



# 1<sup>st</sup> Annual Report to the Deputies Committee on Complex Priorities

Information Briefing  
Deputies Committee Staff  
December 16, 2008



# Agenda

- Introduction
- A New Concept of Complexity
- Trajectory vs. Scenarios
- Trajectory Analysis
- Complex Priority 1
- Complex Priority 2
- Complex Priority 3
- Recommendations



# Introduction

“The ability of the state to protect the national interest requires greater awareness of the future implications of the challenges and opportunities that we face today. Governance must become more alert, responsive, and successful in dealing with multiple, interrelated, complex “.– First Annual Report to DCOM

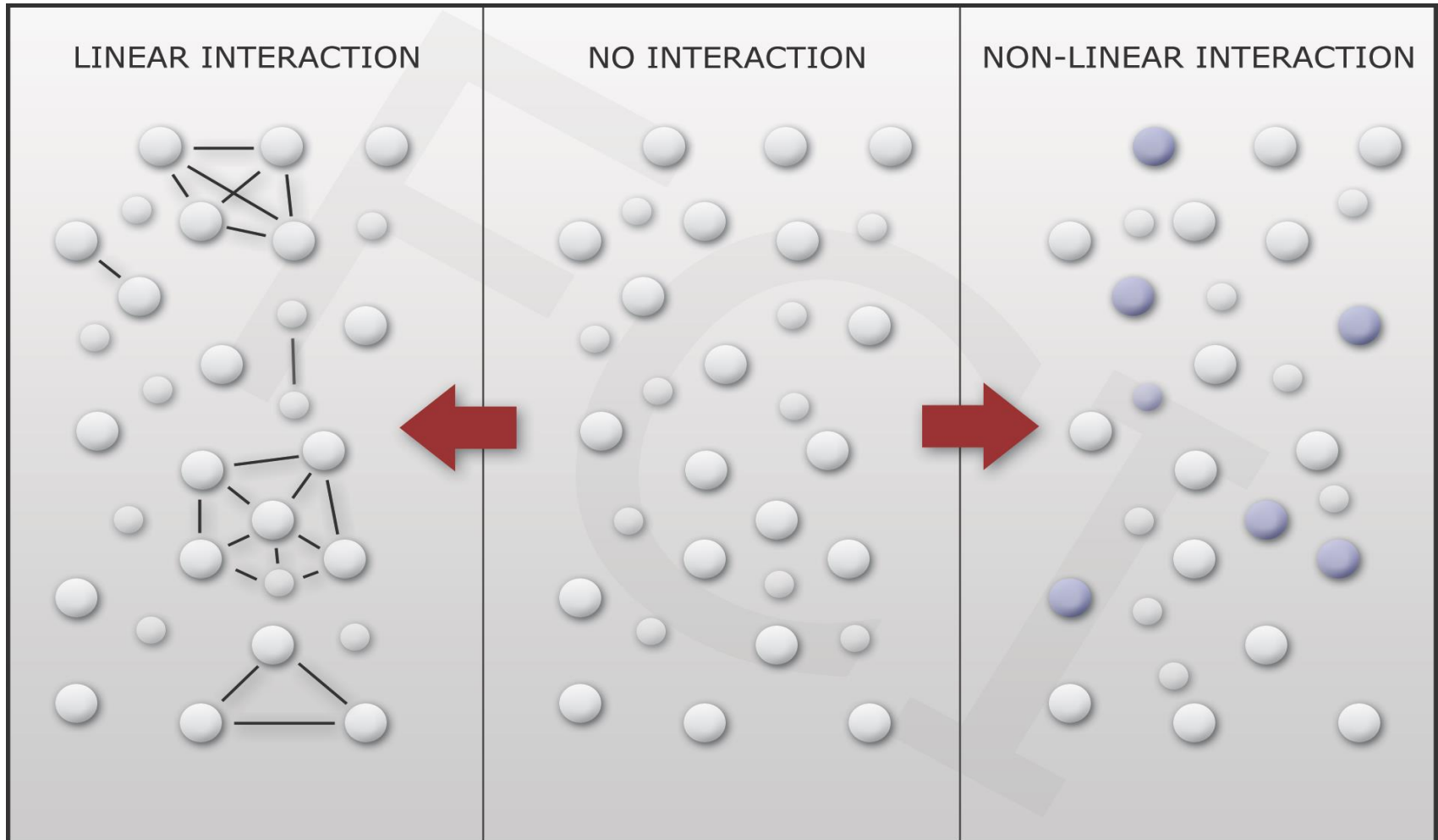
- Engaging complexity for U.S. Interests
- A new opportunity to engage the future
- Forward Engagement: Improving how we engage complexity



