

# H-1 Weapons System Support Activity (WSSA)



## Observations from Just Beyond TSP: *One Implementation*

Presenter:

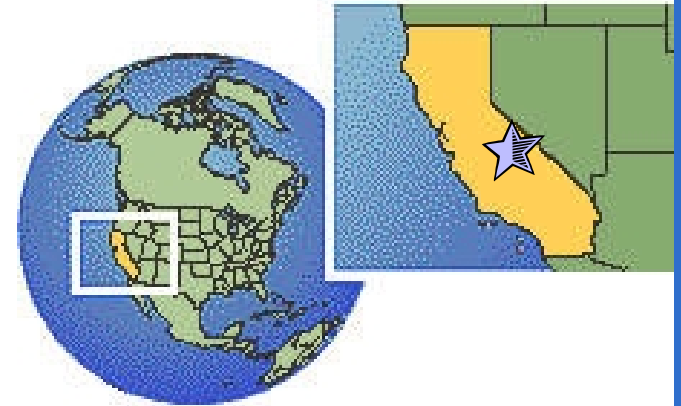
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# Context

The H-1 WSSA at China Lake, California develops updates to the AH-1W



Cobra 3 System Configuration Set (SCS) is the current update being developed

Team consists of co-located government/contractor, team using a common process



# Cobra 3 Team

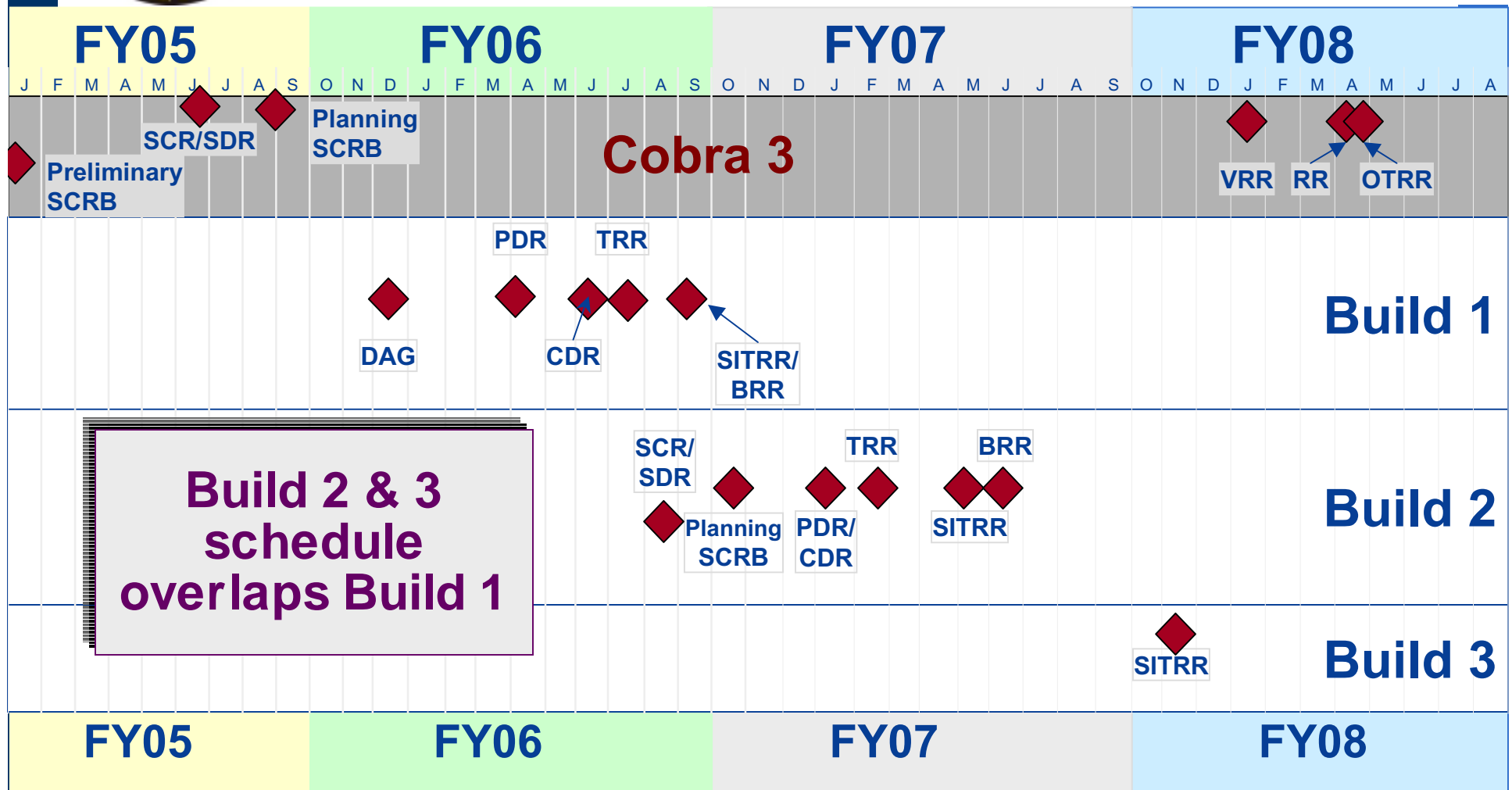
- § 14 team members
- § 6 software engineers
  - 2 AH-1W experience
  - 3 other platform expertise
  - 2 industry background
- § New project manager
- § New role assignments



