Analysis in Allied Command Transformation

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DACOS Future Capabilities Research & Technology
**Analysis in Allied Command Transformation**

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See also ADM202031. NATO/RTO-MP-SAS-055, The original document contains color images.

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Outline

• Transformation of NATO Defence Capabilities

• ACT Mission and Organisation

• Capabilities development process

• FCRT

• Analysis Coordination
The Future Environment

• Foremost challenges
  – Emergence of transnational threats
  – Fallout from failing states
  – Proliferation of WMD
  – Use of asymmetric warfare

• Operations will be influenced by ‘information age’

• Political, civil, economic and military efforts must be coordinated

• Forces must be expeditionary and capable of swiftly dealing with a wide array of threats

• High intensity operations will remain the benchmark
Transformation of NATO Defence Capabilities

20th Century
- Static
- Reactive
- Regional
- Mass
- Attrition
- Deconfliction
- Supply Point Logistics
- National Intelligence

21st Century
- Agile
- Proactive
- Global
- Effect
- Precision
- Coherence
- Integrated-Distribution Based Logistics
- NATO Fused Intelligence

ACT + ACO + Nations through NRF = Transformed NATO Military
Attributes of a Transforming NATO Force

Deconflict Services & Cultures

Stitch Nation Seams

Integrate NATO Response Force Capabilities

Effects-Based, Collaborative, Network Enabled and Interdependent

Deconflicting Coordinating Integrating Coherence

It is about Culture and Product
**NATO Response Force**

• NRF is test bed for experimentation

• NRF designed to be:
  – flexible,
  – rapidly deployable,
  – interoperable,
  – well protected,
  – and trained.
ACT Vision

“We are NATO’s forcing agent for change, leading the continuous improvement of Alliance capabilities to uphold NATO’s global security interests.”
To provide a vision of the way in which future Alliance operations will be planned and conducted, and, thereby, guide the transformation of forces, concepts and capabilities in the coming decades.
Strategic Vision - Development

Transform Forces, Concepts & Capabilities

Conduct of Future Alliance Operations

Future Risks & Challenges
Nature of Future Operations & Conflict
Effects of Technology

Strategic Environment

“Strategic Vision: The Military Challenge”
Effects-Based Approach to Operations

Involves the comprehensive integrated application of all instruments of Alliance power, both military and non-military, to create campaign effects which will achieve desired outcomes.
Effects-Based Approach to Operations

CAPABLE FUTURE FORCES

ACHIEVING COHERENT EFFECTS

ACHIEVING DECISION SUPERIORITY

ACHIEVING JOINT DEPLOYMENT & SUSTAINMENT

TRANSFORMATION GOALS

ACHIEVING JOINT DEPLOYMENT & SUSTAINMENT

TRANSFORMATION OBJECTIVES

EFFECTIVE ENGAGEMENT

INFORMATION SUPERIORITY

EXPEDITIONARY OPERATIONS

JOINT MANOEUVRE

NETWORK ENABLED CAPABILITY

INTEGRATED LOGISTICS

R&T Projects – Concept Development & Experimentation – Defense Planning

ACHIEVING COHERENT EFFECTS

ACHIEVING DECISION SUPERIORITY

ACHIEVING JOINT DEPLOYMENT & SUSTAINMENT

EFFECTIVE ENGAGEMENT

INFORMATION SUPERIORITY

EXPEDITIONARY OPERATIONS

JOINT MANOEUVRE

NETWORK ENABLED CAPABILITY

INTEGRATED LOGISTICS

R&T Projects – Concept Development & Experimentation – Defense Planning
Ability to execute effects-based operations requires attributes that permit the NATO force to have DECISION SUPERIORITY over an adversary; be able to integrate capabilities to produce COHERENT EFFECTS; and be able to DEPLOY AND SUSTAIN an expeditionary force.
**Five Domains of Transformation**

- **Strategic Concepts, Policy, & Interoperability (SCPI)**
  - Force Interoperability concepts, policy and procedure development and implementation

