

MORS FORCE STRUCTURE SPECIAL MEETING WG 2 PRESENTATION

Sustaining Recruiting Resources within a Band of Excellence

(Army Studies Program Proposal #USAAC10246)

TASC Heritage Conference Center, Chantilly, VA
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Center for Accessions Research

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Agenda

- ▶ Problem Definition
- ▶ Our Approach
- ▶ Model Demonstration

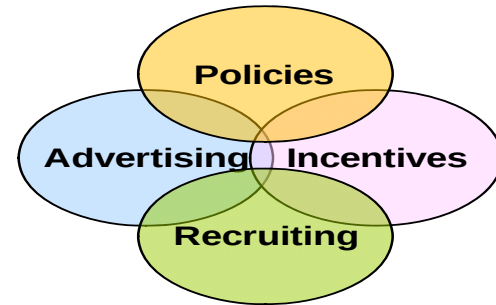


“From First Handshake to First Unit Assigned”

Army Accessions Process

- ▶ Recruiting for the Army's officer, warrant officer, and enlisted forces and transforming volunteers into soldiers and leaders to meet the human resource needs of the Army





What is the underlying problem?

- ▶ In order to sustain the all-volunteer force, the Army must recruit large numbers of high-quality youth each year, regardless of the recruiting environment (**Drivers**)
- ▶ The Army has several resources and policies available (**Levers**) to meet recruiting market challenges, but our current resource allocation tools are generally stove-piped, do not include all relevant inputs, address only the near-term horizon, and do not address 2nd and 3rd order interaction effects
- ▶ Recruiting success historically increases pressure to cut future recruiting resources, without adequate insights into the long-term impacts of these cuts (“Boom and Bust” cycle)

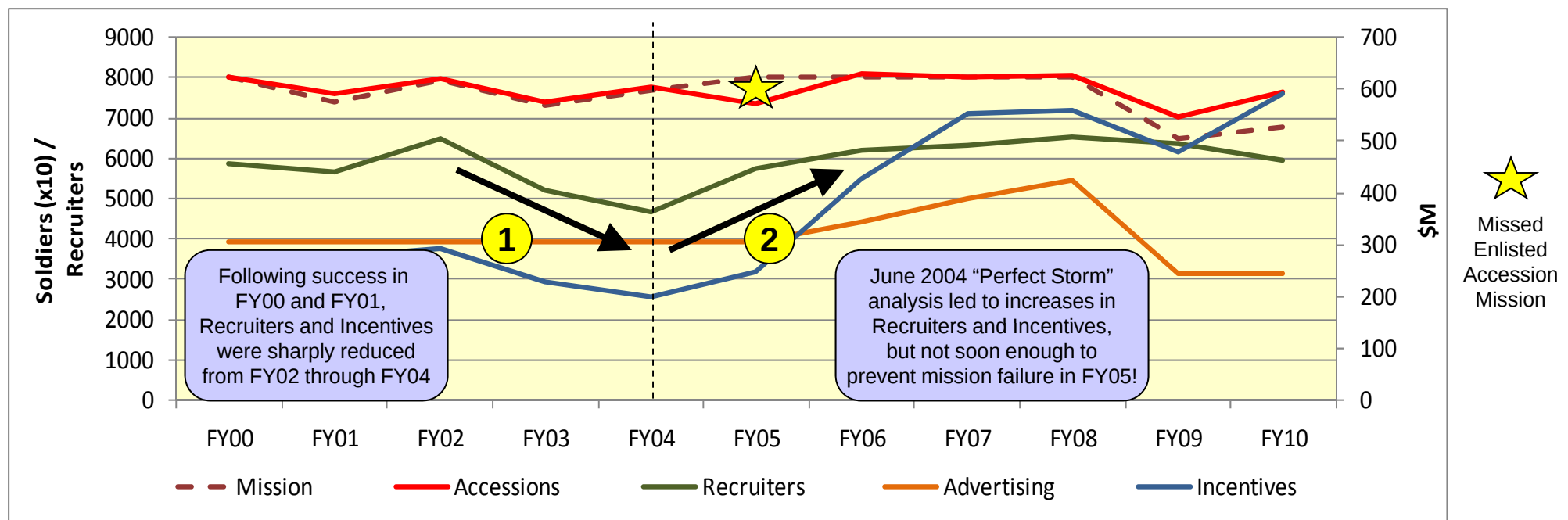
“The key to continued success is the ability to provide the **right level and mix of recruiting resources** to meet recruiting market challenges **promptly.**”

*Source: OSD researchers Bicksler and Nolan,
“Recruiting an All-Volunteer Force: The Need for Sustained Investment in Recruiting Resources”*