# A New Concept of Complexity

- Clarifying conceptual tools of the report
  - Future Contingencies of Interest
  - Connections and Links
  - Complex Priorities
  - Emergent impacts
  - Trajectories

# A New Concept of Complexity (con't)





# Trajectory Analysis

- What is Trajectory Analysis?
  - Form of analysis based on the interaction of various Trajectories from different Complex Priorities.

# Trajectories vs. Scenarios

## ■ Comparison to Scenarios

### □ Shared Qualities:

- Multiple Visions of the Future
- Promotes Long-Range, Anticipatory Policy Making
- Focus on Interaction and Complexity

### □ Differences

- End Point v. Directionality
- Discovering Engagement Opportunities

## ■ Cooperative Approach to Looking at the Future

- Scenarios identify the “what” and “why” of policy creation.
- Trajectory Analysis identifies the “when” and “how” of policy implementation.

# Trajectory Analysis (con't)

## Faint Signals at the (A)

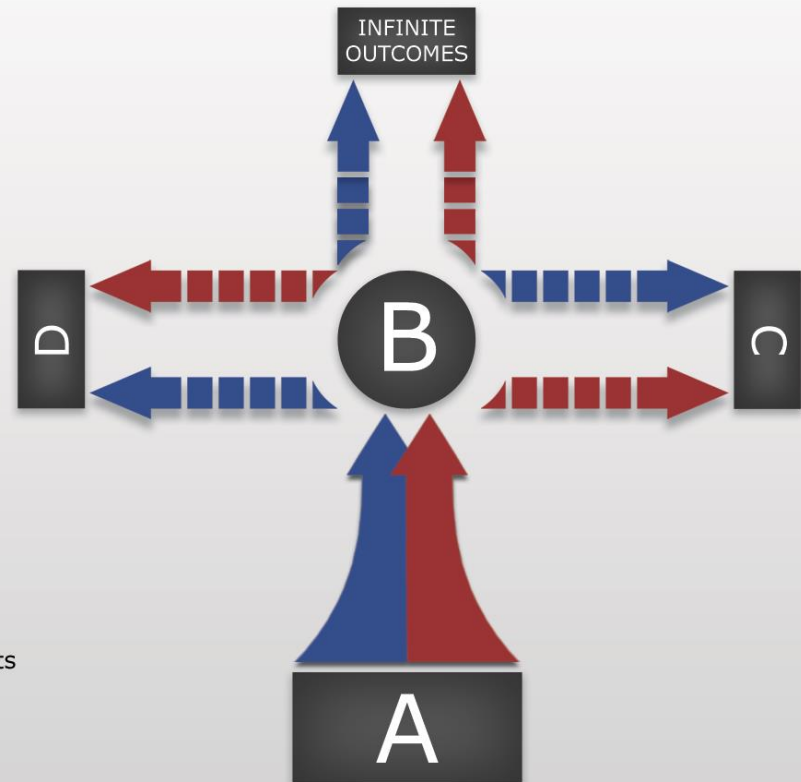
- Pharmaceuticals testing AIDs vaccine in Africa
- Development of nano-scale medicine and treatments
- Pharmaceuticals keeping unfavorable raw data from the public
- Blue-water pirateering in Somalia and SE Asia
- Acquisition of hi-end technologies by pirates
- Human trafficking across regional waterways

## Favorable Outcomes (C)

- Accountability increased for clinical trials of nanoscale medicines
- Public/Private research initiatives mutually promote development
- FDA can approve medicines to make U.S. Pharm more competitive
- Pirateering combated by unified multinational front
- Collective security and national sovereignty protected
- Nano-enhanced weapons and technology blocked from reaching terrorists and non-state actors of violence