- **Joint & Combined Future Capabilities Research & Technology (FCRT)**
  - Coordination of NATO research and technology initiatives

- **Joint Experimentation, Exercises & Assessment (JEEA)**
  - Synchronization and evaluation of joint warfighting experimentation, Integration of capabilities, and experiments on tactics, techniques and procedures

- **Joint Education & Training (JET)**
  - Leader development, Control of NATO Education/Training entities, Standardization

- **Defence Planning (DP) - Requirements & Capabilities Planning & Implementation**
  - Identification of required capabilities and implementation of solutions through defence planning
ACT Matrix Organization

STAFF FUNCTIONS

CROSS FUNCTIONS

Information Sup. / NNEC
Effective Engagement / Joint Maneuver
Enhanced CIMIC
Expeditionary Ops
Integrated Logistics

C4
Intel
Logs
SMES

: Common Transformation Picture
ACT Relationships/Links

Allied Commander Transformation
HQ SACT (Norfolk, VA)

Centres of Excellence

US JOINT FORCES COMMAND (JFCOM)
Norfolk, VA

Staff Element Europe
Mons, BE

SACT REP EUROPE (SACTERPEUR)
Brussels, BE

NATIONS (National Liaison Reps – NLRs)

Joint Warfare Centre
Stavanger, NO

Joint Force Training Centre
Bydgoszcz, PL

Joint Analysis & Lessons Learned Centre
Monsanto, PO

Undersea Research Centre
La Spezia, IT

NATO CONSULTATION COMMAND & CONTROL AGENCY (NC3A)
BE and NL

RESEARCH TECHNOLOGY AGENCY
Paris, FR

NATO School
O’Gau, GE

NATO Defence College
Rome, IT

NATO CIS School
Latina, IT

HQ Allied Command Operations (ACO)
Mons, BE

NATO Educational Network
ACT-Industry Relationship

- Draft policy paper being developed
- Examines various options for improving how industry can contribute to the Transformational objectives of ACT and how ACT could benefit from a direct relationship.
- Delivery for the ACT Industry Day (19 Sept 05).
- FCRT is the focal point within ACT for the relationship with industry
Transformation Process

**Transformation Process Products**

- **DEVELOP LONG TERM VISION**
- **DEVELOP STRATEGIC & OPERATIONAL CONCEPTS**
- **IDENTIFY UNFULFILLED CAPABILITY REQUIREMENTS**
- **IDENTIFY POTENTIAL SOLUTIONS THROUGH CD, R&T, CNAD, ETC**
- **ASSESS SOLUTIONS THROUGH STUDIES, EXPERIMENTS, TRIALS ETC**
- **DETERMINE IMPLEMENTATION APPROACH**
- **IMPLEMENT IN NATO & NATIONS**

**Transformational Objectives**

- **FUTURE OPERATIONAL CONTEXT**
- **PRIORITIZED UNFULFILLED SHORT, MEDIUM & LONG TERM REQUIREMENTS**
- **POTENTIAL SOLUTIONS**
- **VALID SOLUTIONS**

**Roadmaps expressed in terms of:**

- Doctrine, Organization, Training, Material, Leadership, Personnel, Facilities, Interoperability
- Force proposals, Training, Capability packages
From Strategic Vision to Strategic and Operational Concepts

- ACT has begun to develop supporting documents, including:
  - Concept for Alliance Future Joint Operations
  - NATO Network Enabling Capability Foundation
  - Concept for Joint Intel Surveillance & Reconnaissance (JISR) in Future Alliance Operations
- Anticipate the development of many lower level and supporting concepts
Ability to produce an effect that users of assets or services need to achieve - a capability will contribute to the achievement of an effect or an operational outcome required to accomplish a military mission.

