

**UNCLASSIFIED**

|                                                                            |                         |
|----------------------------------------------------------------------------|-------------------------|
| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2014 Air Force | <b>DATE:</b> April 2013 |
|----------------------------------------------------------------------------|-------------------------|

|                                                                                                                                                              |                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i><br>BA 7: <i>Operational Systems Development</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0901226F: <i>Air Force Studies and Analysis Agency</i> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|

| COST (\$ in Millions)                | All Prior Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014 Base | FY 2014 OCO <sup>##</sup> | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost |
|--------------------------------------|-----------------|---------|----------------------|--------------|---------------------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element                | -               | 0.900   | 1.175                | 0.786        | -                         | 0.786         | 1.596   | 1.726   | 1.596   | 1.624   | Continuing       | Continuing |
| 676009: <i>M &amp; S DEVELOPMENT</i> | -               | 0.900   | 1.175                | 0.786        | -                         | 0.786         | 1.596   | 1.726   | 1.596   | 1.624   | Continuing       | Continuing |
| Quantity of RDT&E Articles           |                 | 0       | 0                    | 0            |                           | 0             | 0       | 0       | 0       | 0       |                  |            |

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

**A. Mission Description and Budget Item Justification**

Provides for development and enhancement of modeling and simulation tools for strategic planning, operational requirements, modernization and recapitalization of systems and programs, and the Planning, Programming, Budgeting and Execution (PPBE) processes for the AF Analytic Community and Secretary of the Air Force Standard Analysis Toolkit in support of AF Senior Leadership. As new technologies are introduced to the battlefield Digital Electronic Jammers, maneuvering Surface-to-Surface Missiles, Directed Energy Weapons, etc.)along with evolving warfighting techniques and support operations, the range covered by existing analytic tools needs to be expanded as well. M&S creation and enhancement can require extensive research in how to implement the emerging weapons capabilities as well as demand development of software techniques to implement the changes. Additionally, new focus areas such as Space, Irregular Warfare, Information Operations, Cyber warfare and ISR are mandating tools of their own to examine and these also require new exploration and development. These focus areas will need to be examined in isolation and cross-domain through populating data in existing models.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

**UNCLASSIFIED**

|                                                                                                                                                              |                |                |                                                                                           |                         |                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|-------------------------------------------------------------------------------------------|-------------------------|----------------------|
| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2014 Air Force                                                                                   |                |                |                                                                                           | <b>DATE:</b> April 2013 |                      |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i><br>BA 7: <i>Operational Systems Development</i> |                |                | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0901226F: <i>Air Force Studies and Analysis Agency</i> |                         |                      |
| <b>B. Program Change Summary (\$ in Millions)</b>                                                                                                            | <b>FY 2012</b> | <b>FY 2013</b> | <b>FY 2014 Base</b>                                                                       | <b>FY 2014 OCO</b>      | <b>FY 2014 Total</b> |
| Previous President's Budget                                                                                                                                  | 0.928          | 1.050          | 0.000                                                                                     | -                       | 0.000                |
| Current President's Budget                                                                                                                                   | 0.900          | 1.175          | 0.786                                                                                     | -                       | 0.786                |
| Total Adjustments                                                                                                                                            | -0.028         | 0.125          | 0.786                                                                                     | -                       | 0.786                |
| • Congressional General Reductions                                                                                                                           | -              | 0.000          |                                                                                           |                         |                      |
| • Congressional Directed Reductions                                                                                                                          | -              | 0.000          |                                                                                           |                         |                      |
| • Congressional Rescissions                                                                                                                                  | 0.000          | 0.000          |                                                                                           |                         |                      |
| • Congressional Adds                                                                                                                                         | -              | 0.000          |                                                                                           |                         |                      |
| • Congressional Directed Transfers                                                                                                                           | -              | 0.000          |                                                                                           |                         |                      |
| • Reprogrammings                                                                                                                                             | 0.000          | 0.000          |                                                                                           |                         |                      |
| • SBIR/STTR Transfer                                                                                                                                         | -0.028         | 0.000          |                                                                                           |                         |                      |
| • Other Adjustments                                                                                                                                          | 0.000          | 0.125          | 0.786                                                                                     | -                       | 0.786                |
| <b>C. Accomplishments/Planned Programs (\$ in Millions)</b>                                                                                                  |                |                |                                                                                           | <b>FY 2012</b>          | <b>FY 2013</b>       |
| <b>Title:</b> Modeling & Simulation Development                                                                                                              |                |                |                                                                                           | 0.900                   | 1.175                |
| <b>Description:</b> Develop and Update M&S tools                                                                                                             |                |                |                                                                                           |                         |                      |
| <b>FY 2012 Accomplishments:</b><br>Developed and Updated M&S tools                                                                                           |                |                |                                                                                           |                         |                      |
| <b>FY 2013 Plans:</b><br>Develop and Update M&S tools                                                                                                        |                |                |                                                                                           |                         |                      |
| <b>FY 2014 Plans:</b><br>Develop and Update M&S tools                                                                                                        |                |                |                                                                                           |                         |                      |
| <b>Accomplishments/Planned Programs Subtotals</b>                                                                                                            |                |                |                                                                                           | 0.900                   | 1.175                |
| <b>D. Other Program Funding Summary (\$ in Millions)</b><br>N/A                                                                                              |                |                |                                                                                           |                         |                      |
| <b>Remarks</b><br>N/A.                                                                                                                                       |                |                |                                                                                           |                         |                      |
| <b>E. Acquisition Strategy</b><br>All efforts will be awarded under existing Task Order contracts.                                                           |                |                |                                                                                           |                         |                      |