A “Boom and Bust” resourcing strategy weakens the recruiting infrastructure

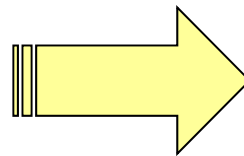
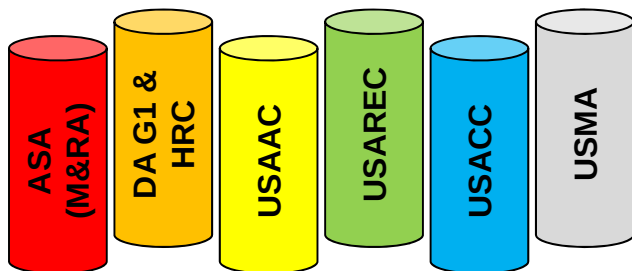
- ▶ Large resource reductions typically result in reduced “awareness” capital and propensity levels, which are expensive to reverse
- ▶ The response time to add resources is slow and resources take time to yield results, which can result in “too little, too late”



What is needed?

- ▶ The Army needs an analytical tool that supports the **integrated** trade-off analysis necessary to provide informed, synchronized, and defensible resource allocation recommendations
 - Identify "Steady-State" resource levels that support an Accession "Band of Excellence"
 - Conduct Contingency Analyses to assess the impact of changes in the Levers and Drivers
 - Anticipate problems soon enough to take preventative actions
 - Take a long-term perspective in determining resource and policy decisions
 - Predict Return on Investment (ROI) for proposed policies and programs
 - Facilitate training of leaders and analysts on the Accessions Process

