President’s Commission On Moon, Mars And Beyond

24-25 MAR 04

Mr. Gary Payton
Deputy For Advanced Systems
Missile Defense Agency
MISSION

- Defend The United States, Deployed Forces, Allies And Friends

- Employ A Ballistic Missile Defense System That Layers Defenses To Intercept Missiles In All Phases Of Their Flight Against All Ranges Of Threat
ELEMENTS

- Collection Of Several Disparate Existing And Future Programs Funded And Managed By Army, Air Force, And Navy

- Now, Elements Brought Together In One Major Program With A Single Mission, Integrated Schedule, Prioritized Funding, And Closely Coordinated Performance Objectives
ELEMENTS
# HISTORICAL APPROACHES

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**Key**
- Green: Government Responsible
- Orange: Independent Industry Responsible (Not Element Developer)
- Blue: Industry Responsible
- Blue with Green: Industry Support To Government / Element Developer
- Blue with Orange: Industry Support To The Government Responsible

Mercury, Safeguard, Apollo, NRO (Early), Shuttle, U-2 / SR-71, SDI, SLBM-Trident, NRO, C-17, JSF
Thorough Trades Analyses Between Elements
- Accurate Engineering Models
- Uniform Metrics
- Cost Models
- Leads To Budget Decisions And Programatic Direction
SYSTEMS ENGINEERING

- Ruthless Configuration Control
  - Performance
  - Contracts
  - Budget

- Rigorous Interface Control
  - Hardware
  - Software
Add New Capability Based On Technical Maturity
Upgrade Existing Capability – Insert Technology
Evolve Requirements
Procure Additional Force – Enhance Capability
Extend To Allies And Friends When Appropriate
SPIRAL DEVELOPMENT

- Realistic Demonstrations

- Proven In Representative Test Environment (Stretching From California To Alaska To The Kwajalein Atoll in the Marshall Islands)

- Build – Test – Learn