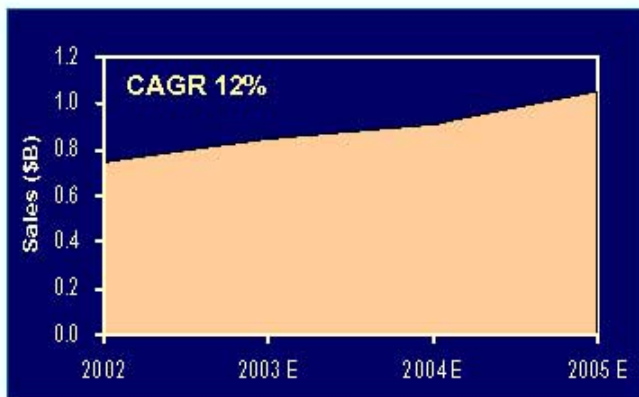
- Intelligence Community
- U.S. Air Force
- U.S. Army
- U.S. Navy

### Major Programs

- Guardrail
- Restricted

### Key Differentiators

- Domain expertise in Signals, ELINT, and Information Warfare





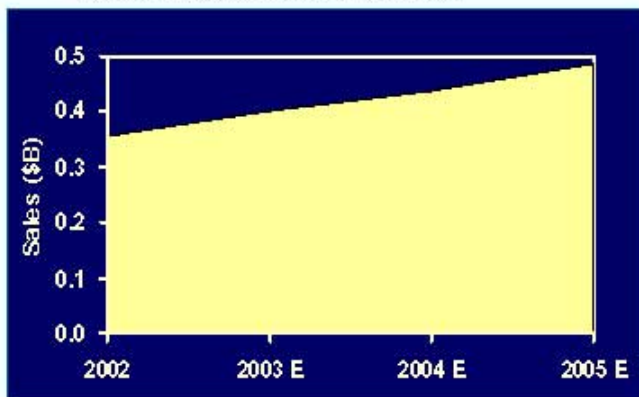
## Tactical Systems

### Market

- Command, Control, Communications & Computer Systems
- UAVs and Vehicular System Integration
- Battlefield Logistics System Automation

### Products/Offerings

- Battle Command and Information Systems
- Tactical Operations Centers
- Tactical UAVs/Ground Control



### Key Customers

- U.S. Army
- U.S. Marine Corps

### Major Programs

- Force XXI Battle Command Brigade-and-Below
- Nuc/Bio/Chem Reconnaissance System
- Tactical Operations Centers
- Operation Enduring Freedom

### Key Differentiators

- Command & Control Product Portfolio
- Patents & Technology



## ICBM

### Market

- Intercontinental Ballistic Missile (ICBM) Program for U.S. Department of Defense

### Products/Offerings

- Program management, systems engineering & integration, sustainment & modernization and ICBM domain knowledge

### Key Customers

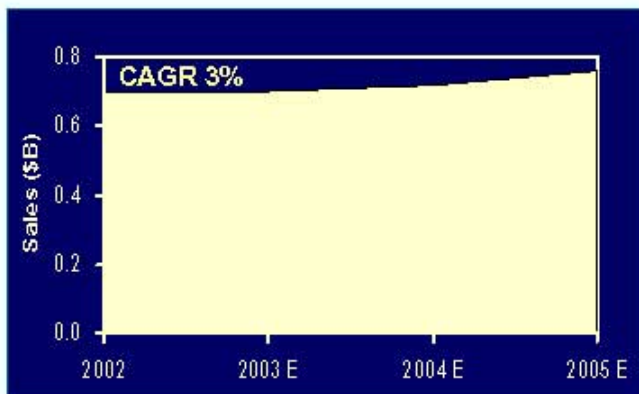
- ICBM System Program Office
- U.S. Air Force
- U.S. Strategic Command

### Major Programs

- ICBM Prime Integration Contract

### Key Differentiators

- System Engineers for ICBM since program inception
- Program Management





# Missile Defense

## Market

- Integrated Missile Defense system & test support for U.S. Military

## Products/Offerings

- Battle Management Command & Control Systems
- Wargames, Modeling & Simulation
- Systems Engineering & Integration
- Target Vehicles

## Key Customers

- Missile Defense Agency
- Boeing
- Lockheed Martin

## Major Programs

- Ground-Based Midcourse Defense Segment
- Joint National Integration Center
- BMC<sup>3</sup> Systems Engineering and Integration
- Liquid Booster Target Vehicle

## Key Differentiators

- Software: Discrimination algorithms
- Ballistic missile domain knowledge

## Major Opportunity

- KE Boost Phase Interceptor





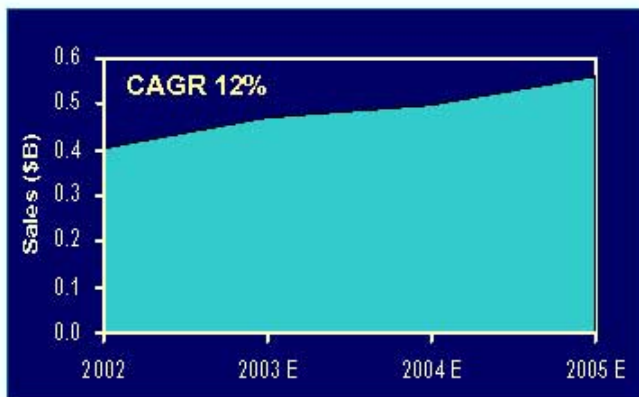
## Information & Technical Services

### Market

- Quality Differentiated Services

### Products/Offerings

- Information Technology
- Systems Engineering and Analysis
- Military Training Modeling & Simulation
- Test & Evaluation and Technical Support



### Key Customers

- U.S. Department of Defense (including Joint Forces)

### Major Programs

- Defense Travel System
- Joint Warfare Fighter Center
- Balkan Linguists

### Key Differentiators

- Excellent technical staff
- Joint training & simulation



## Enterprise Management Services

### Market

- Operations and Maintenance (O&M), and training services

### Products/Offerings

- Foreign Military Training and Staff Support
- Facility Operations & Maintenance
- Education and Vocational Training

### Key Customers

- U.S. Army
- U.S. Air Force
- U.S. Department of Labor
- U.S. Department of Justice

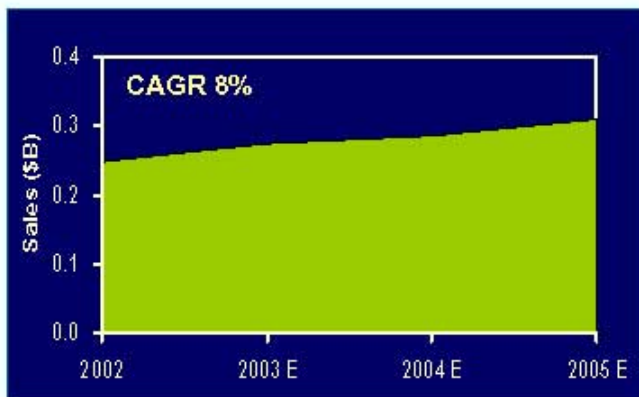


### Major Programs

- Ft. Irwin Logistics Support Services
- Turkey Base Maintenance
- Saudi Arabian National Guard
- INS Application Support Centers

### Key Differentiators

- Strong past performance and long term customer relationships
- OCONUS operations





## Civil Systems

### Market

- U.S. and U.K./Europe Public Safety
- U.S. Human Services, Public Administration & Aviation

### Product/Offerings

- Command centers
- Communications systems
- Integrated Justice Information Systems
- Systems Engineering & Technical Assistance



### Key Customers

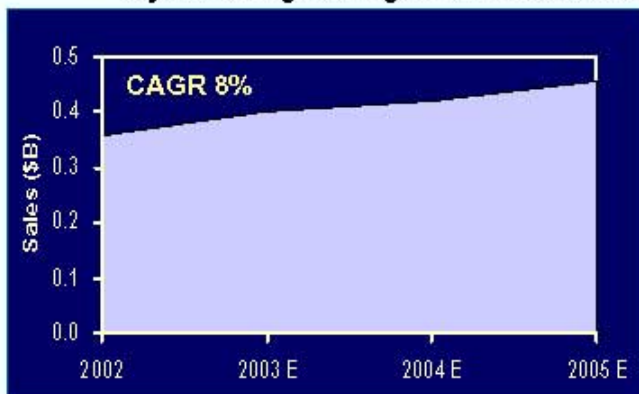
- State and large city/county Governments
- U.S. Federal Aviation Administration
- Police Information Technology Organisation

### Major Programs

- Ohio Communications System
- FAA Technical Assistance Contract
- U.K. Fingerprint Identification System

### Key Differentiators

- DoD command center experience





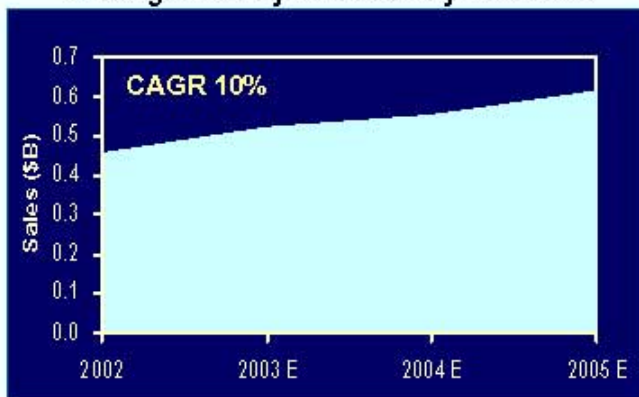
## Information Technology

### Market

- Federal Enterprise Networks & Information Technology
- Commercial (including Healthcare)

### Products/Offerings

- Enterprise Network Engineering & Operations
- Enterprise Information Systems
- Integrated Physical Security Solutions



### Key Customers

- U.S. Department of Treasury
- U.S. Department of Health & Human Services
- American Red Cross



### Major Programs

- Treasury Communication System
- IRS Integration Support Program
- EDGAR
- Centers for Disease Control




### Key Differentiators

- Converged large-scale, secure networks
- Integrated Physical Security Solutions



# Strategic Opportunities

## Major 2003 Opportunities Being Pursued

	<u>PROGRAM</u>	<u>ESTIMATED VALUE</u>	
Intelligence	<ul style="list-style-type: none"> <li>☒ Restricted Programs</li> </ul>		
Defense	<ul style="list-style-type: none"> <li>☒ KE Boost Phase Interceptor (for Missile Defense)</li> </ul>	~ \$4.0B	
	<ul style="list-style-type: none"> <li>☒ Targets, Payloads and Countermeasures (for Missile Defense)</li> </ul>	~ \$1.5B	
Civil Federal	<ul style="list-style-type: none"> <li>☒ IDENT 1 (United Kingdom)</li> </ul>	~ \$250M	