"Stove-pipe" Construct



"Enterprise" Construct

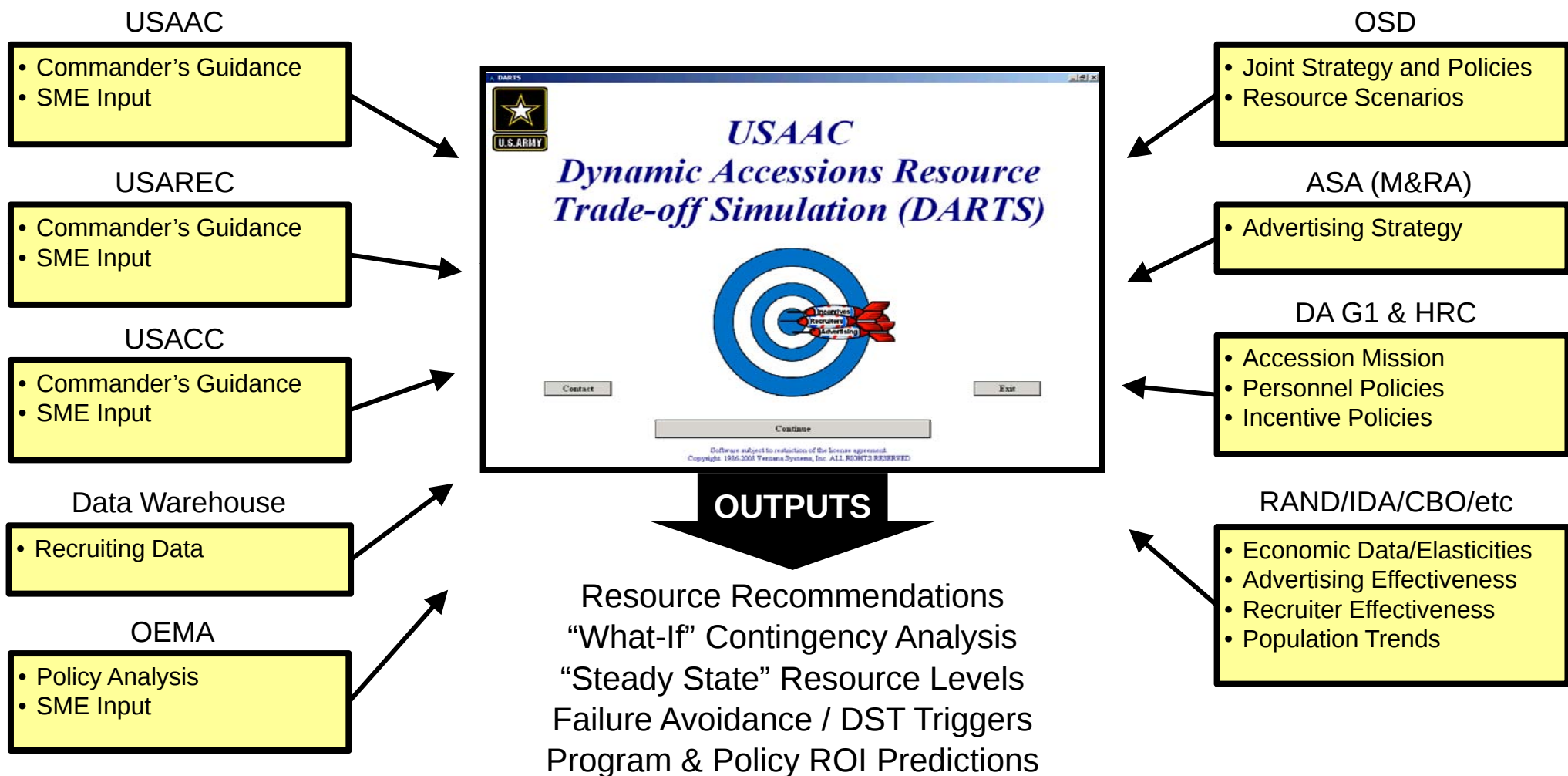


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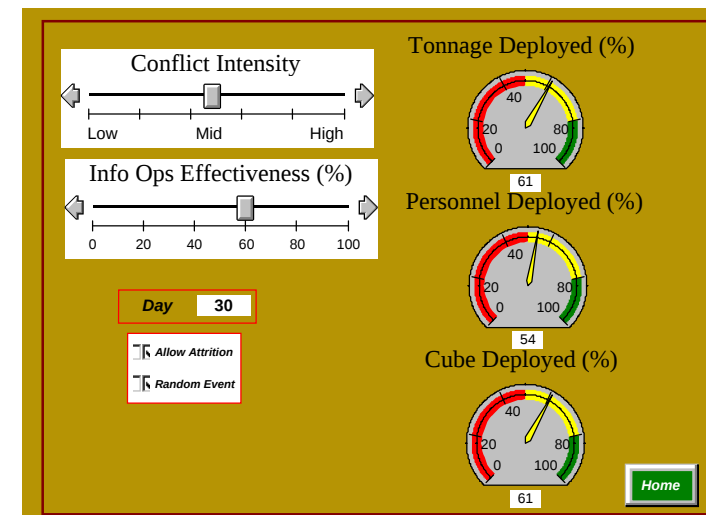
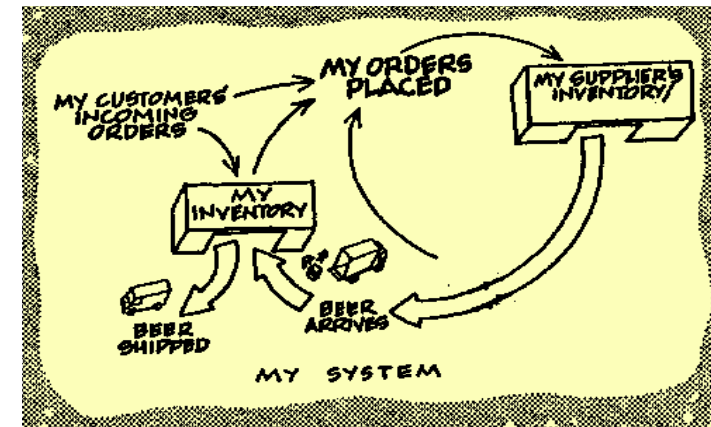


