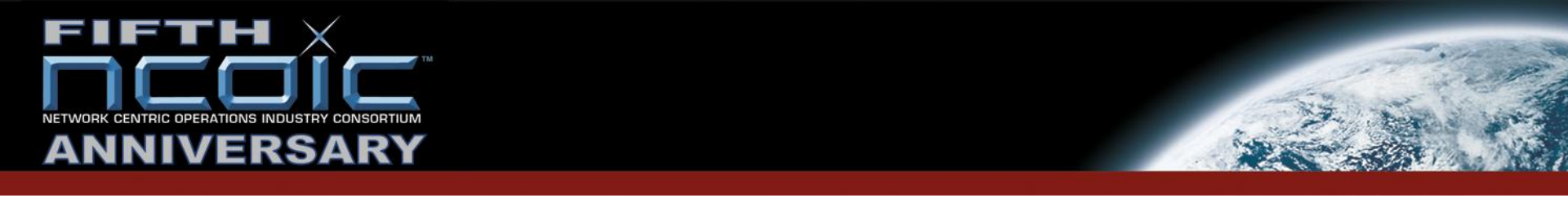

Network Centric Operations
Industry Consortium

The Role of NCOIC in Architecting the NetCentric Enterprise

May 2010

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NCOIC Assists Customers in Obtaining Interoperable Solutions

- "Unity of Effort"
  - Industry working together with customers to provide a network centric environment where all classes of information systems interoperate
- "Readiness for Action"
  - Available methods and tools
    - NCOIC Interoperability Framework (NIF™)
    - NetCentric Patterns, Guidance on application of standards to mission areas to achieve interoperability
    - Systems, Capabilities, Operations, Programs & Enterprises (SCOPE) and NetCentric Assessment Tool (NCAT™) - tools to plan for and assess netcentricity
- "Mission Success"
  - Our mission is to facilitate the success of your mission - global realization of Network Centric Operations.

The SCOPE Model

CUSTOMER GOALS → MISSIONS TO ACHIEVE GOALS → MISSION NEEDS → SOLUTIONS TO NEEDS (EXISTING AND FUTURE) → RESULTING CAPABILITIES & SERVICES

Systems, Capabilities, Operations, Programs & Enterprises (SCOPE) Model

The SCOPE Model:

- An analytical tool that characterizes systems and organizations along interoperability dimensions
- Helps to understand gaps to be overcome and strengths to be leveraged
- Interoperability across various nodes (similar or dissimilar) can be assessed, especially for Legacy systems

Typical Process Steps to Solutions:

1. ***Analysis of Alternatives***
2. ***Requirements Derivation***
3. ***Requirements Validation***
4. ***Design Synthesis***

NIF + BB + NCAT

5. *Design Verification*
6. *Deployment*
7. *Support*
8. *Upgrade or Disposal*

Supports Layered Quality of Service

Network Centric Analysis Tool (NCAT™)

Building Blocks (BB)

Modeling & Simulation and Demonstrations of missions, needs, & solutions

Test & Evaluation of solutions & results

NCOIC Interoperability Framework (NIF™)

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SCOPE Model

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Supports Layered Quality of Service

NCOIC Interoperability Framework (NIF™)

The NIF™ provides enabling guidance for net-ready solutions

- **Concepts, principles, processes, patterns and frameworks for NCO solutions**
- **Recommended standards & implementation guidance for communications & information infrastructures, service-oriented architectures (SOA), semantic interoperability, information assurance (IA), etc.**

NIF + **BB** + **NCAT**

Network Centric Analysis Tool (NCAT™)

Building Blocks (BB)

5. ***Design Verification***
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Modeling & Simulation and Demonstrations of missions, needs, & solutions

Test & Evaluation of solutions & results

Building Blocks Verification & Catalog

CUSTOMER GOALS → MISSIONS TO ACHIEVE GOALS → MISSION NEEDS → SOLUTIONS TO NEEDS (EXISTING AND FUTURE) → RESULTING CAPABILITIES & SERVICES

SCOPE Model

NCOIC Interoperability Framework (NIF™)

The Building Blocks (BB) initiative addresses NIF-Compliant Off-The-Shelf products, including:

- **Self-Verification Criteria for candidate re-usable off-the-shelf products**
- **BB Catalog on a public web-site, providing a database of certified BB entries available for inquiry by member and public entities**

Typical Process Steps to Solutions:

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4. ***DESIGN SYNTHESIS***

NIF + BB + NCAT

5. ***DESIGN VERIFICATION***
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Supports Layered Quality of Service

Network Centric Analysis Tool (NCAT™)