## Major Opportunities Across Multiple Markets

## Well Positioned to Deliver Growth and Value

Deep, Legacy Domain  
Expertise in Priority, High  
Growth Segments

Well Positioned in High  
Growth Addressable Markets

Excellent Program  
Performance

Strong Award Fee  
Performance and Record  
Backlog

Business Model that Produces  
Excellent Returns and Cash  
Flow

- 🔗 Extensive addressable market and diversified contract base
- 🔗 Solid growth potential in defense/intelligence and civil/federal markets
- 🔗 Experienced, well-respected team

**NORTHROP GRUMMAN** DEFINING THE FUTURE

*Integrated Systems*

February 13, 2003

# Integrated Systems Overview

Institutional Investor Conference

**Scott Seymour**  
President  
Integrated Systems





## Integrated Systems...

- ✦ **\$3.7B – 2003E Sales**
- ✦ **13,000 Employees**
- ✦ **4 Major Development Centers**
  - 2 Multiple Billion Dollar + Development Programs
- ✦ **4 Major Production Locations**
  - 2 Major Multi-Year Production Programs
- ✦ **Double Digit CAGR Across Entire Product Base**

***Poised to Meet  
the Future***





# Leading the Way to 21<sup>st</sup> Century Warfare







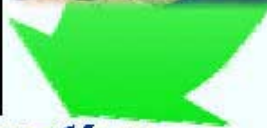
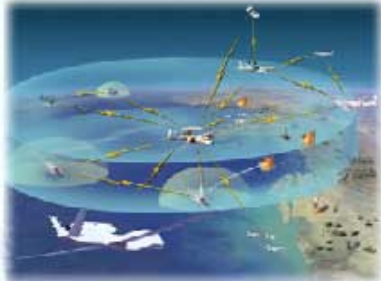
# Critical Contributors to the War on Terrorism





## Building Upon Demonstrated Integration Capabilities

- Systems Architectures
- Large-Scale Integrated Systems
- Industrial / Government Teams
- Program Management
- Systems Engineering
- Modeling & Simulation



**Enabling Tomorrow's Information Centric Combat Environment**

## Strategic View

**Perform** on Current Business – Sustain Operational Excellence

**Position** the Enterprise to Enhance Competitive Posture

**Grow** by Anticipating Customer Needs – Provide “Best Value” Solutions

**Sharing Knowledge to Deliver Capabilities Enabling Integrated Military Concepts of Operations**



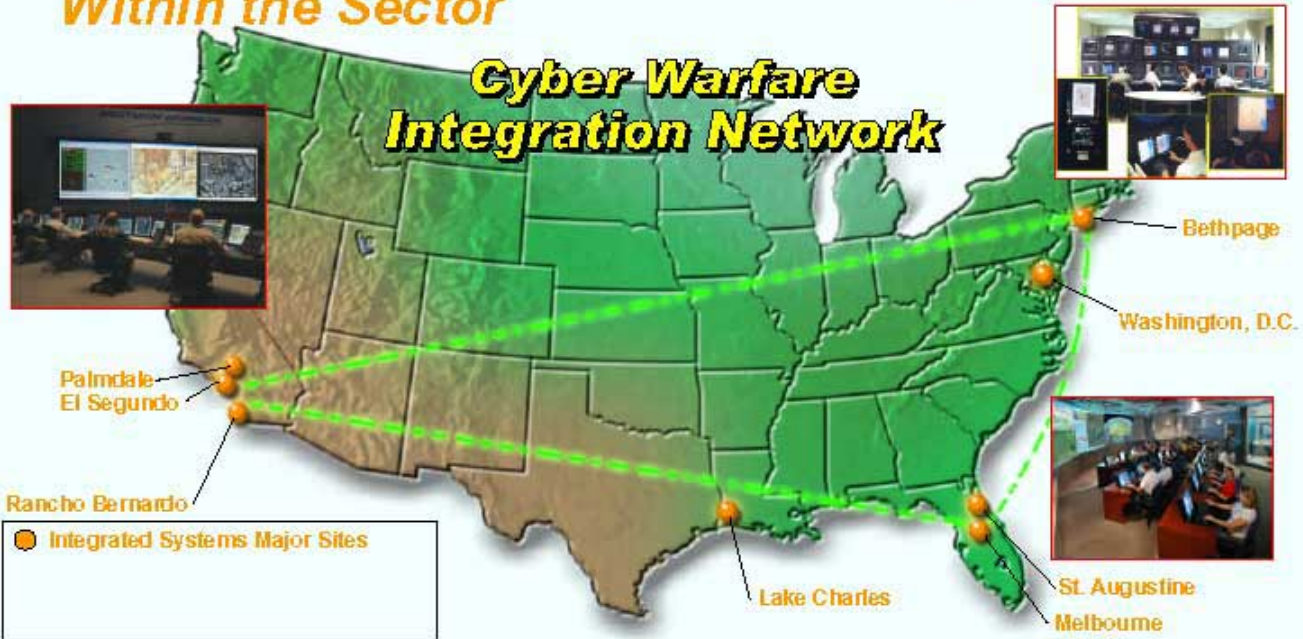
## Harnessing the Power of Knowledge *Within the Sector*



**Enabled Through Lean Processes, Common Systems,  
Shared Services, and Knowledge Sharing**



## Harnessing the Power of Knowledge *Within the Sector*



**Enabled Through Lean Processes, Common Systems,  
Shared Services, and Knowledge Sharing**



# Harnessing the Power of Knowledge Across the Company



**Enabled Through Lean Processes, Common Systems,  
Shared Services, and Knowledge Sharing**



## Harnessing the Power of Knowledge With Government and Industry Partners



**Enabled Through Lean Processes, Common Systems,  
Shared Services, and Knowledge Sharing**



# Integrated Systems Structure

## Capability Development Centers



### El Segundo, CA

- Long Range Strike
- Tactical Air
- Airframe Design
- Stealth
- Weapons Integration



### Rancho Bernardo, CA

- Unmanned Systems
- Targets



### Bethpage, NY

- Airborne Surveillance
- Electronic Warfare
- BMC4I



### Melbourne, FL

- Airborne Ground Surveillance
- Integrated Architectures
- BMC4I

## Business Areas



## Capability Production Centers

### El Segundo, CA

- F/A-18
- F-5 / T-38
- Composites



### Palmdale, CA

- Prototypes
- B-2
- Global Hawk
- F-35
- Targets



### St Augustine, FL

- E-2C
- EA-6B



### Lake Charles, LA

- Joint-STARS







# Integrated Systems Leadership



**Scott Seymour**  
PRESIDENT

## Functional Support



**Advanced Capabilities Development**  
Paul Meyer



**Operations**  
Tom Vice



**Program Integration**  
Mark Tucker

## Shared Services



**Materiel**  
Mary Simmerman



**Business Management**  
Lance Newquist



**Human Resources & Administration**  
Bob McNulty

**Air Combat Systems**  
Gary Ervin

**Unmanned Systems**  
Marty Dandridge

**AEW & EW Systems**  
Phil Teel

**AGS & BM Systems**  
Alan Doshier

## Business Areas

# Operational Excellence Through Collaboration

## Proven Leadership in Key Defense Markets

### Leading Market Positions

- Surveillance Systems and Battle Management Capabilities
- Airborne Standoff Electronic Jamming Systems
- Long Range Strike Systems
- Unmanned Systems

### Teamed on Key Tactical Programs (F/A-18 / F-35)

Sales		
2001	2002	2003
\$3.0B	<del>3.1B(E)</del>	3.7B(E)
	3.3B	



## 2002 Accomplishments

### Program Performance

- High Customer Satisfaction (CPAR and Award Fee Ratings)

### New Business Awards

- Global Hawk EMD / LRIP
- MP-RTIP / 767 Integration
- Pre-SDD Funds for Advanced Hawkeye / Radar Modernization Program (RMP)
- Pre-SDD Funds for Follow-On Support Jammer (FOSJ)
- First Phase Funding for the B-2 Radar Modernization Program



# Our Operating Efficiency Creates Enterprise Value

## Best Value Solutions

Business Structure

Strategic Objectives

Lean

Results Sharing

Operating Strategy

Financial Goals

Factory of the Future: Manufacturing Technology & Processes  
Subcontract Management & Supplier Symposium

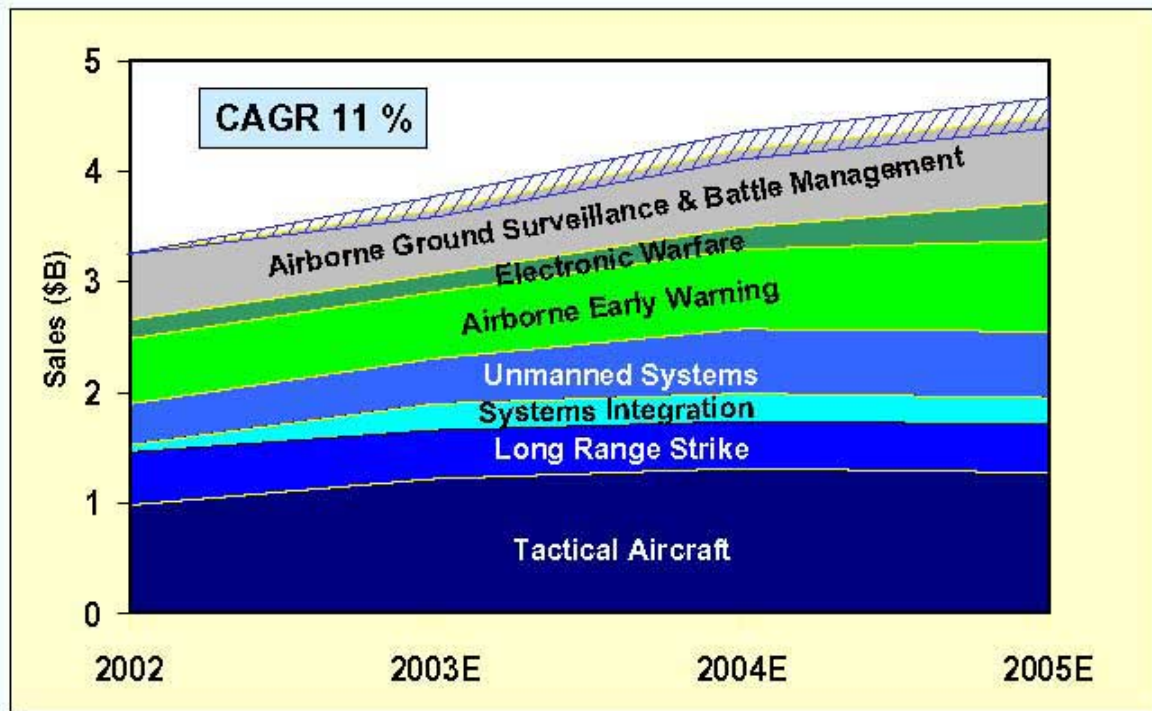


Product Throughput Cycle Time  
Shared Services Metrics  
Cash Management Teams  
Information Technology  
Six Sigma