Develop an **integrated** System Dynamics model of the Accession Process

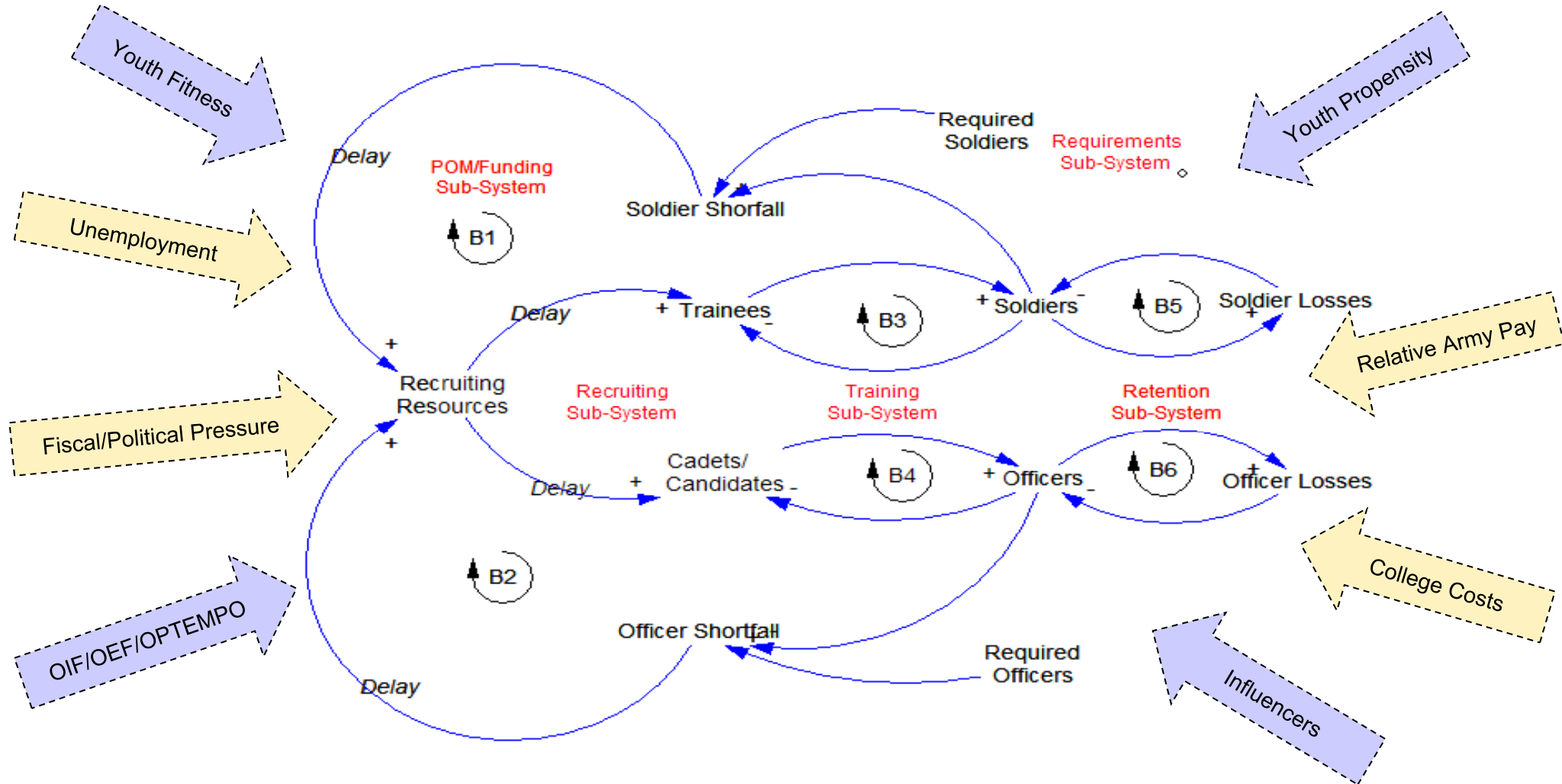


Why choose System Dynamics?

- ▶ SD provides valuable insights into the behavior of complex “Systems of Systems”
 - Illuminates system physics and levers of change
 - Highlights interactions between system entities
- ▶ SD shows the impact of policy and environmental changes to the system over time
 - Simulates alternate futures quickly
 - Provides a platform for conducting Trade-Off Analyses and Contingency or “What-if” Analyses
- ▶ SD provides a catalyst for learning
 - Provides a “Management Flight Simulator” to improve understanding of the system’s dynamics
 - Fosters a shared view of the enterprise among stakeholders

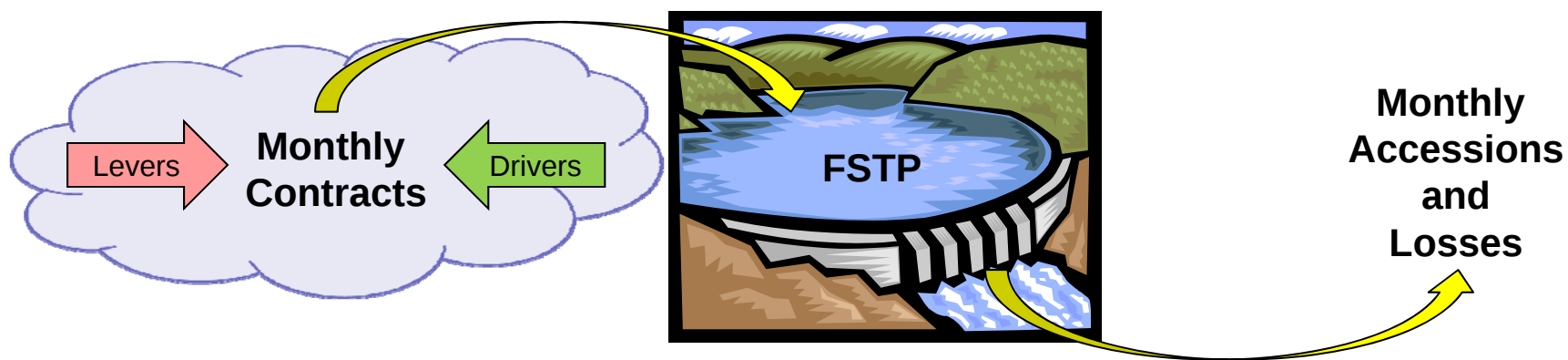


The Accessions Process is a complex “System of Systems” within a dynamic environment...perfect for System Dynamics!