## Unfavorable Outcomes (D)

- Pharmaceuticals leave US jurisdiction to test nanoscale antibody
- Entrepreneurial terrorist links pharmaceutical funds with OWP interests
- Exploitation of third-world at-risk populations
- Pirates acquire nano-enhanced surveillance and weaponry
- Private enterprises finance threatening non-state actors
- Sub-national movement further destabilizes nation-state system



**A** The Present  
**B** Engagement Opportunity

**C** Favorable Outcomes  
**D** Unfavorable Outcomes

 Trajectory: The Nano-Revolution  
 Trajectory: Empowerment of Non-State Actors





# Complex Priority 1

## Management of Accelerating Technological Innovation

*The last half of the twentieth century and the beginning of the twenty-first have seen unprecedented scientific advancement. The challenge for government will be keeping policy abreast of developments, harnessing the creativity of our scientists in the interests of the United States and the world while avoiding the pitfalls of over- or under- regulation.*

- Our ability to manipulate matter at small scales will increase and accelerate
- A nanoscale revolution would have many civil and military applications
  - More efficient electrical conductors
  - Stronger materials such as submarine hulls capable of withstanding extreme depths
  - DNA manipulation
- Such advances would be world changing



# Complex Priority 1

## Management of Accelerating Technological Innovation

### Trajectories

- Successful management of nanoscale revolution
- Mass socio-cultural reevaluation
- Failed management of nanoscale revolution



# Complex Priority 2

## Fragility of the State-Based International System

*While states are vulnerable to a loss of power, non-state actors acquire power through successfully navigating change, through new technology, and through reciprocal interactions with black markets.*

- Sub-state challenges to state-based governance are increasing
- Recent events are illustrative of these challenges
  - 9/11 and Mumbai terrorist attacks
  - Piracy and illicit trade in Somalia
  - Natural disasters such as the 2006 Pakistan earthquake
- These challenges will be managed differently
- A shift away from state-based governance may be on the horizon



## Complex Priority 2

# Fragility of the State-Based International System

### Trajectories

- Sub-state groups continue to undermine state-based governance
- Strengthening of individual state sovereignty
- States cede power to supranational institutions



# Complex Priority 3

## Socio-economic Fragility

*Globalization has produced many benefits for humanity. It has increased the interconnections among individuals and groups resulting in a “flattening” of human organization. We are also becoming increasingly aware of how sensitive socio-economic systems are to shocks.*

- We are vulnerable to social and economic disruption
- Traditional policies are failing to anticipate or avert crises
- Events over the next 5-10 years will have profound effects for global social and economic order



# Complex Priority 3

## Socio-economic Fragility

### Trajectories

- Socio-economic collapse
- Sustained instability
- Socio-economic durability

# Recommendations

## General recommendations

*The methods of analysis outlined in this report will improve the ability of the U.S. government to comprehend and engage complex reality. A better interagency mechanism is necessary to carry out this analysis and generate effective policy responses.*

- Improved analysis of Complexity
- Improved interagency coordination
- Endorse Project on National Security Reform's (PNSR) recommendations for interagency reform
- Task forces to manage Complex Priorities

# Recommendations (con't)

## Taskforce Creation

1. **Create three (3) task forces** to manage the Complex Priorities identified in this report
  1. Nano-revolution and the management of scientific advancement
  2. Revealed fragility of the international state-based system
  3. Socio-economic fragility
2. The **mission** of these task forces should be:
  1. To analyze these Complex Priorities in-depth and generate important Trajectories and scenarios
  2. To offer policy recommendations
3. These task forces should **report to the PCOM. The National Security Advisor (NSA) should oversee them.**



# Recommendations (con't)

## Taskforce Creation (con't)

4. These task forces should be **significantly empowered** following the guidelines set forth by the PNSR
5. These task forces should have **sufficient resources to pursue their mandate**
6. **Effective leadership is essential**
7. These task forces should **engage pertinent agencies but retain control over their own staffing**
8. These task forces should **engage outside expert**
9. The President should **mandate that inter-agency work is expected and will be rewarded**