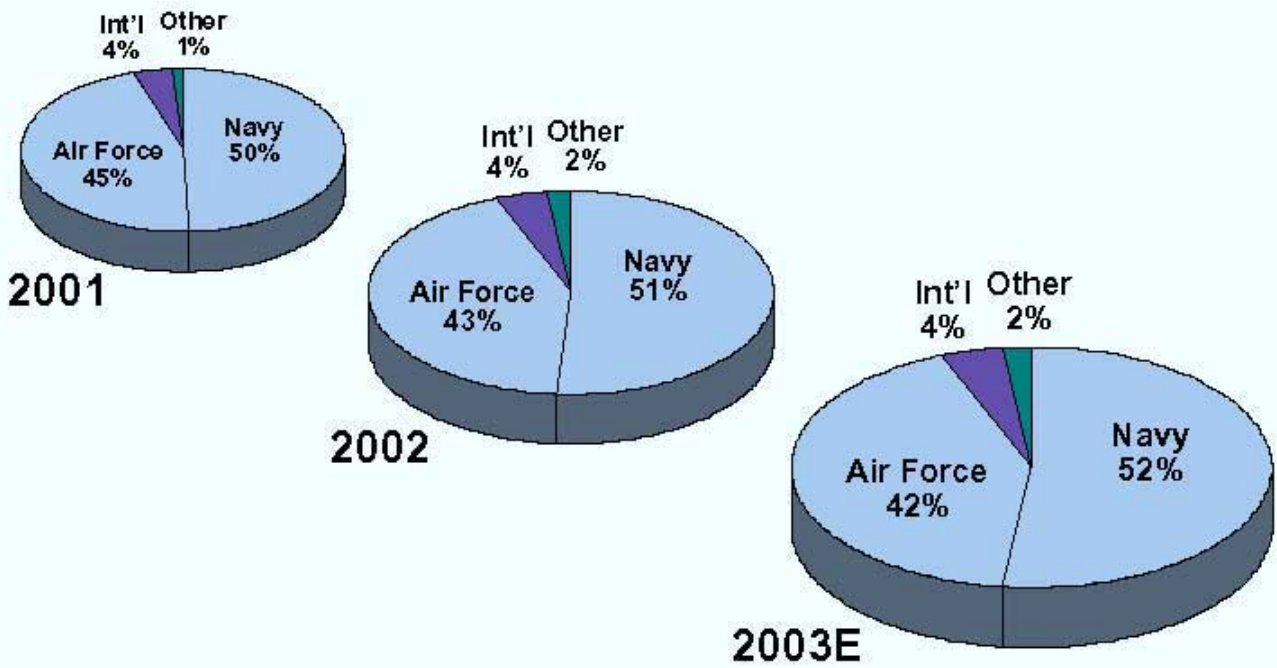


**Optimizing Our People and Physical Resources to Achieve Strong Operating Results**

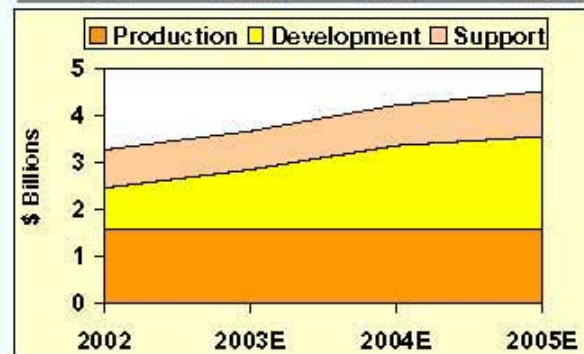
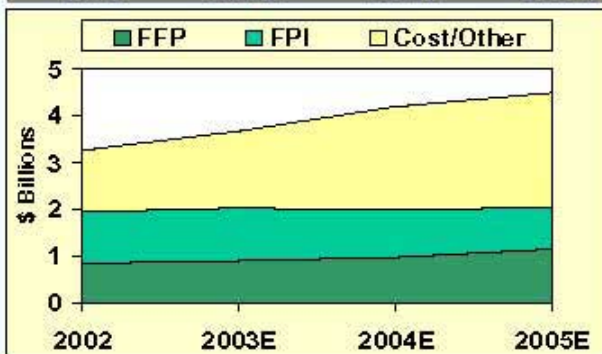
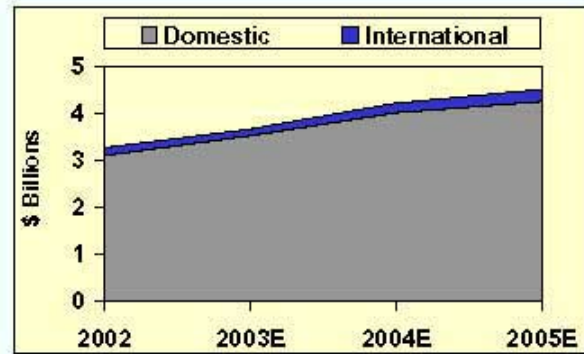
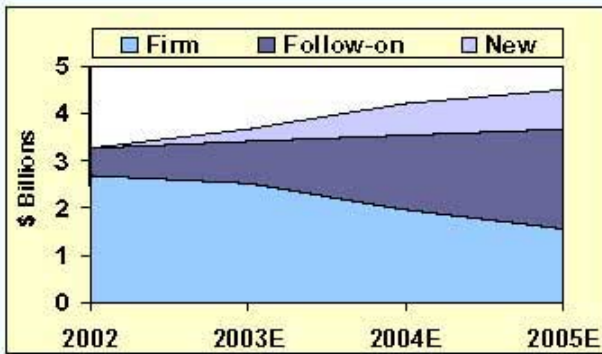
## Revenue Forecast 2003-2005



