

**The Applied Meteorology Unit as a Model
for Successfully Transitioning Research
to Operations**

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Overview

- What's the AMU?
- Technology Transition – Why is it so hard?
 - Technical factors
 - Human factors
- Technology Transition – How we do it
 - Functional elements
 - Management methods
 - Processes
- Our track record – These things work!

AMU “Five Ws”

- Who: NASA, USAF, NWS joint venture, staffed by ENSCO, Inc.
- What: Technology transition
- When: Since 1991
- Where: Cape Canaveral Air Force Station
- Why: Improve weather support to spaceport operations



Technology Transition: What's the Big Deal?

Part I. Technical Factors

Technology rarely works “straight out of the box” in a specific operational environment

Examples:

- Data integration
- Product dissemination
- Performance in the local environment



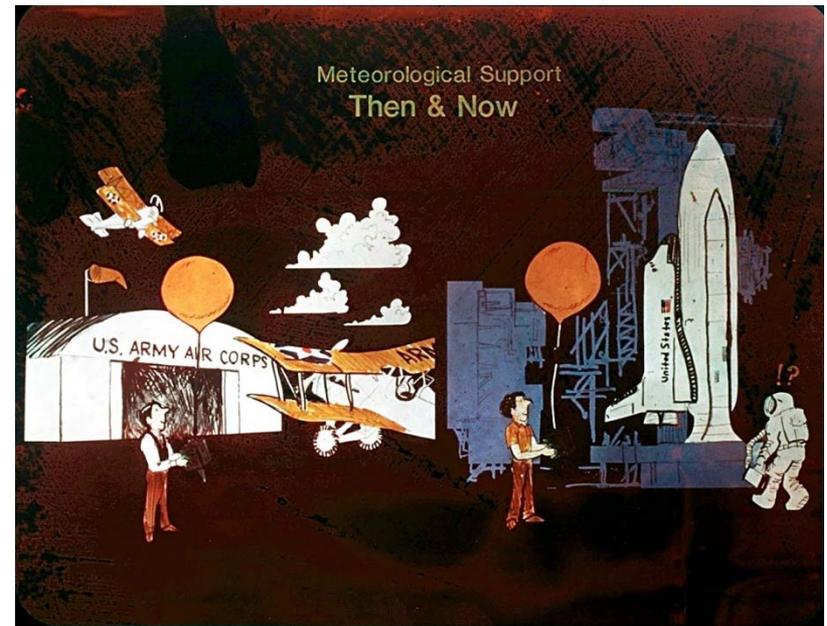
Technology Transition: What's the Big Deal?

Part II. Human Factors

Technology will not be effective if it remains unused or seriously underused.

Some causes:

- Lack of user buy-in
 - Unfamiliar
 - No perceived benefit
 - “Not invented here”
- Difficult to use
- *Appears* unreliable



Technology Transition Functional Elements

- Evaluation
- Development of concept of operations
- Tailoring
- Installation
- Acceptance testing
- Training



Technology Transition Management Elements

- Address a real customer requirement
- Meet that requirement
- Have adequate resources
- Secure customer buy-in



Technology Transition Management Methods

- **Customer-driven** tasking
- **Independent** of operations
- Proper level & mix of **skills**
- **Customer involvement** in execution
- Attention to **customer relations**
- **Co-location** with operational facility



AMU Technology Transition Processes

- Tasking by customer consensus
- Customer review of task plans
- Detailed quarterly reports to customers
- Milestone/decision-point customer teleconferences
- Pre-release product review by customers
- Post-release product evaluation by customers

AMU Results

- Products used operationally: Example <http://www.srh.noaa.gov/mlb/> (click on Real-Time Local Weather)
- National recognition for management practices
- National recognition for technical expertise
- After more than a decade, we're still here!

Summary

- Tech transition is much more complex than developing a new system and “throwing it over the wall” to the operators
- There are tested techniques for doing it successfully
- When applied, these techniques lead to a successful tech transition experience for the developer, the user and the transitioner.