Supply and Demand aren't synchronized...the FSTP is used to bridge this gap

- ▶ The Future Soldier Training Program (FSTP) is a “holding pool” of contracted individuals awaiting Initial Entry Training (IET)
 - Inputs: Individuals who sign an enlistment contract (Future Soldiers)
 - Outputs: Future Soldiers who report to IET (Accessions) or attrit from the FSTP
- ▶ The size of the FSTP is a good barometer of accession mission success and risk
 - Too small: Less flexibility to “pull forward” Future Soldiers to cover current contract shortfalls
 - Too large: Increased FSTP losses and management burden
- ▶ The current USAAC goal is to start each FY with 35 percent of the mission in the FSTP



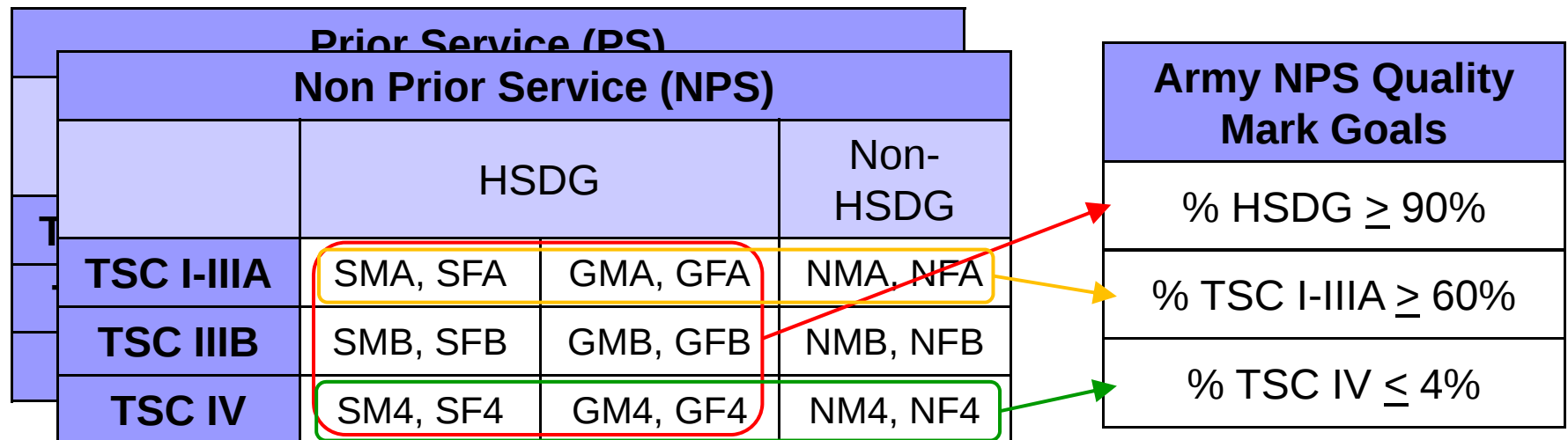
The “Center of Gravity” of the model predicts this Supply (monthly enlistment contracts written), given projected Levers and Drivers

- ▶ The prediction equation coefficients were derived from an analysis of historical data, using a switching model to account for both supply-limited and demand-limited recruiting regimes
 - Drivers: Youth Unemployment, Youth Propensity, Youth Population, Recruiting Regime, etc.
 - Levers: Number of Recruiters, Incentive Spending, Advertising Spending, Monthly Contract Mission, etc.
 - Lagged variables are used for the Levers that exhibit a delay between implementation and results
- ▶ All major Levers and Drivers are used as inputs
 - PRO: The model is responsive to a wide range of policy or environmental changes
 - CON: Some model inputs are much less significant than others
- ▶ The predicted monthly contracts then enter a highly-detailed model of the accession process, which provides insights into overall system performance as a function of defined policies, current processes, and the anticipated recruiting environment