- § TSP background
  - 1 completed project
  - 1 in-work project
  - TSP standard for in-house developments
  - 2 SW engineers with prior TSP
  - PSP training provided for all SW engineers
  - Internal TSP Facilitator
  - Same TSP coach
  - Manager TSP Team training obtained



# Cobra 3 Project Summary





# Cobra 3 TSP Approach



- § Linked to organizational goals
- § Milestone timeline prior to launch
- § Launch for each Build
- § Training provided as available
- § Weekly meetings
- § Use Process Dashboard

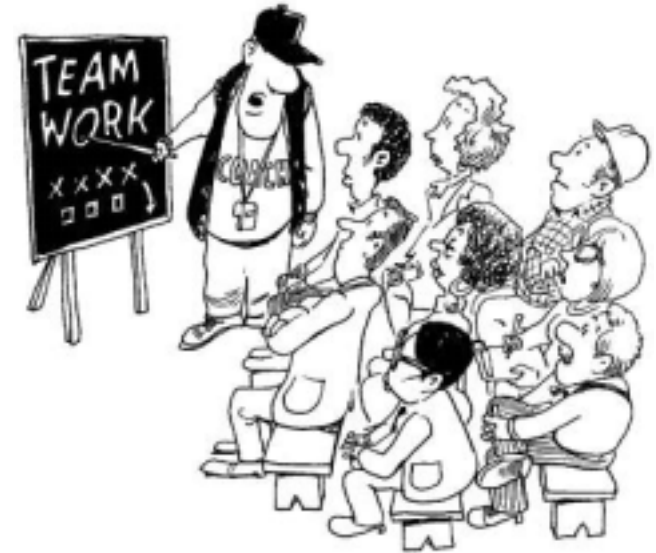
*Recognize - TSP ignores team dynamics*





# My Expectations

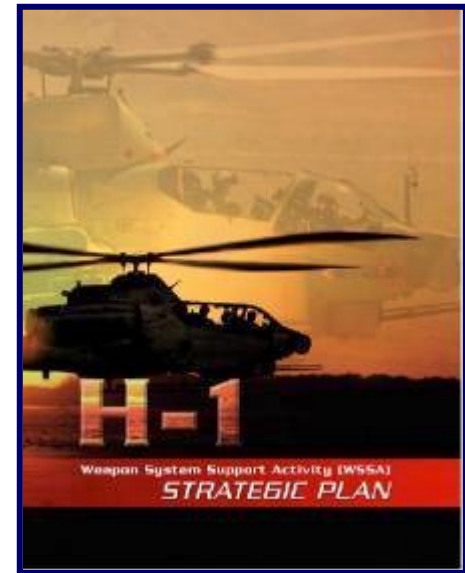
- § Easy visibility into product status
- § Clear points of contact & responsibilities
- § Clear information on resource & product issues
- § Consistent, timely, & meaningful metrics
- § SW input based on & supported by metrics
- § Metrics aiding effective project decisions
- § Data for use at milestone reviews
- § Cohesive SW team