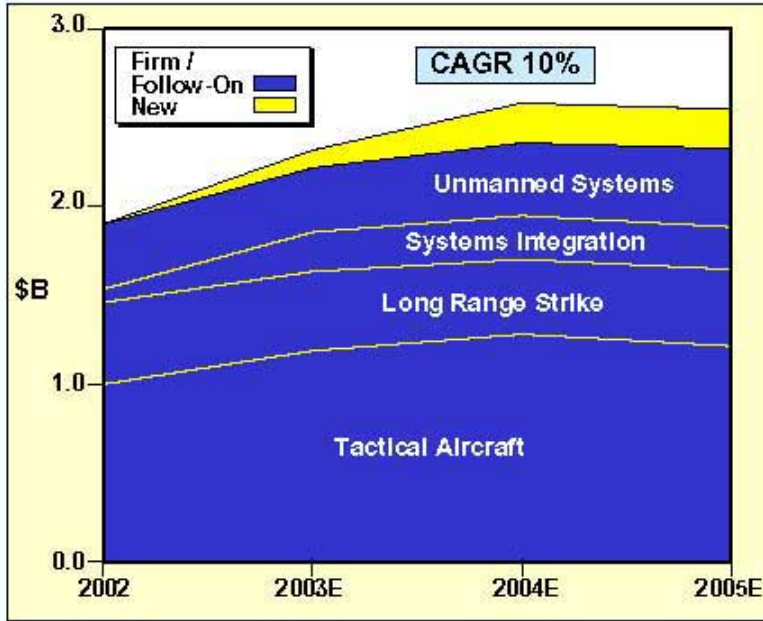
## Solid Defense Core



## Sales Mix



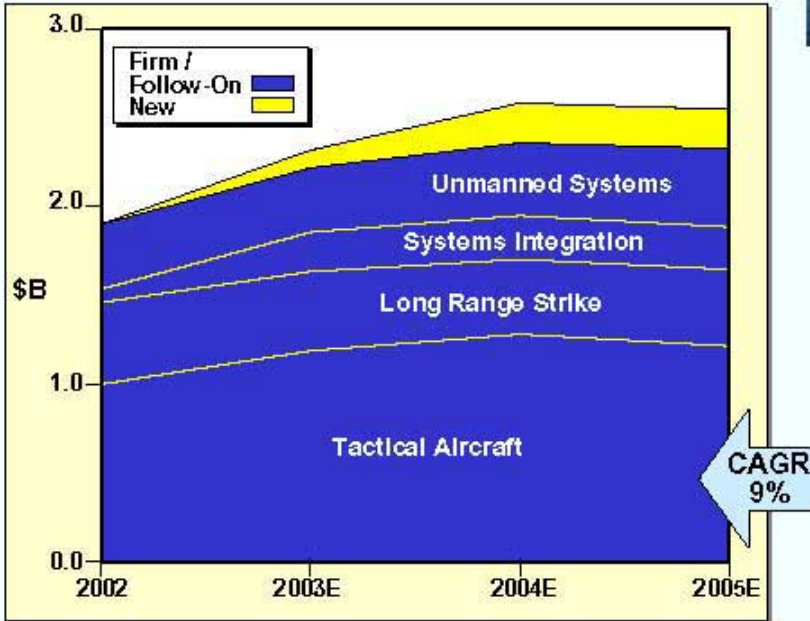
# Air Combat Systems







# Air Combat Systems Tactical Aircraft



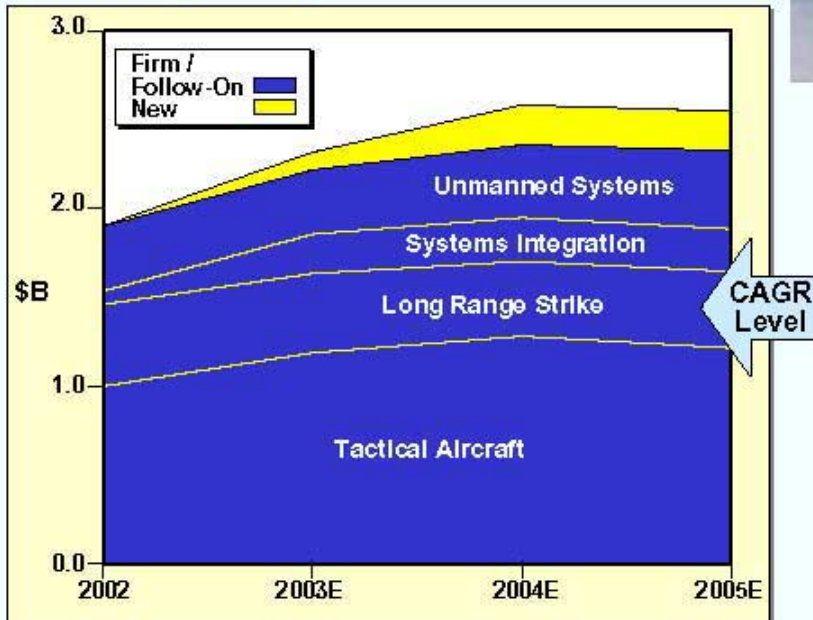
## Key Programs

- ✦ F/A-18E/F
- ✦ F-35 SDD
- ✦ F-5/T-38

## Future Thrusts

- ✦ F-35 Full Production
- ✦ F/A-18E/F MY2
- ✦ Unmanned Combat Air Vehicles

## Air Combat Systems Long Range Strike



### Key Programs

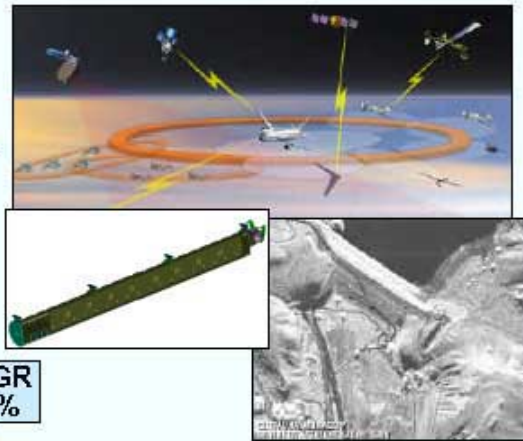
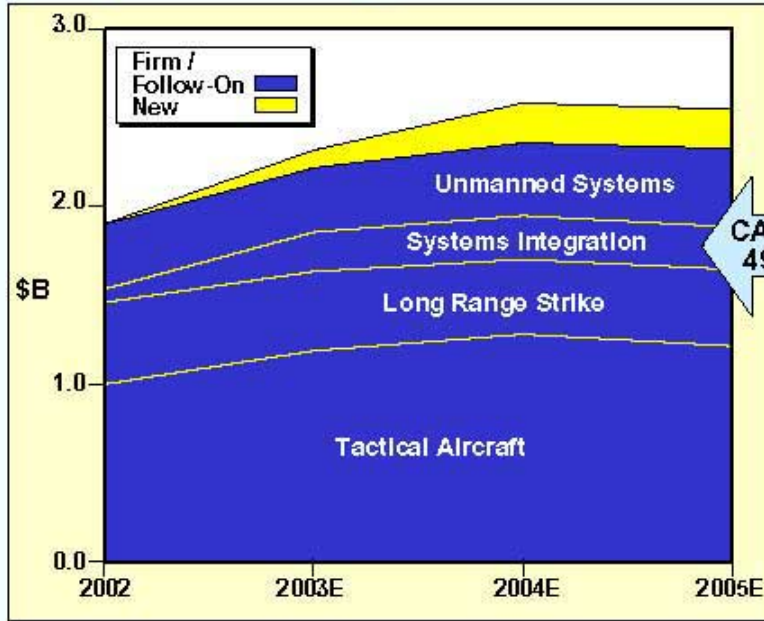
- ✈ B-2 Sustainment
- ✈ B-2 Upgrades

### Future Thrusts

- ✈ Preparedness for Next Generation Strike Capability
  - Manned or Unmanned



# Air Combat Systems Systems Integration



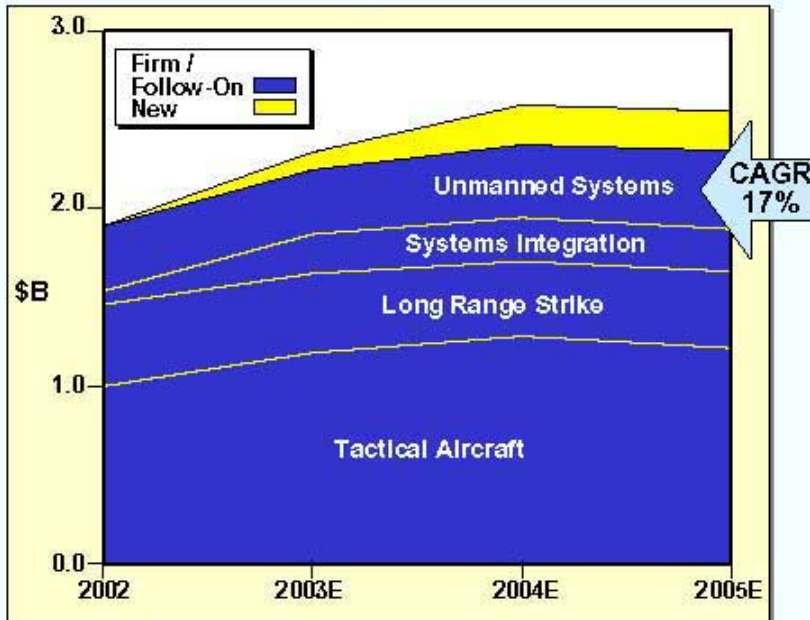
## Key Programs

MP-RTIP

## Future Thrusts

- Integrating Architectures
  - MC2C
  - FORCEnet

## Air Combat Systems Unmanned Systems



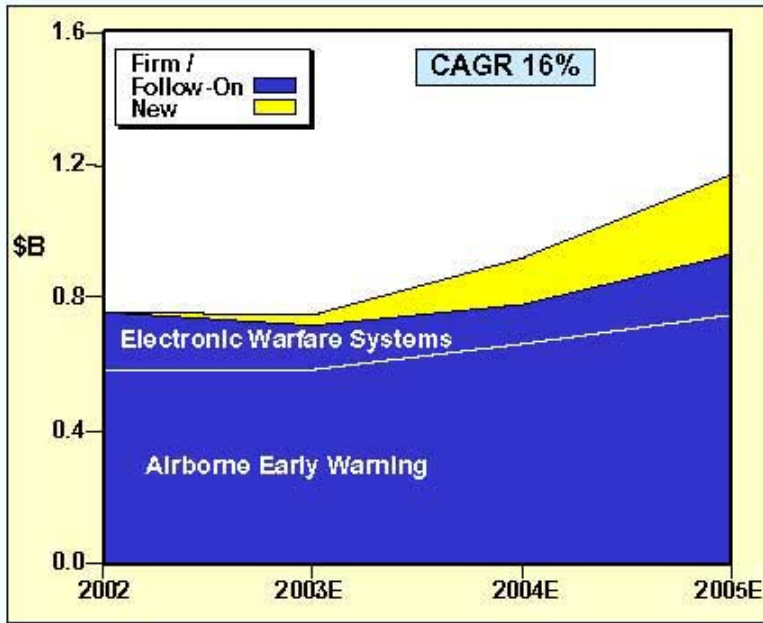
### Key Programs

- ✦ Global Hawk
- ✦ Fire Scout
- ✦ Targets

### Future Thrusts

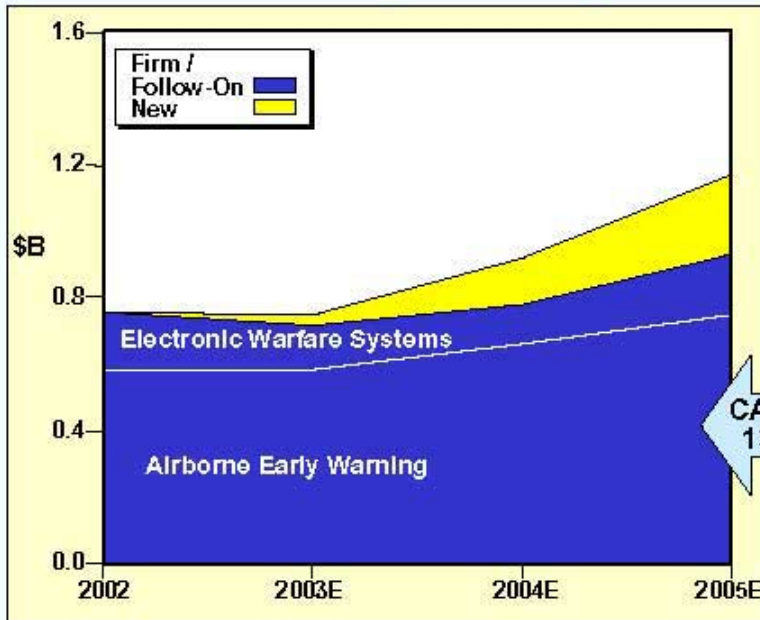
- ✦ Broad Area Maritime Surveillance (BAMS)
- ✦ New Missions / Customers
- ✦ Unmanned Combat Air Vehicles (UCAV)
- ✦ Miniature Air Launch Decoy (MALD)
- ✦ International Opportunities

## Airborne Early Warning & Electronic Warfare



# Airborne Early Warning & Electronic Warfare

## Airborne Early Warning



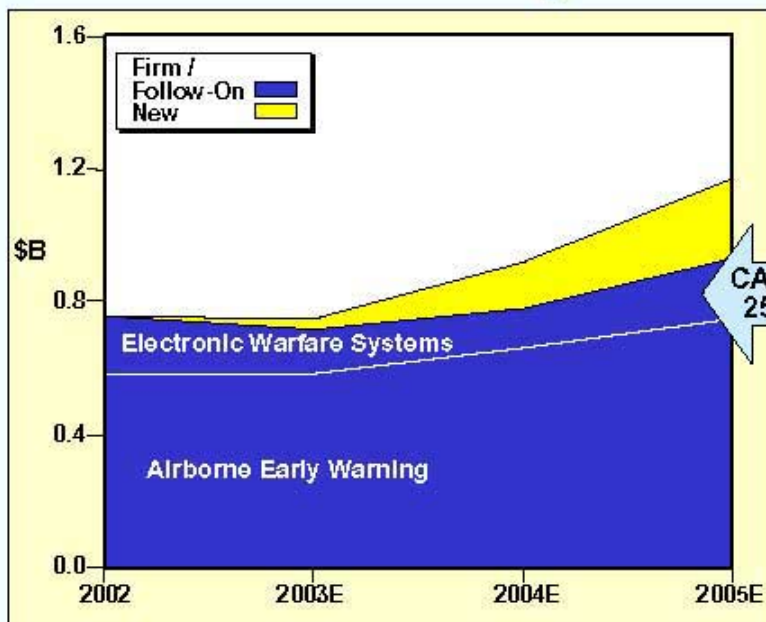
### Key Programs

- ✦ E-2 Hawkeye
- ✦ Advanced Hawkeye / RMP Development
- ✦ Aircraft Product Support & Services

### Future Thrusts

- ✦ Advanced Hawkeye / RMP Production
- ✦ Transition Into UAV Platforms
  - Broad Area Maritime Surveillance
  - Potential Global Hawk AEW Adjunct