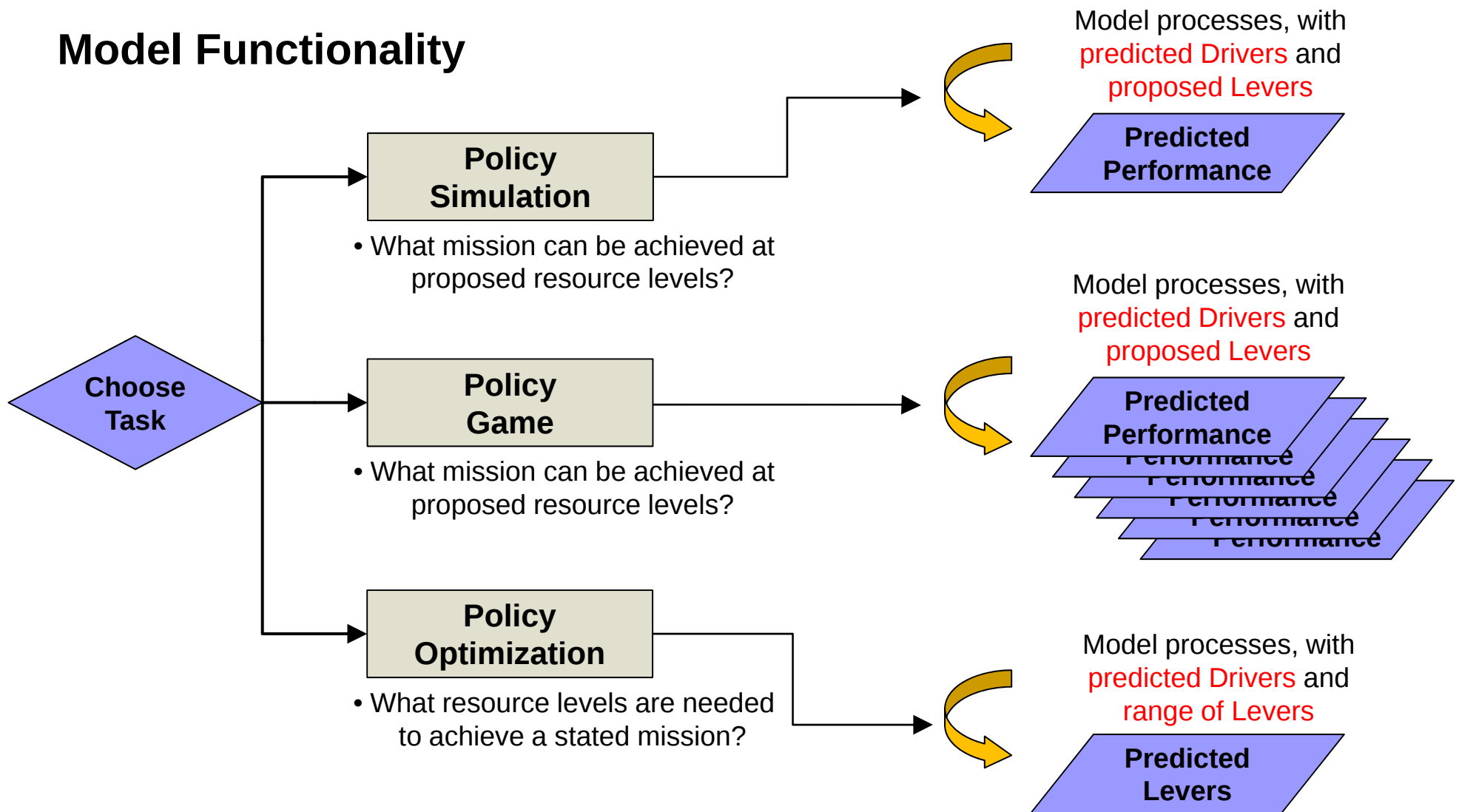


Subscript scheme enables robust modeling of Soldier performance and Quality Mark analysis

- ▶ Model identifies **36** separate subpopulations
 - Gender: **Male**, **Female**
 - Test Score Category: **TSC I-III A**, **IIIB**, **IV**, **V**
 - Education level: **Senior**, **HSDG**, **Non-HSDG**
 - Prior Service Status: **NPS**, **PS**
 - Component: **RA**, USAR, ARNG