# Build 1 Launch Topics

- § Org. Expectations
- § Block Manager Expectations
- § Customer vs. Sponsor Definition
- § Importance to Fleet
- § Linkage to Strategic Plan
- § Funding & Requirements Process
- § Approved Requirements
- § Contract
- § Requirement/Tasking Allocation
- § Schedule
- § Resource considerations

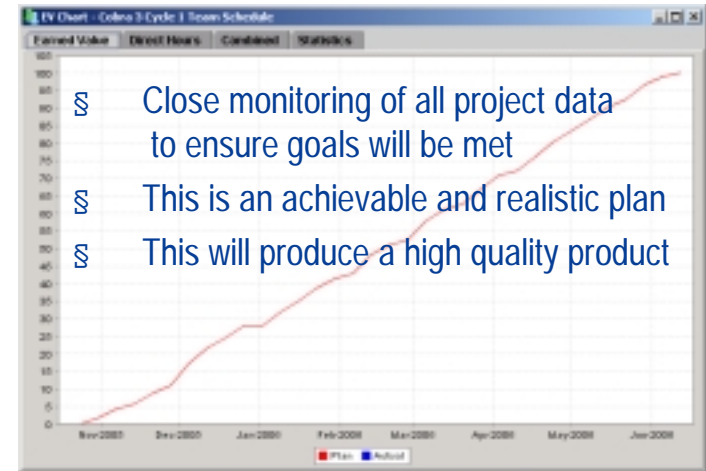


**Launch  
Oct 2005**



# Build 1 Launch Output

- § Team member roles
- § Launch meeting summary
- § Management goals & needs
- § Conclusion



## § Launch Products

- Documented team goals
- Team-member role assignments
- Measurable quality plan
- Overall development strategy
- Detailed team plan (for Build 1)
- Overall plan (for Build 1, Build 2 & Build 3)
- Individual plans
- Software risk assessment

**Are we in sync?**





# Block Manager Observations

- § Builds are separate entities
- § Did not benefit from “**Forming, Storming, Norming, Performing**”
- § Ownership limited to “Build 1 Team”
- § TSP does not address team dynamics
  - Assumes mature team
  - Individual preferences
  - Culture & experience
  - Personnel performance
- § Metric gathering & reporting hurdles
- § SW engineers held to different standard
- § Standard process does not include Block Manager



Observation Is a Means  
of Data Collection



# Block Manager Observations

- § Tasking allocated piece meal
- § Inspection process refinements needed
- § Metrics not driving sw engineer decisions
- § Coding is “real-work”
- § Anything outside TSP plan “not real work”
- § SW engineers do not trust metrics
- § Team believed I had more visibility into status
- § We’ll tell you when we’re ready
- § TSP plan not owned by SW engineers
- § Re-plan thresholds not used