**UNCLASSIFIED**

|                                                                                                                                                                                                                                                                                     |  |                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------|
| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force                                                                                                                                                                                                                     |  | DATE: April 2013                                                                          |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i><br>BA 7: <i>Operational Systems Development</i>                                                                                                                        |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0901226F: <i>Air Force Studies and Analysis Agency</i> |
| <b>F. Performance Metrics</b><br>Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission. |  |                                                                                           |

**UNCLASSIFIED**

|                                                                                                                                                              |                                   |                                           |                        |                |                   |                |                                                                                           |                     |                    |                    |                                                        |                         |                         |                                 |                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------|------------------------|----------------|-------------------|----------------|-------------------------------------------------------------------------------------------|---------------------|--------------------|--------------------|--------------------------------------------------------|-------------------------|-------------------------|---------------------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2014 Air Force                                                                                       |                                   |                                           |                        |                |                   |                |                                                                                           |                     |                    |                    |                                                        |                         | <b>DATE:</b> April 2013 |                                 |                                 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i><br>BA 7: <i>Operational Systems Development</i> |                                   |                                           |                        |                |                   |                | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0901226F: <i>Air Force Studies and Analysis Agency</i> |                     |                    |                    | <b>PROJECT</b><br>676009: <i>M &amp; S DEVELOPMENT</i> |                         |                         |                                 |                                 |
| <b>Product Development (\$ in Millions)</b>                                                                                                                  |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b> |                                                                                           | <b>FY 2014 Base</b> |                    | <b>FY 2014 OCO</b> |                                                        | <b>FY 2014 Total</b>    |                         |                                 |                                 |
| <b>Cost Category Item</b>                                                                                                                                    | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>    | <b>Award Date</b>                                                                         | <b>Cost</b>         | <b>Award Date</b>  | <b>Cost</b>        | <b>Award Date</b>                                      | <b>Cost</b>             | <b>Cost To Complete</b> | <b>Total Cost</b>               | <b>Target Value of Contract</b> |
| Software Development                                                                                                                                         | TBD                               | Not specified.:                           | -                      | 0.900          | Jan 2012          | 1.175          | Jan 2013                                                                                  | 0.786               | Jan 2014           | -                  |                                                        | 0.786                   | Continuing              | Continuing                      |                                 |
| <b>Subtotal</b>                                                                                                                                              |                                   |                                           | 0.000                  | 0.900          |                   | 1.175          |                                                                                           | 0.786               |                    | 0.000              |                                                        | 0.786                   |                         |                                 |                                 |
| <b>Support (\$ in Millions)</b>                                                                                                                              |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b> |                                                                                           | <b>FY 2014 Base</b> |                    | <b>FY 2014 OCO</b> |                                                        | <b>FY 2014 Total</b>    |                         |                                 |                                 |
