

Introduction:

As we enter the 21st Century, the threats to NATO are not what they once were and the Alliance is transforming to respond to deal with this new environment. NATO Secretary General Lord Robertson said, "NATO must change radically if it is to be effective" and "Modernize or be marginalized".

On June 19th 2003, the Allied Command Transformation (ACT), as NATO's forcing agent for change, assumed the lead in the effort to build through innovation and collaboration the "right capabilities" in support of the NATO Reaction Force (NRF).

In October 2003 in Colorado Springs, the US Secretary of Defense Donald Rumsfeld stated that the Ministry of Defense Seminar "...highlighted the need for that Response Force to have capabilities that are agile, swift and lethal, so that this wonderful alliance of ours can respond quickly and effectively to rapidly unfolding crises".

In 2003, ACT endorsed the Transformation of Information Technology towards Information Superiority, Decision Superiority and Execution Superiority (TIDE) initiative. By capitalizing on NATO Network Enabled Capability (NNEC) developments, reusing existing capabilities and by focusing on human cognitive processes, TIDE aims to quickly provide powerful capabilities for rapid reaction forces in multi-dimensional effects-based operations.

Just-in-time technology insertion is used as a force multiplier by the TIDE initiative to maximize the operational effectiveness of existing and emerging operational information system capabilities.



**TIDE projects
are sponsored and coordinated by:**

Allied Command Transformation

**C4I Division
Technology Coordination Branch (TCB)**



7857 Blandy Road, Suite 100
Norfolk, VA 23551-2490
<http://tide.act.nato.int>
Help: 757.747.3868

TIDE

Transforming technology towards
Information,
Decision, and
Execution superiority

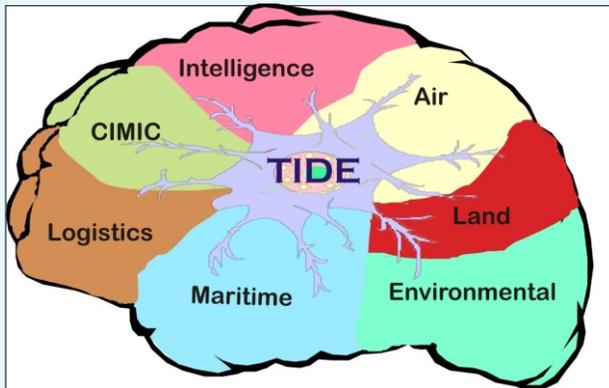


Breaking Down Stovepipe Barriers

Enabling NATO and its partners
through reuse, collaboration and
experimentation to operate in
a networked environment.

Ambitions:

- Collect data in real time through intelligence, surveillance and reconnaissance activities.
- Transform raw data into human understandable information in real time enhancing Information Superiority.
- Deliver the right information in the right format to the right person at the right place and the right time.
- Use cognitive science principles to allow humans to more rapidly gain knowledge and understanding.
- Deploy support tools to all command levels to ensure Decision Superiority.
- Support mission execution and monitoring, leading to Execution Superiority.

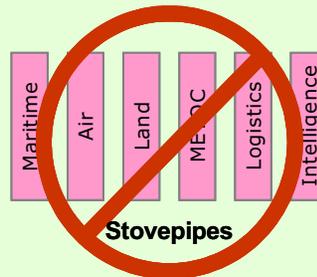


Just as different areas of the brain are capable of high level functions, such as word recognition or judgement, it is when all of these areas work together as a whole that the human brain achieves its remarkable level of brilliance.

Approach:

In today's complex heterogeneous world, military operations cover a wide variety of missions, making it difficult to pre-design and pre-integrate Information Technology (IT) solutions. Flexible and innovative IT capabilities are required to counter any potential threat in ever-changing global environments.

In the past, the Alliance and its member nations have developed numerous capabilities for particular communities of interest (e.g. maritime, air, ground, logistics and intelligence). Most of these capabilities are inherently powerful but often fail to integrate horizontally with other functional services to provide dominant and effective combined and joint capabilities.



Furthermore, today's IT solutions do not necessarily dovetail with human processes such as knowledge gathering and decision making. It is increasingly essential to improve the interface between human and automated processes to maximize our abilities and to facilitate other transformational initiatives.

TIDE seeks to break down current stovepipe barriers and focus on rapid reaction forces in a Joint and Combined political, military and civilian environment. Horizontal integration between functional services and vertical integration with National/Non-Governmental organizations are essential.

Strategies:



Collaboration at the TIDE Sprint, October 2005

Create a cooperative climate between stakeholders (“the sandbox”) for horizontal and vertical integration of functional services breaking down traditional stovepipe barriers.

Assist in developing a network enabled architecture facilitating global deployment, alliance/coalition interoperability and plug & play reconfiguration.

Rapidly improve operational information system capabilities like COP and collaboration through spiral development, experimentation and technology insertion.

Combined Operational Picture (COP)



Improve integration of automated and human processes through capability component harmonization and cognitive science experimentation.

Cognitive Science Eyetracker Experiments