## Airborne Early Warning & Electronic Warfare Electronic Warfare Systems



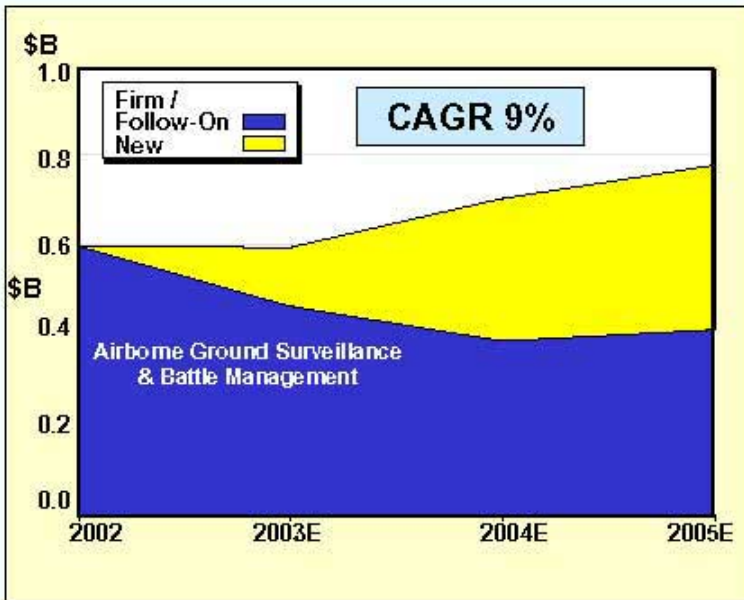
### Key Programs

- ✦ EA-6B ICAP III
- ✦ EA-6B
- ✦ Aircraft Product Support & Services

### Future Thrusts

- ✦ EA-18 (FOSJ)
- ✦ Distributed Jamming Concepts (UCAV/MALD)

# Airborne Ground Surveillance & Battle Management



## Key Programs

- ✈ Joint STARS
  - Production
  - Total Systems Support Responsibility (TSSR)
  - Upgrades

## Future Thrusts

- ✈ 767 MC2A
- ✈ BMC2
- ✈ NATO AGS
- ✈ Space Based Radar (SBR)
- ✈ AT-AOC



## Inter-Sector Collaboration...



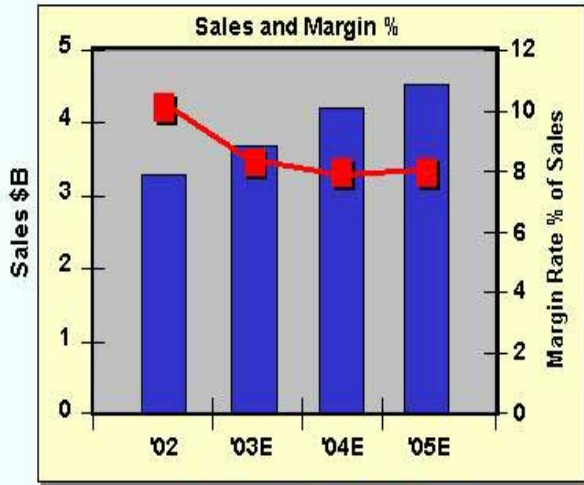
**Cyber Warfare  
Integration Network**

*...Enabling "System of Systems"  
Solutions for the New  
Northrop Grumman*

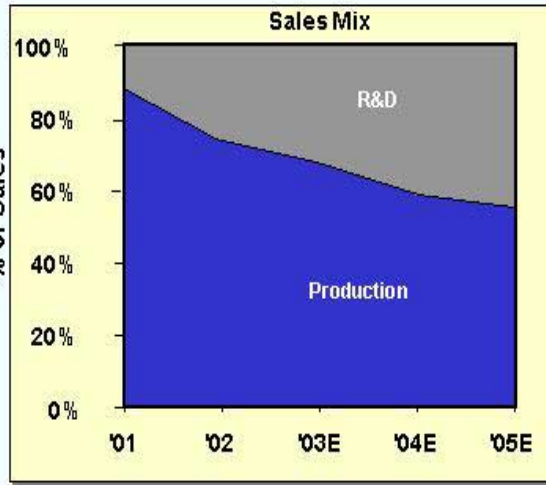
The central image shows a control room with multiple computer monitors displaying maps and data. Above the monitors, the text "NORTHROP GRUMMAN" is visible. To the right, a 3D visualization of a globe is overlaid with a complex network of red and yellow nodes and connecting lines, representing a global integration network. The overall theme is the convergence of various defense systems into a unified "System of Systems" for cyber warfare.



## New Capabilities Drive Growth



■ Margin Rate Range



**Balanced Risk and Return While Growing**





## Pipeline Remains Healthy

### In Production / Service

- † F/A-18E/F
- † E-2C Hawkeye 2000
- † Joint STARS
- † B-2
- † Global Hawk
- † EA-6B
- † Fire Scout
- † BQM-74
- † BQM-34
- † F-14
- † C-2
- † F-5 / T38



### In Development

- † F-35
- † MP-RTIP
- † MP-RTIP/767
- † Global Hawk Spiral Development
- † Fire Scout
- † Advanced Hawkeye / RMP
- † EA-6B ICAP III
- † B-2 Radar Upgrade
- † ALMDS
- † COBRA
- † RAMICS
- † BQM-74F



### Key New Opportunities

- † EA-18 (FOSJ)
- † MC2A-BMC2
- † UCAV
- † Global Hawk Derivatives (BAMS)
- † Global Hawk International
- † Watchkeeper
- † MALD
- † NATO AGS
- † Fire Scout International
- † SBR
- † DJC2
- † AT-AOC
- † MC2C





## 2003 Objectives

- ✦ **Continue to Perform:**
  - Meet all Contract Commitments
  - Deliver Excellent Financial Results
- ✦ **Continue High Level of Customer Satisfaction and Award Fees**
- ✦ **Capture New Business**
  - Advanced Hawkeye / RMP SDD
  - EA-18 Follow-On Support Jammer (FOSJ) SDD
  - MC2A Weapon Systems Integration (WSI) Pre-SDD
  - Global Hawk Broad Area Maritime Surveillance
  - Secure Fire Scout Production
  - Win UCAV Contract
  - ✦ Win U.K. Watchkeeper Down-Select



## A Solid Track Record...

- ✦ **A Firm Business Base**
- ✦ **Strong Product Portfolio**
- ✦ **Focused on Performance**
- ✦ **Sound Business Objectives**
- ✦ **Capabilities Well Aligned to DoD Needs**
- ✦ **Realizing Growth Potential**

**...and an  
Exciting Future**



**NORTHROP GRUMMAN** DEFINING THE FUTURE

*Space Technology*

February 13, 2003

# Space Technology Overview

Institutional Investor Conference

**Wes Bush**  
President  
Space Technology





## Space Technology... Satellite, Laser, and Electronic Systems

- ~\$2.5B - 2003E sales
- 8,500 employees
  - Over 4,000 scientists & engineers
- Headquartered in Redondo Beach, CA
  - 13 locations across the U.S.
- Broad advanced technology portfolio
  - 2,850 issued and pending patents

***Well Positioned for Strong and Profitable Growth***



## Space Technology Value Perspective

### Demonstrating Growth

- New contracts for \$6.4B in 2002
- >20% sales growth in 2003 to \$2.5B

### Market Leadership

- Advanced technology space systems
- Laser weapons
- CNI avionics

### Outstanding Performance

- 93% award fee score in 2002
- 2003 margin projected at 6.5% to 7%
- Six Sigma driving continued operational improvement

### Strategic Focus

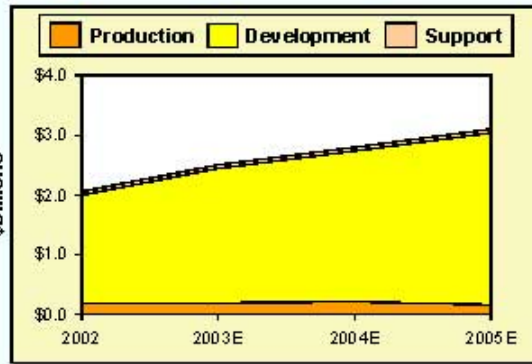
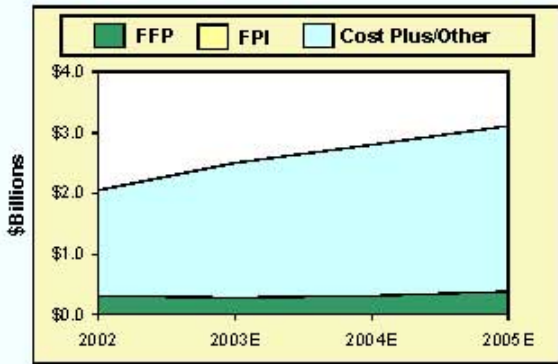
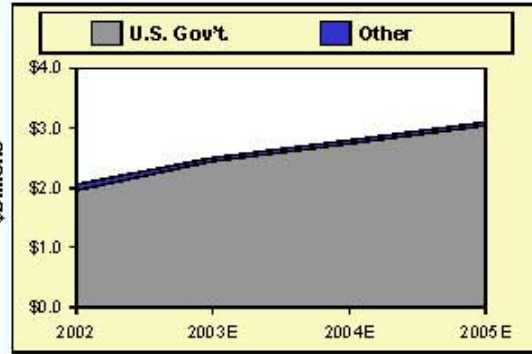
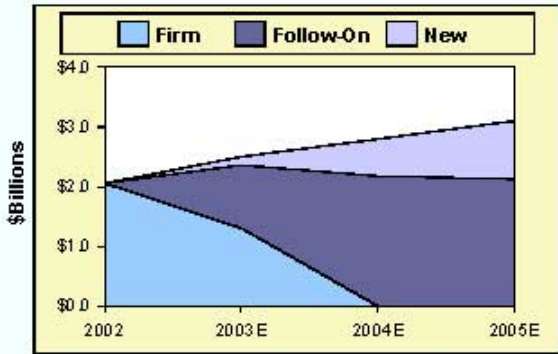
- Broad technology capability
- Expansive talent base
- Systems integration and technology leader
- Trusted provider



## Recent Acquisitions in Every Market Area



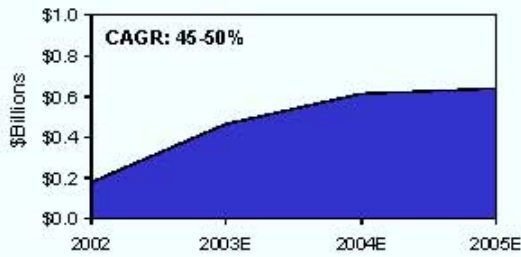
# Sales Mix



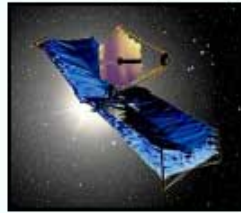


## Civil Space

### Major Programs



**James Webb Space Telescope (JWST)**



**Earth Observing System**

### Market Position

- Leader in high-energy astronomic observatories
- Leader in advanced earth sensing missions
- Outstanding program performance history