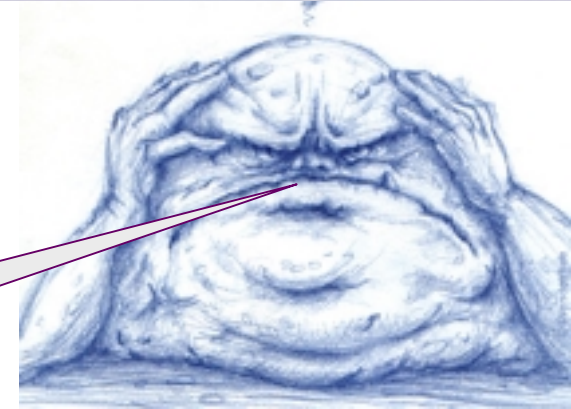
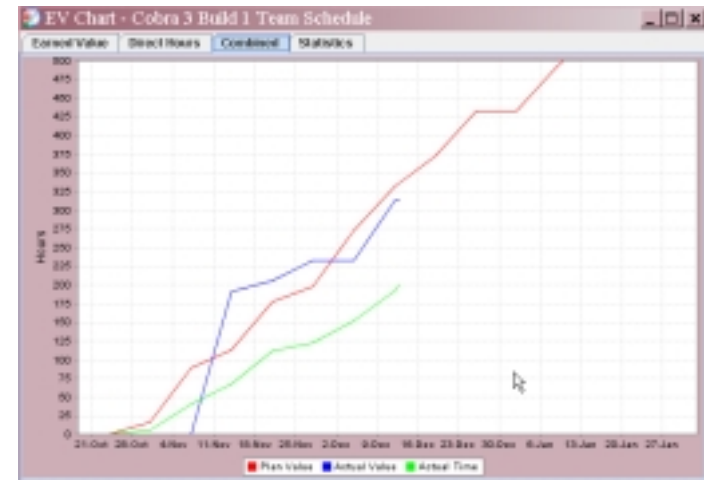


# Block Manager Observations

TSP plan too high-level for effective project management

- Task/Product Allocation
- Detailed plan invisible
- Support of milestone review dates
- Resource Leveling

What products will not be ready if milestone is held on XXX?