**Capability Development Cycle**

1. Conduct mission analysis
2. Identify capability needs
3. Derive requirements
4. Conduct gap analysis and fulfill requirements
5. Identify and select solutions
6. Conduct implementation

**Strategic Guidance**

**Enabling Concepts**

**Qualified and Quantified Specification of a Capability Need**

**Strategic Concepts**

**Effects-based Approach**

**Solution Concepts**

**Capability-based Approach**

**Joint Approach**

NATO Defence Planning (plus other processes)
Military Capability

Military concept and Doctrine
Organisation
Training
Materiel
Leadership development
Personnel
Facilities
Interoperability
Future Capabilities R&T (FCRT)

Role of FCRT:
• Analysis of Strategic Concepts
• Capability Requirements Analysis
• R&T gap analysis and coordination
• Scientific programs of work at NC3A & NURC
• Operational Analysis
Transformation Critical Path

Vision, Requirements, Guidance

Identify Potential Solutions & Concepts

Develop concepts & systems

Evaluate prototypes & system concepts

Exploit NATO R&T Capability

Operational Experimentation

Technology Watch

Assess Operational Potential

FEEDBACK

Actionable Recommendations

Discard

TRANSFORMATION PRODUCTS: CPs, FORCE PROPOSALS, DOCTRINE/STANDARDS, TRAINING IMPROVEMENTS, INTEROPERABILITY IMPROVEMENTS
Analysis Collaboration

• Methods for assessing non-traditional operations
  • Stabilisation, Urban, etc

• Effectiveness criteria for NRF (incl NEC)

• Methods for measuring and combining political, military, economic, etc. effects

• Multinational, multi-discipline teams for technology workshops and evaluating experiments
Questions?

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Back up
Long Term Capability Requirements

- LTCR study (in 2003)
  - identified military requirements post 2010 for R&T
- LTCR Review (ongoing):
  - Aligns LTCRs to Transformational Objective Areas
  - Eliminate duplication - rationalize related LTCRs
- Long Term Requirements Study (LTRS)
  - Provide sound analytical basis to derive future Long Term Capability Requirements
  - Beyond current Defence Planning timeline
  - LTRS – long term (~2015-2030), qualitative
  - Integrate ACT’s future concepts development
Common Information Database for the NATO R&T Community

The Problem:

• Tracking ongoing projects addressing future capabilities across NATO research, technology and armaments communities (RTO, NC3A, NC3B, NURC, CNAD etc)

• Achieving current overview of “who is doing what”

• Locating specific expertise

• Linking R&T activities to requirements (eg LTCRs)

• Constantly changing data

• Unequal projects (eg short term vs long term; technology research vs system development etc)

The Solution:

• Linked independent databases using common reference Taxonomy
**Step 1:** Coordinate R&T information for RTO, NURC, NC3A and ACT

Step 2: Incorporate other R&T information

- ACT (LTCRs)
- NC3A
- SPOW
- RTO Activities
- NURC
- SPOW
- ACT - CDE
- C4I - ICTs
- IMS, NSA
- CNAD (MAG, NIAG)
- TTCP, EU, MIC, Nations (JFCOM)
- etc.
Concept Development and Experimentation (CD&E) Plan

**Major Initiatives**

- Experimentation with NATO Effects Based Operations (EBO) process
- Decision Superiority at the Political, Strategic, Operational and Tactical levels
- Key Concept Areas for NRF performance and effectiveness
2005 Experimentation Events/Concepts

ALLIED REACH
Effects Based Planning
NRF C2 Refinement

CRISIS MANAGEMENT EXPERIMENT
Decision
Superiority, EBP, NATO IA Coord

JOINT WARRIOR INTEROPERABILITY DEMONSTRATION
CIE, EBP Tools, LOG Tools

ALLIED WARRIOR
TBD

MNE LOEs
Strategic Context, CIACG

MNE LOEs
ISR, CIS
Date TBD

BATTLE GRIFFIN TIDE, CIE, ONA, LCCIS, ACCIS, CIA-COP

ALLIED ACTION TBD

MNE LOE Knowledge Mgt

ETO Development

CCID DEMO CCID

CBIS DEMO CBIS

MNE LOE EBO Tools, MN IOE

ETO Development

VIKING TIDE, LCCIS, ACCIS

Jan

Apr

Jul

Oct

Dec
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