Aerospace C2ISR
"Spiral Development"

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Outline

- Scope
- Current Status
- Process / Participants
- Roles & Responsibilities
- Improvements
- Challenges
C2ISR Innovation Totals

<table>
<thead>
<tr>
<th>Spiral Development IPT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Management</td>
<td>10</td>
</tr>
<tr>
<td>Joint Aerospace Applications</td>
<td>11</td>
</tr>
<tr>
<td>Agile Combat Support</td>
<td>15</td>
</tr>
<tr>
<td>Sensors &amp; Platforms</td>
<td>18</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>9</td>
</tr>
<tr>
<td>Warrior Ops</td>
<td>13</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>76</strong></td>
</tr>
</tbody>
</table>

* Includes AFEO, AFRL, UAV BL
* Not included: C2 BL, TENCAP, R&D, University, other

Transition Success Requires
Prioritization, Teamwork, and Commitment

Current Status

- JEFX
- Research Labs
- Industry
- Battlelabs

Current Practice

Warfighter
"Current" and "Proposed" Processes

**Current**
- Ideas / Opportunities
- Opportunity Down-select
- Assessment
- Transition Decision
- Determine Sponsor
- Determine Schedule, Money, etc.
- Transition

**Proposed**
- Ideas / Opportunities
- Opportunity Down-select
- Assessment
- Transition Decision
- Transition

Planning & Execution
- Identification
- Mature / Assess
- Transition

**Innovation Planning**
- Executive Summary
- Concept of Use
- Market Analysis
- Business Case
- Resource Estimation
- Assessment Methodology

**Transition Planning**
- Innovation Plan
- COT&E Plan
- TTPs / Assumptions
- Funding Plan / Strategy
- Resource Plan / Summary
- Requirement Strategy
- Transition Plan Briefing

**Transition Execution**
- Transition Plan
- Requirement Documents
- Contracts Strategy
- Implement Strategy
- Monitor / Report Progress
Innovation & Transition Process

"One Increment"

Innovation Execution

ASSESSMENT

Experiments

Test Programs, AID, ACTD, etc.

ASSISTANCE

Military

Yes
done

Transition

Nomination

Oversight

Acquisition

Acquisition

Yes

Technical

(Standards)

Ref: C21SR Transition Guide. DRAFT. 5 Jan 00; ACPISRCICT; Imckee@mitre.org

SDIPT Composition

- "Core" SDIPT
- Standing Membership
- Oversight
- Working Group(s)
- Innovation-based Membership
- Transition Planning

Tester

User / Sponsor

Developer

Headquarters

Firder

Innovator

Trainer

Ref: CRIS Transition Guide. DRAFT. 1 Jan 01; ACISR/GOGT; Imckee@mitre.org
Roles & Responsibilities

I. Opportunity
- Opportunity Assessment
- Opportunity Funding

II. Identification
- Identification for Innovation Organization

III. Mature / Assess
- Spiral Development IPT
  - User / Sponsor
  - Champion
  - Stakeholder Assessment

IV. Transition
- Innovation Organization
- Sponsor

Improvements
(Invariants / Variants)

- Standardized Process
- Concurrent development of artifacts
  - Level of detail increased as project evolves / matures
- Early stakeholder involvement
- Stakeholder commitment increases as process continues
  - Money and personnel
- Increased linkage to stakeholder objectives
- Emphasis on "flexible" artifacts
  - Capability based vs System based
- Balanced information for decision makers
- Prepared to execute upon decision
SDIPT Status

- Infrastructure - IOC
- Agile Combat Support - IOC
- Joint Aerospace Applications - IOC
- Warrior Ops - IOC
- Information Management - TBD
- Sensors & Platforms - TBD

Challenge Areas

- Numerous spiral development "candidates"
  - Quantify "capability" vs "profit" (capability based trade-offs)
  - Prioritization of efforts
  - "Not "Weapons Control" software / systems
- COTS / GOTS / Other integration
  - Complexity increased
  - Influence decreased
- AF / Joint / Coalition interoperability
- Acquisition / Funding
- Rapidly evolving requirements
- Training
- Balance between "push" vs "pull"
- Architectures
Questions