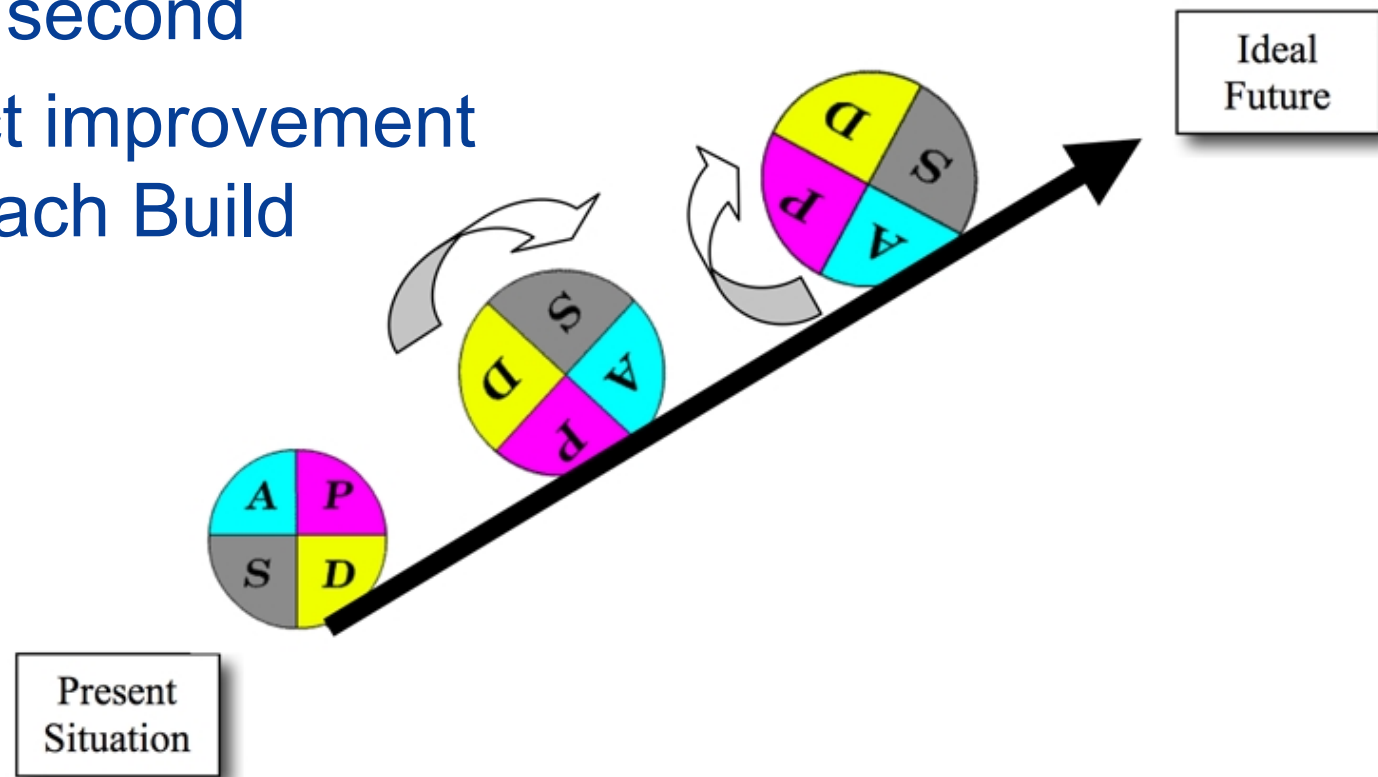
**Frustration**

**SW engineers  
Block Manager  
Cobra 3 Team**



# Incremental Improvement

- § No process is perfect the first time  
... or second
- § Expect improvement  
with each Build





# Refinements



- § Recognized frustration
- § E-mail questions
- § Obtained guidance from TSP coach, Block Manager, facilitator, team members & TSP roles
- § Changed focus of weekly TSP meetings
- § Tweaked weekly Cobra 3 project meetings
- § Recommend re-plan
- § Specified products due to support milestones
- § Individual product status updates





# Build 3 Launch Topics

## *Additions from Build 1*

- § Changes to requirements
- § Lurking requirements
- § Detail on TSP needs
- § Build 3:
  - Sequence of major tasks
  - Schedule
  - Required personnel resources
  - Risks
  - Ramp-up time
- § Team interpretation of input

**No milestone reviews for Build 3 activities—TSP is only insight in activities, schedule, progress**

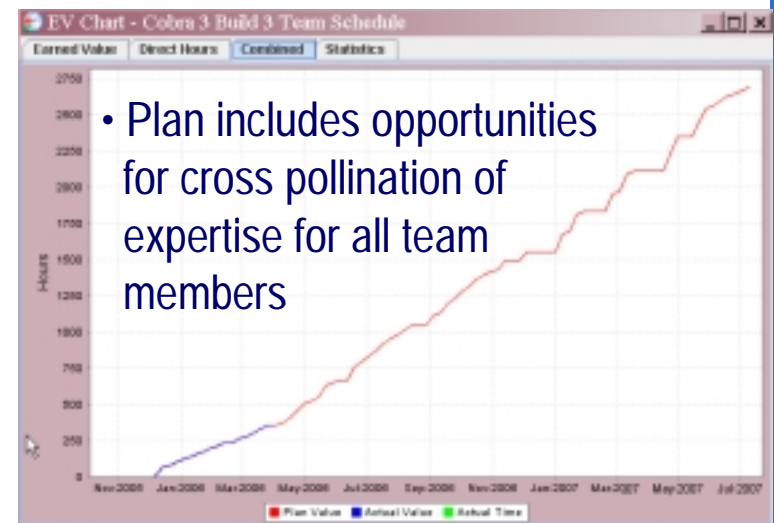
**Launch  
Mar 2006**



# Build 3 Launch Output

## *Additions from Build 1*

- § Credit for work completed prior to launch
- § Overall schedule, work years & estimated completion date
- § Team member build tasking
- § Team goals
- § Execution analysis & strategy
- § Critical dependencies
- § Key task effort