**Crab Nebula (Chandra)**



**National Polar-orbiting Operational Environmental Satellite System (NPOESS)**

### Opportunities

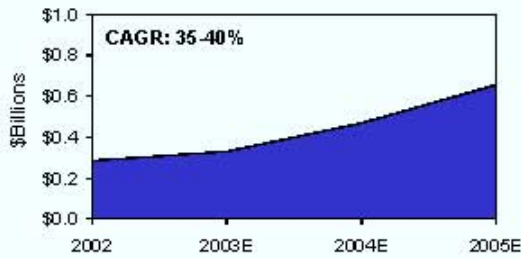
- Geostationary Operational Environmental Satellite-R (GOES-R)
- Space Science



**Nobel Laureate Riccardo Giacconi**



## Missile Defense



### Market Position

- Complex system prime contractor
- World leader in high-power lasers for defense
- Mission expertise

### Opportunities

- ABL Block 08
- STSS Cycle 2
- Tactical Lasers, e.g., Mobile Tactical High Energy Laser (MTHEL)

## Major Programs



Space Tracking & Surveillance System (STSS)

Airborne Laser (ABL)



## Opportunity

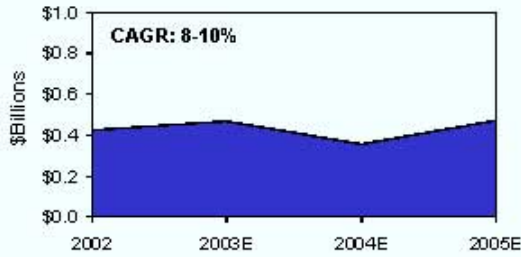


Tactical Lasers



# Satellite Communications

## Major Programs

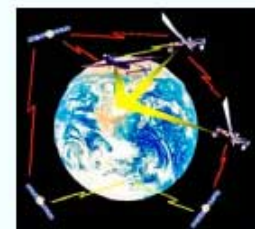


Advanced  
Extremely High  
Frequency  
(AEHF)  
Payload



Milstar Payload

## Opportunity



Transformational  
Communications  
System (TCS)

## Market Position

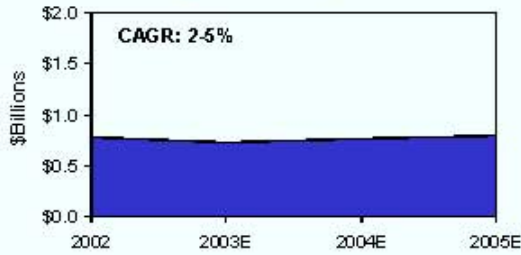
- Outstanding track record of program performance
- Leader in complex satcom systems
- Performance/price leader in broadband payloads

## Opportunities

- TCS
- AEHF Follow-Ons



# Intelligence, Surveillance & Reconnaissance



## Major Programs



Multiple  
Restricted  
Programs

## Market Position

- Decades of consistent, excellent on-orbit performance
- Leading developer of advanced recon systems
- Decades of space/ground operational expertise

## Opportunities

- Restricted
- SBR



Defense Support  
Program (DSP)

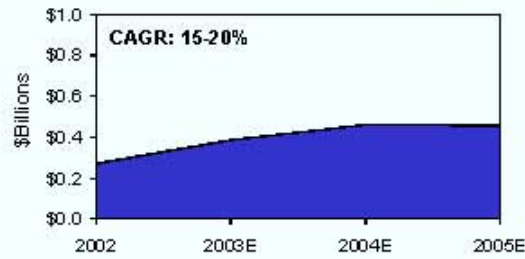
## Opportunity

Space Based  
Radar (SBR)



## Avionics/Military Radios

### Major Programs



### Market Position

- Leading provider of integrated communication, navigation, identification avionics

### Opportunities

- JTRS
- Aircraft upgrades

#### F-35 Joint Strike Fighter (JSF)



RAH-66  
Comanche



F/A-22  
Raptor

### Opportunities

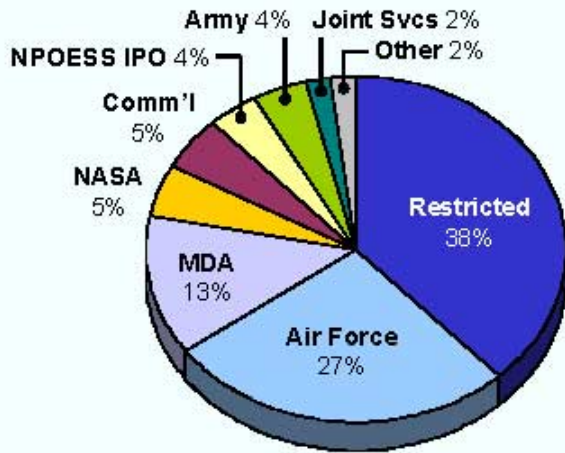
#### Joint Tactical Radio System (JTRS)



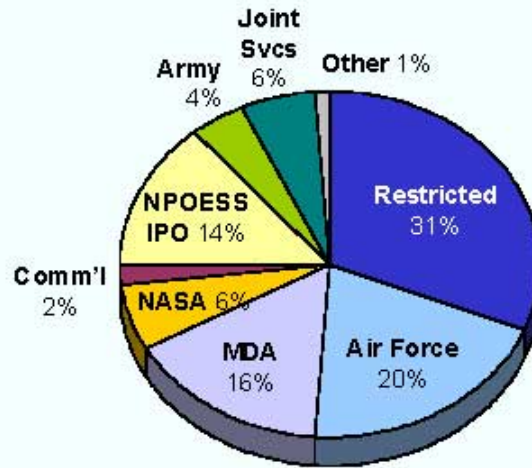


## Broad Customer Portfolio

**2002 Sales**



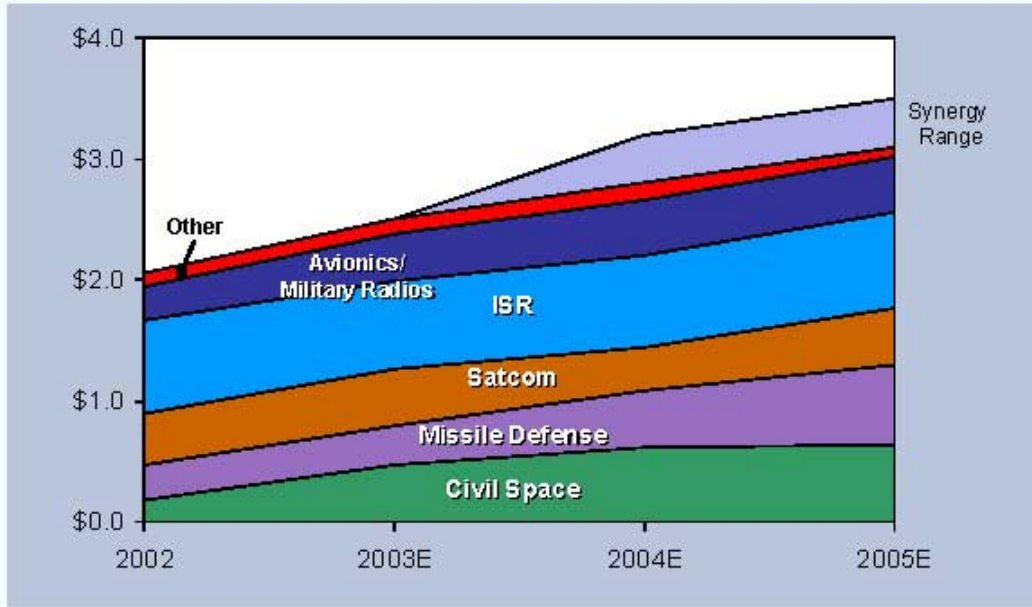
**2005E Sales**







## Sales Projections (\$Billion)



## Technology Aligned with Future Defense Needs

### Advanced Technologies

#### High Energy Lasers



#### Advanced Sensor Payloads



#### Space Vehicle Technologies

#### Electronic Payloads



### Systems Engineering & Integration

### Defense Transformation

- Leverage to the intelligence community and the warfighter
- Need for solutions that are complex and technologically-driven
- Demand for improved execution



## Technology Bank

### Original Strategy

- **Develop technology base**
  - **Patent aggressively**
  - **Use for government business**
- 
- **Grow commercial sales**
    - License where sales growth not feasible
  - **Profit investments to drive commercial growth**
    - \$30M in 2002

### Current Strategy

- **Develop technology base**
  - **Patent aggressively**
  - **Use for government business**
- 
- **Capture commercial value externally**
    - Favor licensing
  - **Investment focused on government applications**
    - Minimal impact in 2003



## Six Sigma Management Framework Drives Operational Improvements

Accomplishments	Measurable Results	Looking Forward
<ul style="list-style-type: none"><li>▪ 2001 – Business transformation</li><li>▪ Six Sigma selected</li><li>▪ Uniquely tailored</li><li>▪ Demonstrated improvements</li></ul>	<ul style="list-style-type: none"><li>▪ High program capture rate</li><li>▪ Cost savings</li><li>▪ 1,300 employees trained</li><li>▪ Active customer involvement</li></ul>	<ul style="list-style-type: none"><li>▪ Accelerate transformation</li><li>▪ Focus on:<ul style="list-style-type: none"><li>– Program execution</li><li>– Operating efficiencies</li></ul></li><li>▪ Broader customer engagement</li></ul>



## Legacy Programs Position Us for Future Opportunities

	Past	Present	Future
<b>Satcom</b>	Milstar	AEHF	TCS
<b>Civil Space</b>	Gamma Ray Observatory Chandra	EOS NPOESS JWST	GOES-R Space Science
<b>Missile Defense</b>	DSP Chemical Laser Weapons	STSS Cycle 1 THEL ABL	STSS Future Cycles Solid State Laser Weapons ABL Follow-On
<b>ISR</b>	Addressed Cold War Target Set	Addressing Evolving Threat	Increasing Threat Capability Drives Need for Advanced Technology Solutions
<b>Avionics/ Military Radios</b>	Integrated Communi- cation, Navigation, Identification Avionics	F-35 JSF F/A-22 Comanche	JTRS Future Clusters Aircraft Upgrades



