Cost Benefit Analysis Case Study: European Infrastructure Consolidation

Summary of Army Involvement

3 June 2016

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Office of the Deputy Assistant Secretary of the Army (Installations, Housing, and Partnerships)
• Bottom Line
• Army’s EIC Strategy
• Process & Timeline
• Summary of Capacity Analysis
• Summary of Military Value (MILVAL) Analysis
• Impact of Approved Actions
• Conclusion
• Army used EIC to advance its existing European Transformation Plan
• Army involved in most of the SECDEF approved actions:
  – 13 of 16 Quick Win scenarios
  – 20 of 26 Full Analysis scenarios
  – One significant USD(P&R) policy exception
• EIC will produce beneficial outcomes for Army and Joint Force
• Net effect of EIC will not jeopardize intent of European Reassurance Initiative (ERI) or degrade strategic or operational capability
• Army is maintaining focus on EIC to ensure that stationing costs are properly identified and funded
• Army anticipates $165M in savings (FY 16-21) and one-time costs of $295M (FY 16-21) and is programmed to receive $106M in FY 16 and $70.4M in FY 17 of the OSD EIC Wedge

Implementation of 20 Army scenarios (including those developed by Joint Groups) will yield $165M in savings over FY 16-21 and $1.34B in savings over 20 years at a one-time cost of ~ $300M.
Goal: Establish a streamlined portfolio of installations with optimized military value and a significantly reduced cost of ownership.

Strategic Imperatives:

• Keep the Pre-EIC Army European Transformation Plan on track
• Seek to accelerate this plan
• Achieve a definitive outcome (open, closed, or realigned) for Baumholder
• Accommodate emerging Special Operations Forces stationing requirements
• Achieve an outcome for the Livorno Community
• Ensure adequate maneuver space to enable collective training readiness as well as theater security cooperation and build partner capacity programs and initiatives
• Ensure any potential outcomes result in stationing of Army units within acceptable distances to available training resources
• Ensure Army installations have sufficient infrastructure to move units to air and sea ports of embarkation to meet established deployment timelines
**Cold War 1989:**
- 213K Soldiers
- 41 ASG/BSBs (~850 Sites)

2004 – 2 BCT Decision (239 Sites)
- 2006
  - 54K Soldiers
  - 22 Garrisons (235 Sites)

2008 – Hold on BCTs

2010 – QDR

2011 – 3 BCT Decision

2012 – 2 BCT Decision

Today
- ~29K Soldiers
- 9 Garrisons (94 Sites)

**Expeditionary 2018:**
- ~29K Soldiers
- 7 Garrisons (~60 Sites*)

* Post EIC (~FY 2021)
AMERICA’S ARMY: 
THE STRENGTH OF THE NATION

DoD EIC/BRAC Recommendation Development Process

Key Aspects of Process

**Capacity Analysis**
- Inventory
  - What
  - Where
  - How Big
  - Usage
  - Surge

**Military Value**
- Selection Criteria 1 - 4
  - What’s important
  - How to measure
  - How to weight
  - Rank order

**Scenario Development**
- Force Structure Plan
- Capacity Analysis
- Military Value Analysis
- Transformational Ideas
- Guiding principles

**Scenario Analysis**
- Selection Criterion 5 –
  - Potential Costs & Savings (COBRA or BCAT)
- Criteria 6, 7, 8 –
  - Economic
  - Community
  - Environmental Impacts

*Each analytical team meticulously follows and documents each step of the process with respective leadership reviewing and exercising continuous oversight.*
AMERICA’S ARMY: THE STRENGTH OF THE NATION

EIC Timeline

- SECDEF directs European infrastructure capacity analysis be conducted
- USD(AT&L) Guidance
- Army Operating Guidance
- Capacity Analysis Approach Approved
- MILVAL Approach Approved
- "Quick Wins" Parameters Determined
- "Quick Wins" Recommendations Made / BCAT Tool Approved
- DMAG Approves "Quick Wins"
- "Priority" Scenario Recommendations Made
- MILVAL Analysis Report Approved
- Capacity Analysis Report Approved
- CSFWG Full Analysis Scenario Recommendations Made
- Army Full Analysis Scenario Recommendations Made
- SECDEF Approves "Quick Wins"
- MILVAL Analysis Report Approved
- CSFWG Full Analysis Scenario Recommendations Made
- DMAG Approves Full Analysis Scenarios
- SECDEF Approves Full Analysis Scenarios
- EIC Report delivered to Congress
- EIC Implementation transferred to ARSTAF
• Capacity Analysis revealed excess capacity in Europe
• This excess, however, will decrease as planned, announced closures and force structure changes occur
• Sufficient capacity exists to station the approved for EIC FY18 force structure
• Two locations had the greatest potential as “receivers” for restationing; other sites require significant construction to receive new units
• Only one location enables the conduct of all types of training (including combined arms maneuver and live fire) — yet this location had little existing excess infrastructure to enable restationing of additional units
• Family Housing is a limiting factor in all options for consolidation or realignment in Europe
• Stationing or restationing units in Europe will require significant investment (and may not yield savings in the short-term)
• The Army does not need to retain significant excess to meet wartime surge requirements
• To replicate BRAC-like analysis, MILVAL was the primary consideration in developing scenarios for closing or realigning sites in Europe