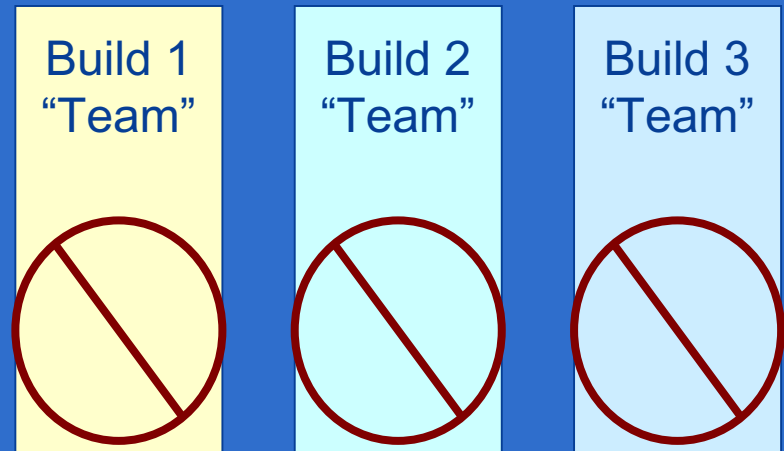




# Block Manager Observations

- § Separate Build teams
- § Varying levels of Build ownership
- § Data not sufficient for decision-making
- § Product & timeline insight
  - Are the right products in the plan?
  - Is product ready?
  - When will a product be ready?

*Not a COHESIVE  
SW ENGINEERING TEAM –  
Stovepipes for each Build*





# Block Manager Observations

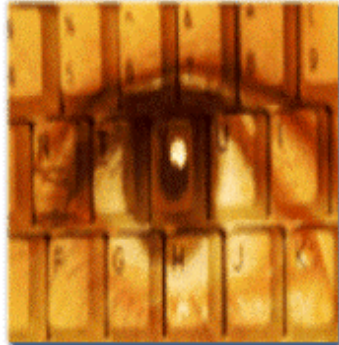
- § TSP data not used to answer questions on schedule, product status, task allocation, etc.
- § Nature is to work a complete change from start to finish
- § Reliance on LOC estimates does not encourage team members to participate in tasking not related to coding
- § Launch planning & timing can be improved
- § TSP structure communication & coordination problematic
  - Use of a technical “Lead” for expertise & communicate to the Block Manager can lead to a “gate-keeper”
  - Tasking & random pieces of data supplied to the Block Manager without a clear understanding of the context



# Block Manager Observations

- § Metrics remain insufficient
- § Definition of “self-directed team” can be misleading
- § TSP group views me as an outsider or boss, not an integral part of the effort
- § Lack of clear tasking for those outside TSP whose assistance is required
- § TSP Support role may encourage over-emphasize, or lead someone to attempt to control the “support” needs of the project
- § Not sure how “customer interface role” implemented
- § Overlook “project management” role & responsibility





# Block Manager Observations

*Feedback regarding*

- § Concern for overlapping Builds
- § Hold launch when ready to begin work
- § Ownership limited to assigned tasks
- § Launch could be conducted without SW engineers
- § Questions redundant with TSP meetings
- § Perceived frustration with SW engineers
- § Difficulty juggling requirements
- § Need clarity on milestone products
- § Need agreement on key definitions
- § Micromanagement
- § Milestones were stopping work

My view:  
Implementation  
not meeting needs  
...not about  
the team members



# No Silver Bullet

*May appear as  
Black Magic  
from the outside*



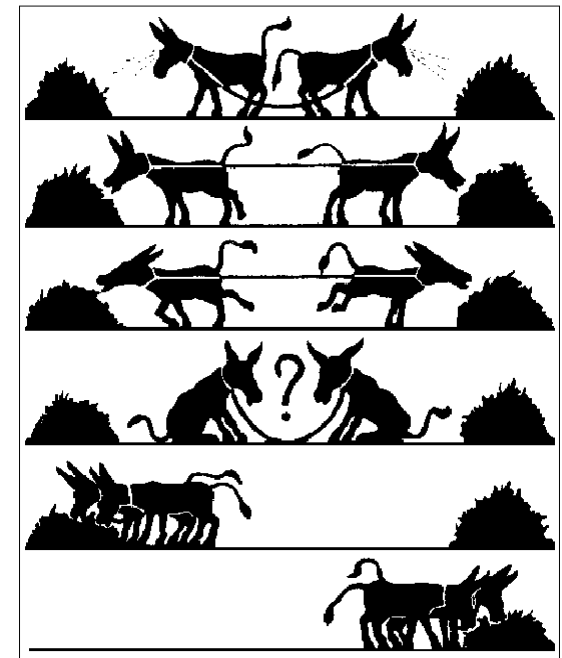
No tool or process is the silver bullet



# Refinements

- § Expanded discussion to include organizational consultant, TSP experts
- § Tweaked weekly TSP meetings
- § Inserting tasks for milestone prep into plan
- § Associated milestone products with need by dates
- § Modified TSP process application
- § Detail at launch
- § Teaming activities