# Leadership



**President**  
Wes Bush



**Executive Vice President**  
Joanne Maguire

## Enabling Processes



**e-Enterprise**  
Marty Melnick



**Finance & Business**  
Molly Ficarra



**Human Resources**  
Jim Garman



**Law**  
Bill Gallas

## Enabling Processes



**Quality**  
Dick Croxall



**Six Sigma**  
Lisa Kohl



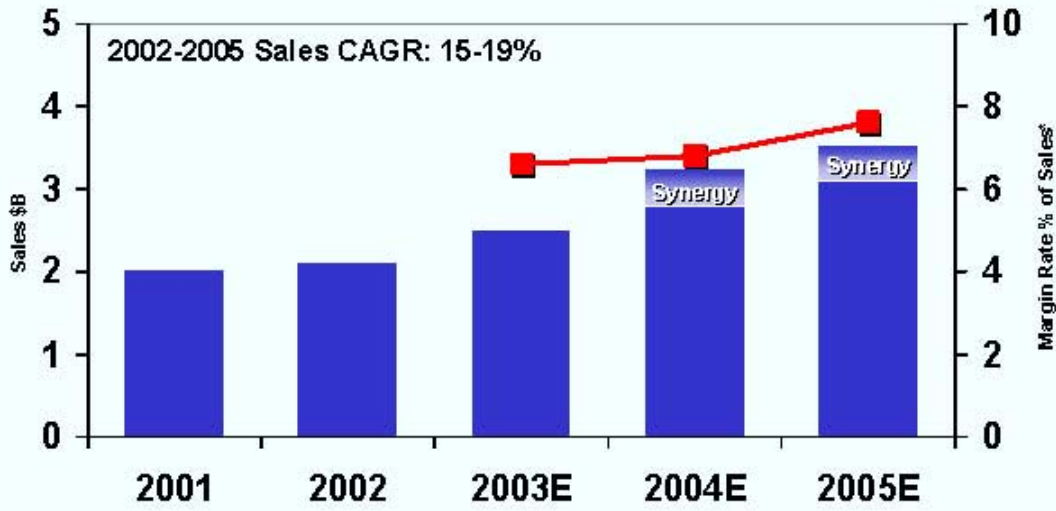
**Strategic Development**  
Jim Myers



*Focused on Performance*



## Major Wins Drive Profitable Growth



\*Subject to purchase accounting & conformance adjustments

■ Margin rate range



## On Schedule to Achieve Full Integration

- Successful “Day One” event—over 7000 attendees
- Sector standup complete by April
- Cross-sector synergy activities underway



***Employees are Excited About the Future  
As Part of Northrop Grumman***





## Opportunities for Cross-Sector Synergies

NGST Market Areas	Electronic Systems	Information Technology	Integrated Systems	Mission Systems	Newport News	Ship Systems
Intelligence, Surveillance, Reconnaissance	✓	✓	✓	✓	✓	✓
Satellite Communications	✓	✓	✓	✓	✓	✓
Missile Defense	✓	✓	✓	✓	✓	✓
Civil Space	✓		✓	✓		
Avionics/Military Radios	✓		✓			

***Merger Provides an Untapped Potential to Grow the Business***



## 2003 Objectives

- Program performance across entire portfolio
- Financial performance
- Growth through new opportunities and synergy
- Continued transformation of the business through Six Sigma
- Full integration as a key part of Northrop Grumman



## Summary

- Focused on defense markets with substantial growth opportunities
- Substantial contract acquisition backlog
- Technology leadership drives continued growth
- Demonstrated outstanding track record of financial performance
- Program execution excellence is our first priority

**Strong Contributor to Northrop Grumman Value Growth**



**NORTHROP GRUMMAN**

DEFINING THE FUTURE



February 13, 2003



# Financial Overview



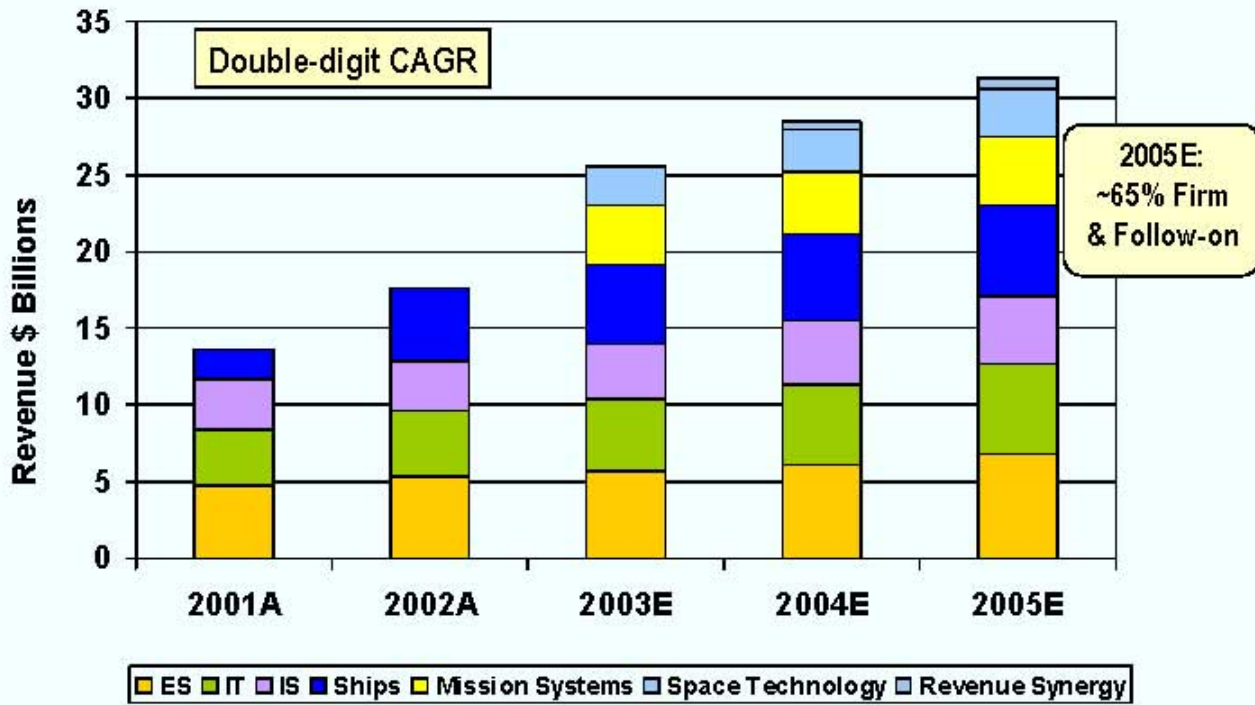
Institutional Investor Conference



**Dick Waugh**  
Chief Financial Officer



## Double-Digit Growth





## Northrop Grumman Will Grow Significant Value

- **Revenue Growth**
  - Portfolio of stable production programs
  - Strong win rate in 2001 and 2002
  - Support for increasing defense-related budgets
  - Significant new opportunities
- **Stable to increasing margin rate**
- **Strong cash from operations**
- **Tight focus on asset management**
- **Improving balance sheet**
- **Options available to enhance shareholder value**



## FAS Pension Accounting Does Not Drive Value

- Funding driven by ERISA not FAS
  - Different actuarial methods
  - Much smoother results
  - Less short-term market sensitivity
  - Better visibility of future funding
- Cash contributions are allowable costs in Government contracting
- Recoverability method
  - Cost reimbursable: all costs recoverable
  - Fixed price: priced to recover contributions

***2003 Cash Contributions Included in Contract Pricing***



## **Pension Elements – 2002 versus 2003**

- **2003 FAS 87 will be finalized in Q1 2003**
- **\$90 million FAS 87 income for 2002 vs. preliminary estimate of \$600 million expense for 2003:**
  - **\$424 million: (9%) plan return versus 9.5% expected rate of return**
  - **\$58 million: Expected rate of return lowered to 9% from 9.5%**
  - **\$59 million: Discount rate lowered from 7% to 6.5%**
  - **\$145 million: TRW**
- **CAS add back estimate of \$260 million**
  - **\$145 million: TRW**





## Discontinued Operations

- **TRW Automotive**
  - ✓ HSR approval
  - ✓ EU approval
  - Expected close – Q1 2003
    - ~\$3.9B cash
    - ~20% equity position
    - \$600M PIK note @ 8% - 10%
- **Component Technologies**
  - ✓ VEAM sold to ITT
  - Multiple transactions
  - Expected completion through Q3 2003

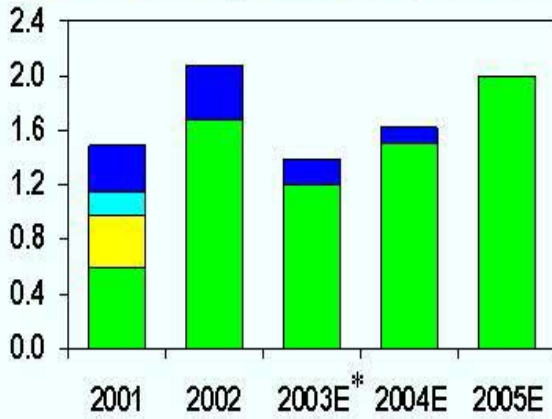
***Proceeds Used Primarily for Debt Reduction***



## Strong Financial Performance

- Strong cash generation continues – near-term purchase accounting
- Stable margin rate on growing revenues – potential for rate expansion

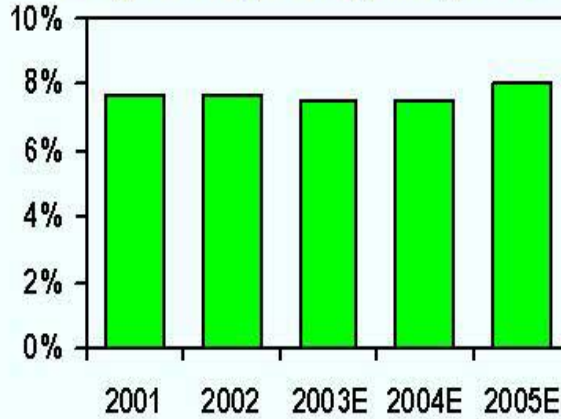
**Cash From Operations – \$Billions**



- Transaction costs from Litton
- AMCV cash impact
- Purchase accounting (TRW Prelim)