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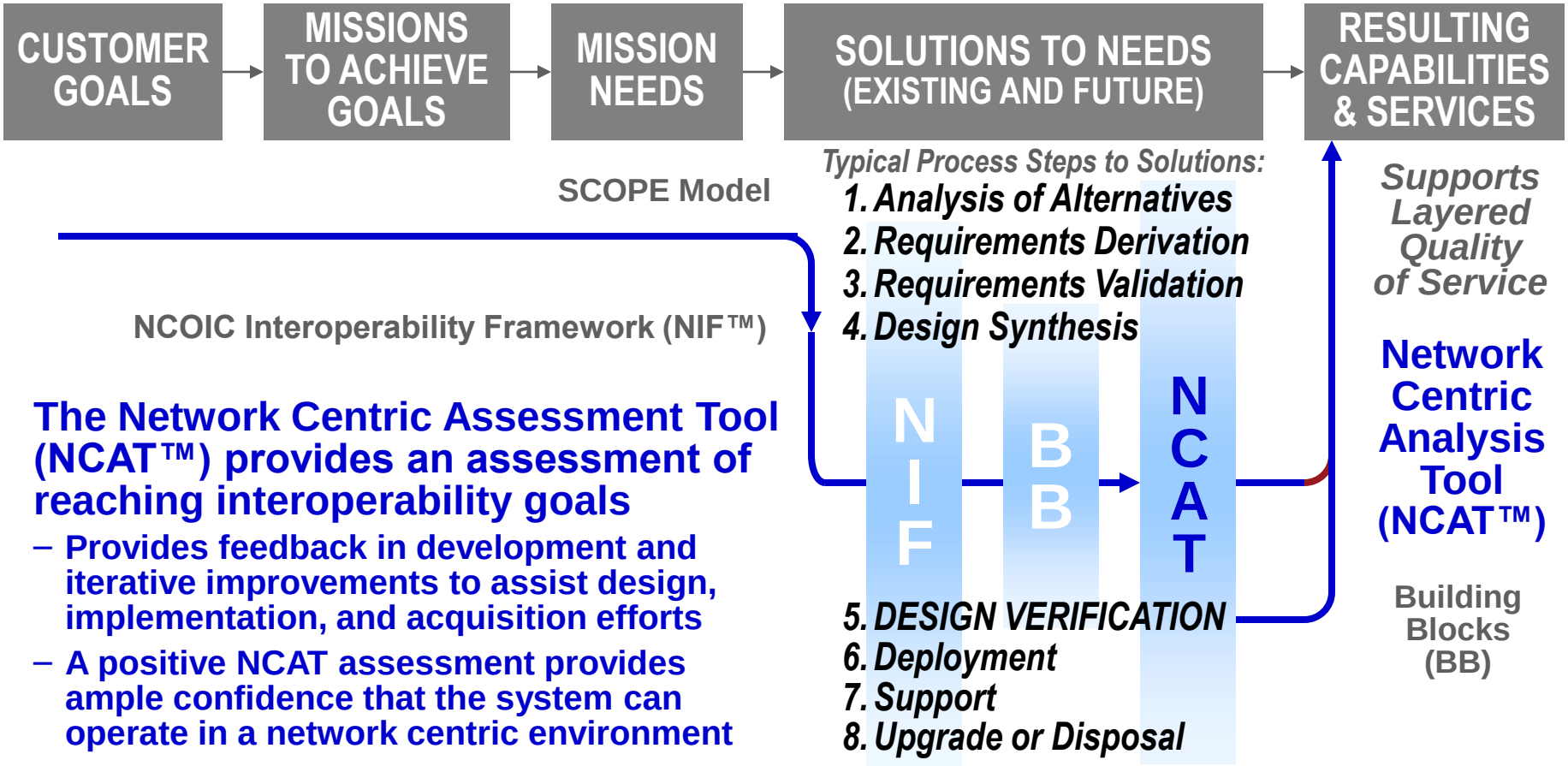
Modeling & Simulation and Demonstrations of missions, needs, & solutions

Test & Evaluation of solutions & results

Network Centric Analysis Tool (NCAT™)



The Network Centric Assessment Tool (NCAT™) provides an assessment of reaching interoperability goals

- Provides feedback in development and iterative improvements to assist design, implementation, and acquisition efforts
- A positive NCAT assessment provides ample confidence that the system can operate in a network centric environment

Modeling & Simulation and Demonstrations of missions, needs, & solutions

Test & Evaluation of solutions & results

Modeling & Simulation, Test & Evaluation

CUSTOMER GOALS → MISSIONS TO ACHIEVE GOALS → MISSION NEEDS → SOLUTIONS TO NEEDS (EXISTING AND FUTURE) → RESULTING CAPABILITIES & SERVICES

SCOPE Model

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Supports Layered Quality of Service

Network Centric Analysis Tool (NCAT™)

Building Blocks (BB)

The NCOIC uses modeling, simulation, and demonstration techniques and laboratories

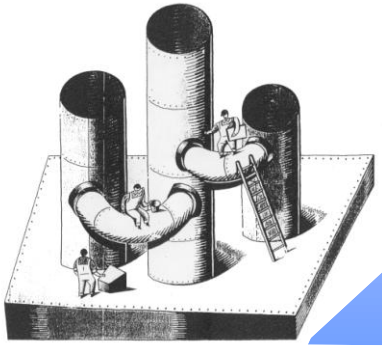
- **To test and evaluate increased levels of interoperability from use of NCOIC deliverables**
- **To recommend Modeling & Simulation standards**
- **To verify the NCOIC deliverables**

Modeling & Simulation and Demonstrations of missions, needs, & solutions

Test & Evaluation of solutions & results

NCOIC™ Goal

Net-Enabled Future



Stovepiped Systems, Point-to-Point Networks

www.ncoic.org