Model Functionality

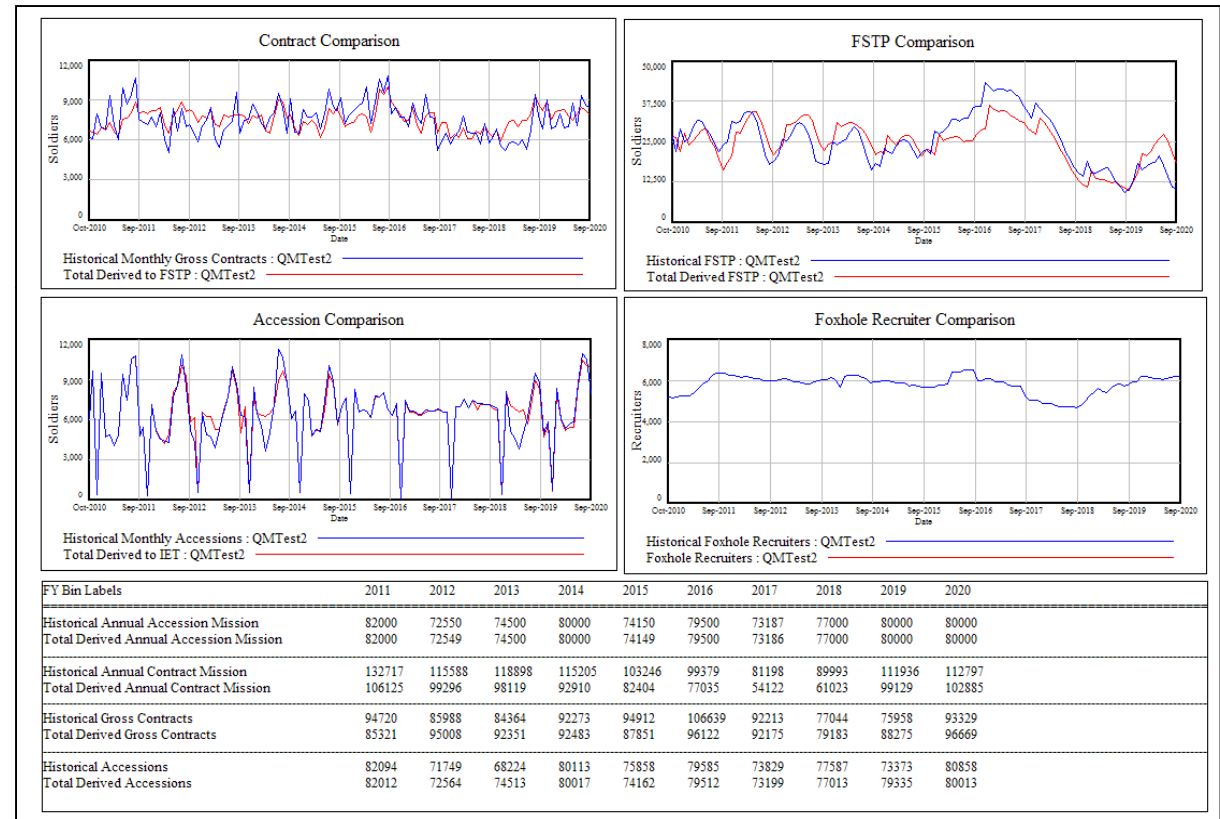
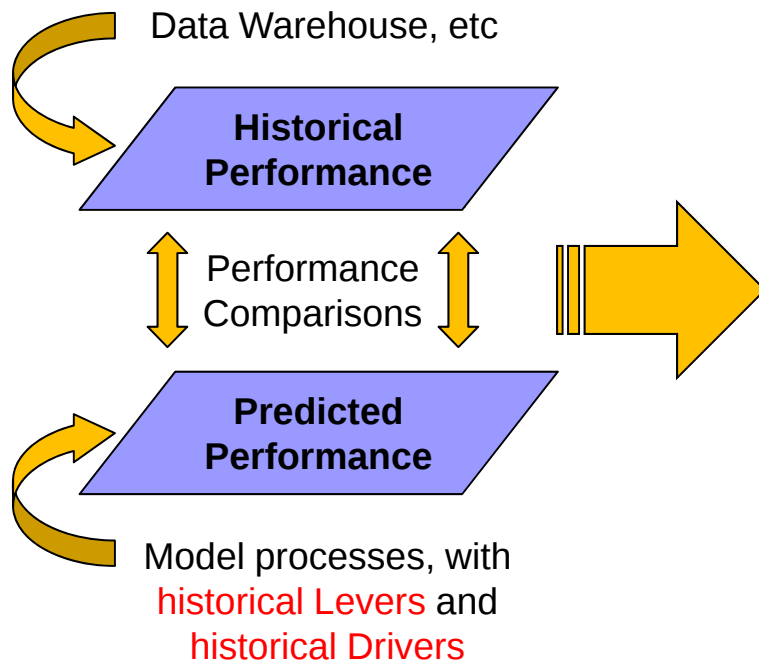


Model Validation and Verification

- ▶ Verification (“Did we build the thing right?”)
 - USAAC SMEs are reviewing our data repository and assumptions
 - USAAC SMEs are looking “under the hood” to verify that we created a reasonable representation of actual system processes
 - Multiple modelers are inspecting the coding and syntax to verify correctness, completeness, and consistency
- ▶ Validation (“Did we build the right thing?”)
 - USAAC SMEs are comparing model and system behaviors to judge whether the model results are reasonable
 - USAAC SMEs are conducting Beta Testing of the Spiral 1 Model to identify defects, deficiencies, or modification recommendations
 - USAAC SMEs are comparing outputs from the system and the model and examining the differences between them