| <b>Cost Category Item</b>                                                                                                                                    | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>    | <b>Award Date</b>                                                                         | <b>Cost</b>         | <b>Award Date</b>  | <b>Cost</b>        | <b>Award Date</b>                                      | <b>Cost</b>             | <b>Cost To Complete</b> | <b>Total Cost</b>               | <b>Target Value of Contract</b> |
| <b>Subtotal</b>                                                                                                                                              |                                   |                                           | 0.000                  | 0.000          |                   | 0.000          |                                                                                           | 0.000               |                    | 0.000              |                                                        | 0.000                   | 0.000                   | 0.000                           | 0.000                           |
| <b>Test and Evaluation (\$ in Millions)</b>                                                                                                                  |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b> |                                                                                           | <b>FY 2014 Base</b> |                    | <b>FY 2014 OCO</b> |                                                        | <b>FY 2014 Total</b>    |                         |                                 |                                 |
| <b>Cost Category Item</b>                                                                                                                                    | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>    | <b>Award Date</b>                                                                         | <b>Cost</b>         | <b>Award Date</b>  | <b>Cost</b>        | <b>Award Date</b>                                      | <b>Cost</b>             | <b>Cost To Complete</b> | <b>Total Cost</b>               | <b>Target Value of Contract</b> |
| <b>Subtotal</b>                                                                                                                                              |                                   |                                           | 0.000                  | 0.000          |                   | 0.000          |                                                                                           | 0.000               |                    | 0.000              |                                                        | 0.000                   | 0.000                   | 0.000                           | 0.000                           |
| <b>Management Services (\$ in Millions)</b>                                                                                                                  |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b> |                                                                                           | <b>FY 2014 Base</b> |                    | <b>FY 2014 OCO</b> |                                                        | <b>FY 2014 Total</b>    |                         |                                 |                                 |
| <b>Cost Category Item</b>                                                                                                                                    | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>    | <b>Award Date</b>                                                                         | <b>Cost</b>         | <b>Award Date</b>  | <b>Cost</b>        | <b>Award Date</b>                                      | <b>Cost</b>             | <b>Cost To Complete</b> | <b>Total Cost</b>               | <b>Target Value of Contract</b> |
| <b>Subtotal</b>                                                                                                                                              |                                   |                                           | 0.000                  | 0.000          |                   | 0.000          |                                                                                           | 0.000               |                    | 0.000              |                                                        | 0.000                   | 0.000                   | 0.000                           | 0.000                           |
|                                                                                                                                                              |                                   |                                           | <b>All Prior Years</b> | <b>FY 2012</b> | <b>FY 2013</b>    |                | <b>FY 2014 Base</b>                                                                       |                     | <b>FY 2014 OCO</b> |                    | <b>FY 2014 Total</b>                                   | <b>Cost To Complete</b> | <b>Total Cost</b>       | <b>Target Value of Contract</b> |                                 |
| <b>Project Cost Totals</b>                                                                                                                                   |                                   |                                           | 0.000                  | 0.900          | 1.175             | 0.786          | 0.000                                                                                     | 0.786               |                    |                    |                                                        |                         |                         |                                 |                                 |
| <b>Remarks</b>                                                                                                                                               |                                   |                                           |                        |                |                   |                |                                                                                           |                     |                    |                    |                                                        |                         |                         |                                 |                                 |