## COLLABORATION





# Build 2 Launch

*Additions from Build 1 & 3*

**Launch  
Jun 2006**

## § Specific Block Manager expectations:

- Planned tasking vice assigned incrementally or piece meal
- Commitments are shared – TSP Plans are owned by SW Engineers
- Concrete list of SW Engineering products
- Block Manager expects status of products – metrics alone not providing entire picture
- If a milestone date does not look achievable, provide concrete data to support SW Engineer recommendation
- Build re-plans or re-launch activities into schedule – then do them
- Parcel tasking to meet milestone review requirements
- Include milestone review checkpoints in TSP plans

## § Milestone product requirements & entry/exit criteria

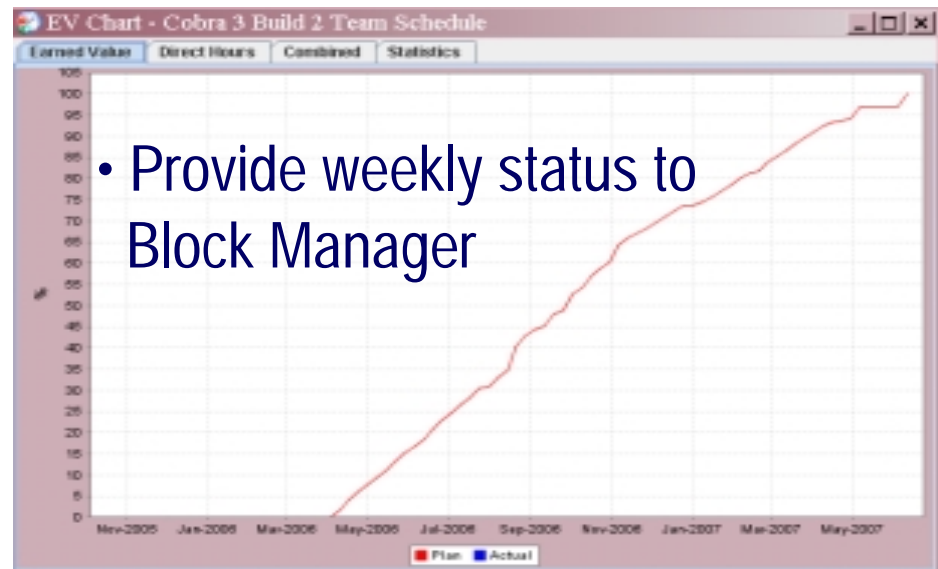


# Build 2 Launch Output

*Additions from Build 1 & 3*

More detail:

- § Expansion on management goals
- § Support needs (who & for what)
- § Late/change requirement impacts







# Block Manager's View Today

*1 into 3 year schedule*

- § Implementation key
- § Effective coach critical
- § Launches conducted to satisfy Block Manager
- § SW engineers view TSP as additional burden
- § Cohesive team still not realized
- § Metrics not effective decision aid



*Unrealized  
Potential*



# TSP Implementation

- § Other factors always exist:
  - Block Manager preferences
  - Clear SW engineer role
  - Process changes
  - Role changes
- § Consider including Block Manager in TSP meetings
- § Possibly expand TSP to cover all project aspects
- § Have no fear in modifying TSP to match needs



Committed to making it better



# Success Definition

- § 5 milestones completed in a single year
- § Finding & removing defects in phase
- § Effective management of requirements creep
- § Promised functionality
- § Functionality pulled into earlier Build
- § On Schedule for project completion

**It's about results  
matching expectations**