\*Before B-2 Tax Payment, debt premium & Auto cash from ops

**Segment Operating Margin Rate**



Adjusted to reflect FAS 142

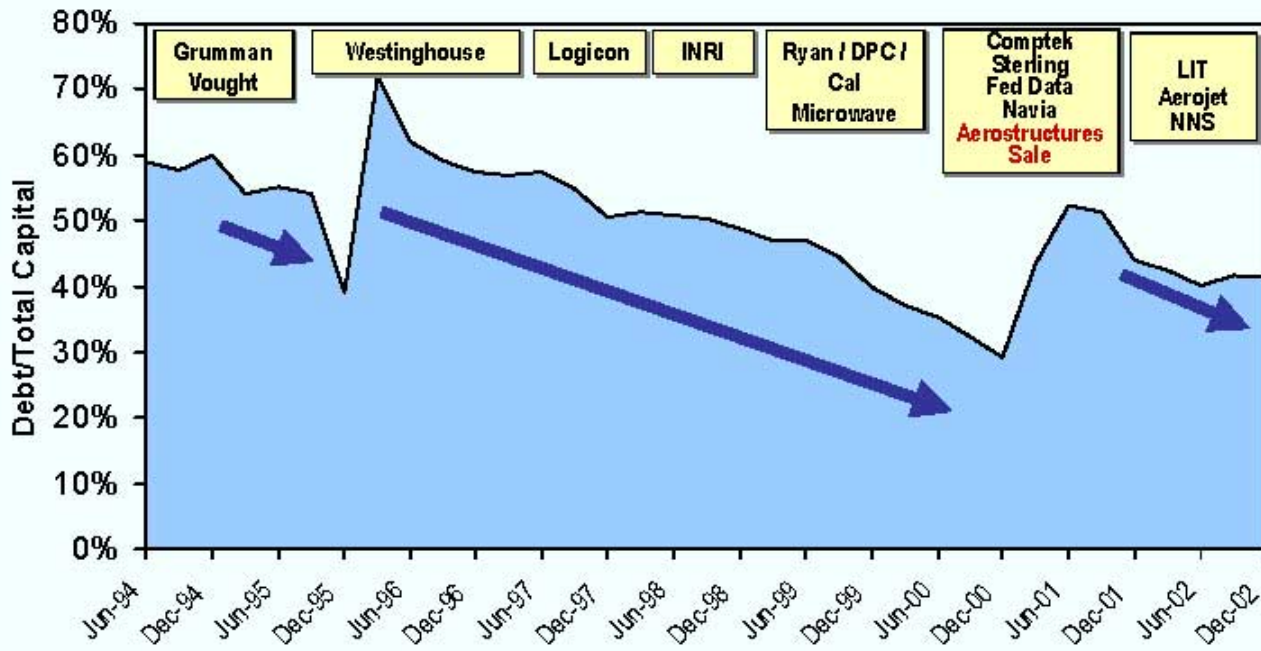


## 2003 Estimated Cash From Operations (\$millions)

	Guidance	
	Low	High
Sales	25,000	26,000
Segment Margin Rate	~ 7.5%	~ 7.5%
<b>Segment Operating Margin</b>	<b>1,875</b>	<b>1,950</b>
<b>Add:</b>		
Depreciation	520	520
Amortization	264	264
<b>Subtotal</b>	<b>2,659</b>	<b>2,734</b>
<b>Less:</b>		
Taxes Payable (excl B2 Payment)	(525)	(550)
Unallocated Expenses	(100)	(100)
Net Interest Payable	(370)	(370)
<b>Subtotal</b>	<b>1,664</b>	<b>1,714</b>
Increase in Working Capital	(600 - 400)	
<b>Cash from Operations (before B2 Tax Pmt)</b>	<b>1,100 - \$1,300</b>	



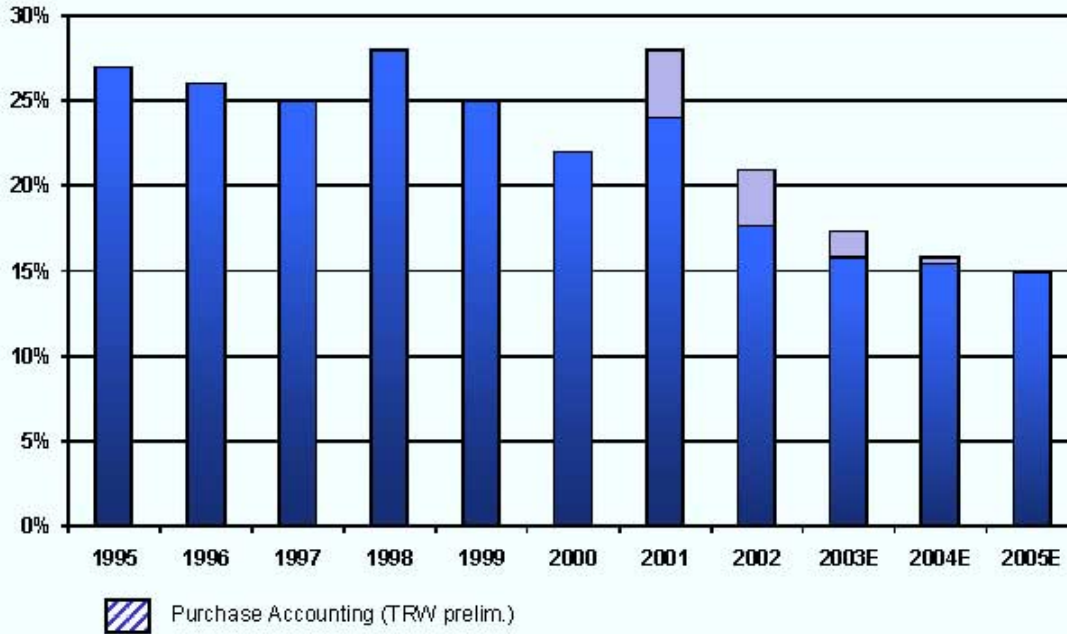
## Demonstrated Ability to Manage Debt





## Working Capital % Sales

### Ongoing Cash Management Emphasis



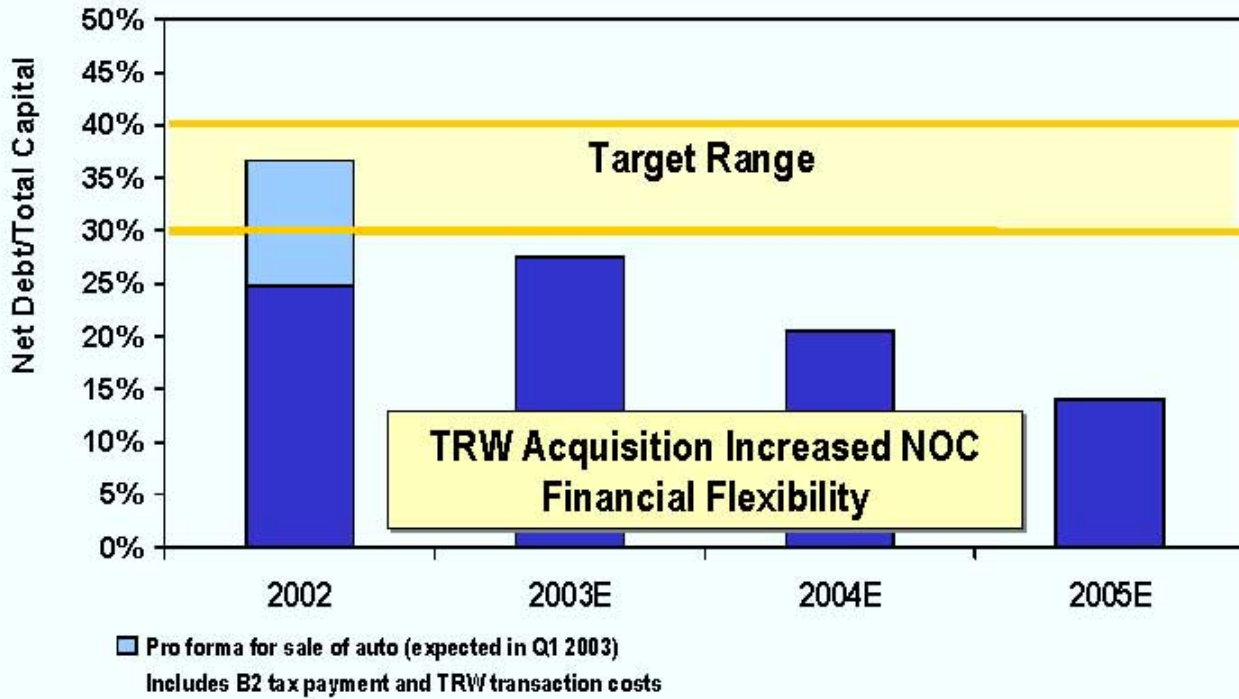


## Company-Wide Focus on Cash Management

- **Focus on operating margin**
  - Basis of operating cash generation
- **Focus on working capital**
  - Contract terms
    - Performance-based payments
    - Progress payments
    - Advance payments
  - Operational efficiencies, e.g., Lean
- **Leadership, incentives and training**
  - Cash focus from senior management
  - Cash goals in incentive compensation
  - Company-wide training links cash flow to Shareholder Value



## Strong Balance Sheet





## Potential Uses of Cash

- **M&A – portfolio shaping**
- **Debt reduction**
- **Stock repurchase**
- **Dividends**





## **NOC = Value for Shareholders**

### **Top Line Revenue Growth**

- ~\$25B to \$26B in 2003
- ~\$28B to \$29B in 2004
- ~\$30B to \$32B in 2005

### **Segment Operating Margin**

- 2003 mid 7% range
- 2004 mid 7% range
- 2005 rate expansion

### **EPS**

- 2003 between \$4.00 and \$4.50
- 2004 revenue growth, steady margins and reduced net debt
- 2005 revenue growth, margin expansion and reduced net debt

### **Cash from Operations**

- 2003 \$1.1B to \$1.3B before B-2 tax payment
- \$1.5B+ in 2004
- Approximately \$2B in 2005 and growing thereafter

***Capital Structure Allows Value Enhancing Actions***

## Northrop Grumman = New Powerhouse

- Sustainable growth in defense spending
- Best positioned portfolio
- Purest defense play
- Strong relationships with all DoD & Intelligence customers
- Strengthened system-of-systems integration capabilities
- Strong acquisition integration track record
- Solid financial performance & balance sheet
- Excellent, highly visible, double-digit growth prospects



***Focused on Growth in Shareholder Value***



## Safe Harbor Statement

Certain statements and assumptions in these materials contain or are based on "forward-looking" information and involve risks and uncertainties. Such "forward-looking" information includes, among other things, the impact of the TRW Inc. acquisition on revenues and earnings. Such statements are subject to numerous assumptions and uncertainties, many of which are outside Northrop Grumman's control. These include Northrop Grumman's ability to successfully integrate its acquisitions including TRW, to realize the preliminary estimates for accounting conformance and purchase accounting valuations for TRW which will be finalized in the 2003 fourth quarter and which may materially vary from these estimates, to close its announced sale of the TRW automotive business, assumptions with respect to future revenues, expected program performance and cash flows, returns on pension plan assets, the outcome of contingencies including litigation, environmental remediation, divestitures of businesses, successful reduction of debt, successful negotiation of contracts with labor unions, timing and amounts of tax payments, and anticipated costs of capital investments. Northrop Grumman's operations are subject to various additional risks and uncertainties resulting from its position as a supplier, either directly or as subcontractor or team member, to the U.S. Government and its agencies as well as to foreign governments and agencies; actual outcomes are dependent upon factors, including, without limitation, Northrop Grumman's successful performance of internal plans; government customers' budgetary constraints; customer changes in short-range and long-range plans; domestic and international competition in both the defense and commercial areas; product performance; continued development and acceptance of new products; performance issues with key suppliers and subcontractors; government import and export policies; acquisition or termination of government contracts; the outcome of political and legal processes; legal, financial, and governmental risks related to international transactions and global needs for military aircraft, military and civilian electronic systems and support, information technology, naval vessels, space systems and related technologies, as well as other economic, political and technological risks and uncertainties and other risk factors set out in Northrop Grumman's filings from time to time with the Securities and Exchange Commission, including, without limitation, Northrop Grumman reports on Form 10-K and Form 10-Q and the company's recently filed amendments to Form S-4.