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

PE 0901226F: Air Force Studies and  
Analysis Agency

**PROJECT**

676009: M & S DEVELOPMENT

UNCLASSIFIED

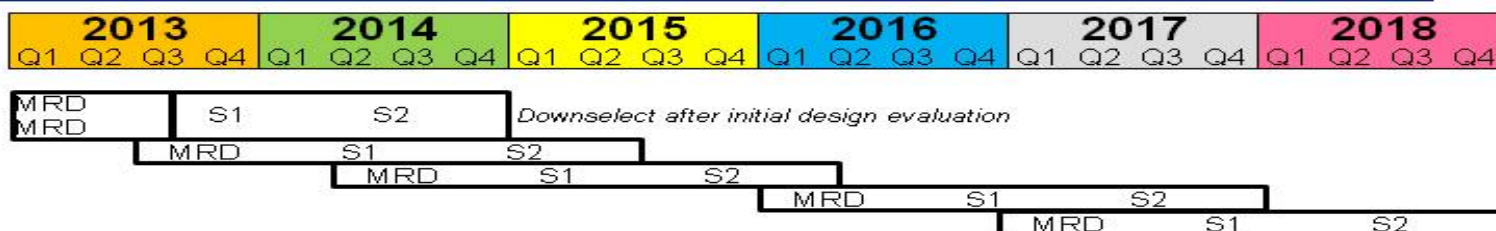


# AF/A9 M&S Development Investment Plan (Aug 12)

Note: Quarterly Reports  
Required For All Initiatives

**New Core Models Design**

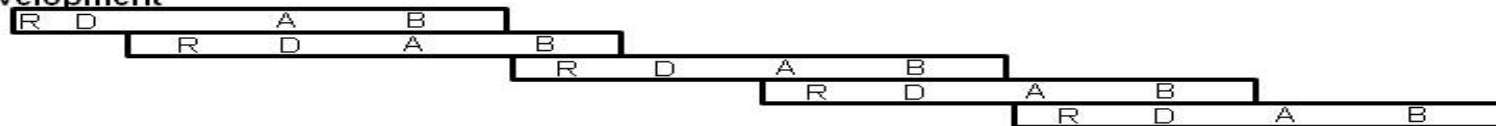
DeFeat Analysis Tool  
Force Structure Analysis Tool  
CFAM F/O – Systems Dynamics  
CFAM F/O – Stochastic Methods  
Brawler F/O Research  
AMOS Improvement Development



Core Models include: EADSIM, CBLP, AMOS. Order/amount spent and spirals to vary with emerging needs/improvements in computer technology

**Mission Level Model Gap Development**

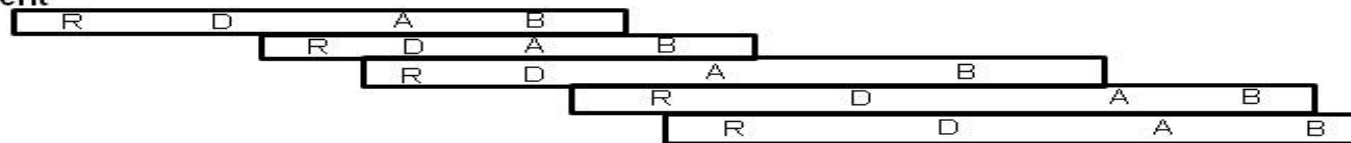
TPFFD Tool  
Air Base Ops/Defense  
Gap Improvement #1  
Gap Improvement #2  
Gap Improvement #3



Gap Models are specifically designed to address areas where gaps in analytic tools have developed based on evolving missions.

**Emerging Technology/Data Development**

ISR Integration Tool  
Threat/Blue Force Integration  
Emerging Tech Model #1/2  
Emerging Tech Model #3/4  
Emerging Tech Model #5/6



Emerging Technology/Data Development Models will include: Capabilities Comparison, Resource Planning, Process Modeling using COTS products, Aeromedical Requirements Modeling. Sequencing/additions based on Analytic Community needs.

For Existing M&S- MRD-Model Research and Design; Sx-Spiral Development Phase 'x'; Deliveries expected after each Spiral.

For New M&S- R-Research/Process Development, D-Development of Tools; A-Alpha Testbed, B-Beta Testbed; Delivery expected after "Beta".

Milestones (Key Decision Points) before Spiral 1/2 starts for Existing M&S and before Development and after Alpha testing for new tools.

UNCLASSIFIED

*Integrity - Service - Excellence*

1

UNCLASSIFIED

UNCLASSIFIED

|                                                                                                                                     |                                                                                |                                      |                  |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------|------------------|
| Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force                                                                             |                                                                                |                                      | DATE: April 2013 |
| APPROPRIATION/BUDGET ACTIVITY<br>3600: Research, Development, Test & Evaluation, Air Force<br>BA 7: Operational Systems Development | R-1 ITEM NOMENCLATURE<br>PE 0901226F: Air Force Studies and<br>Analysis Agency | PROJECT<br>676009: M & S DEVELOPMENT |                  |

Schedule Details

| Events                            | Start   |      | End     |      |
|-----------------------------------|---------|------|---------|------|
|                                   | Quarter | Year | Quarter | Year |
| Modeling & Simulation Development | 1       | 2013 | 4       | 2018 |