Model Validation and Verification

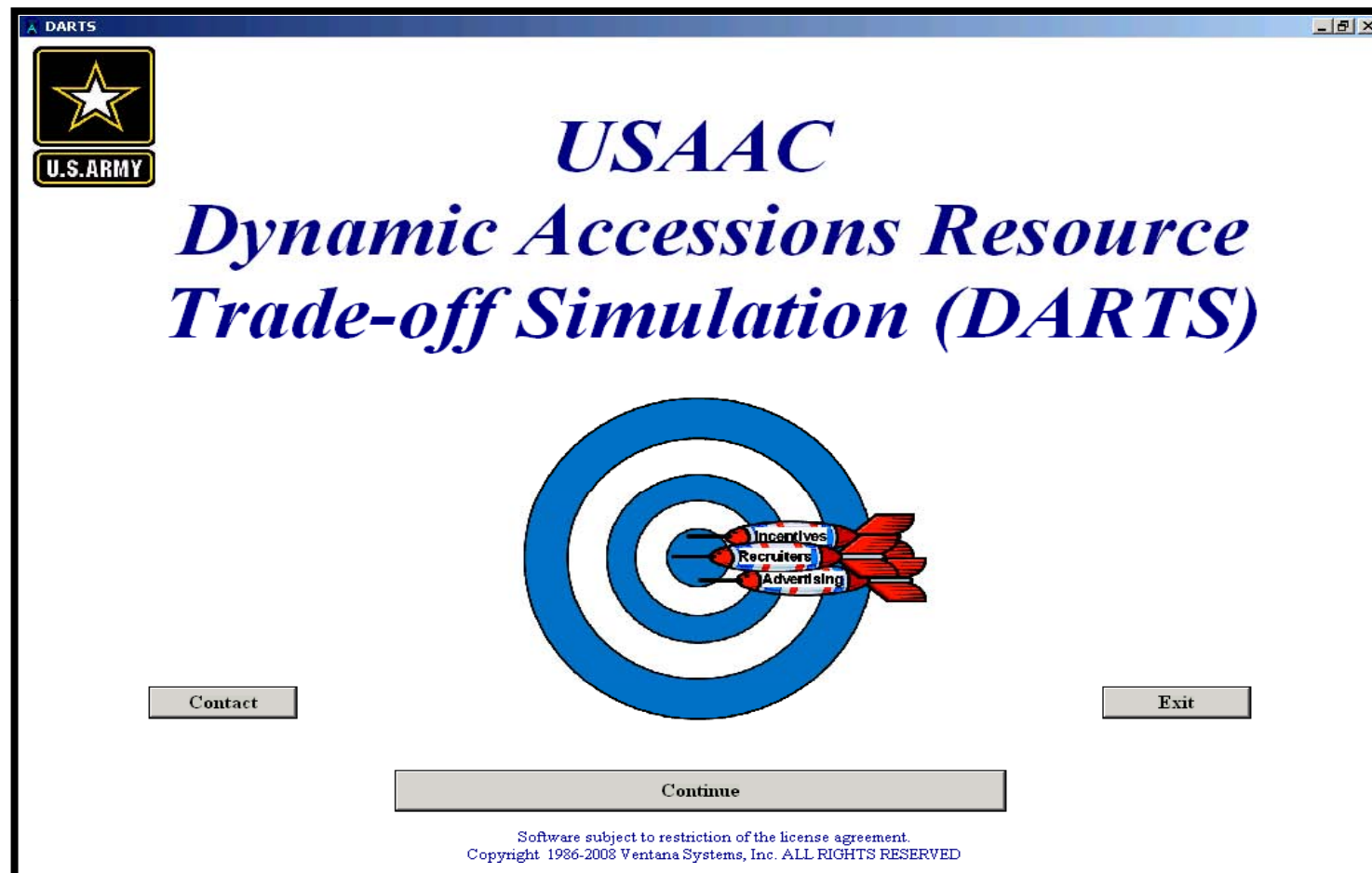


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Model Demonstration



Questions?



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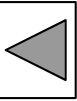
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June 2004 Perfect Storm Analysis

- ▶ USAAC G2/9 predicted that recruiting would become more difficult over the next two years
 - Improving economy
 - Fewer recruiters
 - Increased accession mission
 - Recruiting policy changes
 - Protracted war
- ▶ GWOT permanently altered the Army's value proposition



Bottom Line:

Without changes, the Army will fail the FY05 accession mission!