• Four Statutory Criteria:
  – Ability to Support Mission
  – Availability of Land and Airspace
  – Ability to Support Contingencies
  – Cost and Manpower Considerations

• Army MILVAL Report approved 7 January 2014
  – Grafenwoehr, Baumholder, and Hohenfels at top of list
  – Giessen Depot, Daumerie Caserne, Tirennia, and Livorno at bottom of list

• Scenarios developed or proposed by Army reflect this valuation
  – Sites with highest MILVAL are receiver sites
  – Sites with lowest MILVAL are candidates for closure or realignment
### Impact of Approved Actions ($ Millions)

<table>
<thead>
<tr>
<th>Category</th>
<th>One-Time Cost</th>
<th>6-yr Savings (FY16-21)</th>
<th>20-yr Savings (FY16-35)</th>
<th>Reduction SF (M)</th>
<th>Annual Recurring Savings</th>
<th>Plant Replacement Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announced Closures - Schweinfurt/Bamberg (FY 14)</td>
<td>$219</td>
<td>$4,197</td>
<td>$10,738</td>
<td>11.8</td>
<td>$611</td>
<td>$348</td>
</tr>
<tr>
<td>Quick Win Scenarios (FY 15-16)</td>
<td>$58</td>
<td>$251</td>
<td>$961</td>
<td>13.6</td>
<td>$58</td>
<td>$3,948</td>
</tr>
<tr>
<td>Full Analysis Army Scenarios (FY 16-20)</td>
<td>$213</td>
<td>$9</td>
<td>$577</td>
<td>2.5</td>
<td>$62</td>
<td>$849</td>
</tr>
<tr>
<td>Joint Working Group Scenarios to be Implemented by the Army (FY 16-20)</td>
<td>$86</td>
<td>$156</td>
<td>$763</td>
<td>8.5*</td>
<td>$48</td>
<td>$85*</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>$576</strong></td>
<td><strong>$4,613</strong></td>
<td><strong>$13,039</strong></td>
<td><strong>30.4</strong></td>
<td><strong>$779</strong></td>
<td><strong>$5,230</strong></td>
</tr>
</tbody>
</table>

**Sites affected:**
- 74 of 96 Army sites (77%) realigned, closed, or gained (including Bamberg & Schweinfurt)
- Closed 29 sites, realigned 45 sites

* Joint Working Group data for Square Foot Reduction and Plant Replacement Value are incomplete and do not represent total values for all scenarios.
The EIC process provided an effective mechanism to accelerate elimination of excess Army infrastructure in Europe.

Important to holistically address infrastructure required to support world-wide force structure based on current operational circumstances and conditions.

Savings are real and achieved in near-mid term.

The EIC process demonstrated the potential for significant cost savings and efficiencies when another BRAC round is approved, primarily from permanent reductions in requirements for Base Operations Support and Facility Sustainment, Restoration, and Modernization accounts.

**Large-scale infrastructure analysis and consolidations like EIC and BRAC are the best ways to achieve significant recurring savings.**
### Capacity Analysis

<table>
<thead>
<tr>
<th>Standards</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacities calculated for all facilities supporting each approved function/sub-function: all locations evaluated</td>
<td></td>
</tr>
<tr>
<td>Service-validated databases are the source for data on existing inventory</td>
<td></td>
</tr>
<tr>
<td>Source documentation for steady-state requirements cited and linked to force structure plan; surge requirements are based on &quot;Stacks 1 and 2&quot; as approved by SSG</td>
<td></td>
</tr>
<tr>
<td>Analysis addresses current usage rate, maximum potential capacity, surge requirements, and identifies excess (deficit) by facility type/location</td>
<td></td>
</tr>
<tr>
<td>Report identifies assumptions, constraints, and assesses the quality of the data used in the analysis</td>
<td></td>
</tr>
</tbody>
</table>

### MILVAL Analysis

<table>
<thead>
<tr>
<th>Standards</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes/Metrics/Questions (and associated weighting) are identified and are consistent with work group's approved approach; deviations are explained</td>
<td></td>
</tr>
<tr>
<td>Sites/facilities arrayed based on relative Military Value (includes scores); all sites/facilities within the work group’s scope of analysis are scored/ranked</td>
<td></td>
</tr>
<tr>
<td>Service-validated communal databases are the source for data used in analysis</td>
<td></td>
</tr>
<tr>
<td>Report documents the analytical methodology, identifies assumptions and issues</td>
<td></td>
</tr>
</tbody>
</table>

### Questions the analysis must answer (OSD Policy Memo #2):

1. What is the inventory of facilities currently performing the functions defined as falling within your responsibility for analysis?
2. What percent of the capacity of these facilities is being utilized for current and surge workloads?
3. What percentage, if any, currently exists in excess of current workload plus surge requirements?

**SSG Approved - 20 March 2014**

**SSG Approved - 23 January 2014**
<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description of Scenario</th>
<th>One Time Cost</th>
<th>Annual Recurring Savings</th>
<th>Payback Period</th>
<th>6-yr Savings (Cost)</th>
<th>20-yr NPV (Cost)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army QW-01</td>
<td>Close Frechesfeld Radio Site</td>
<td>$0.06</td>
<td>$0.08</td>
<td>2015-2016 (2 yrs)</td>
<td>$0.34</td>
<td>$1.26</td>
</tr>
<tr>
<td>Army QW-03</td>
<td>Close Garmisch Golf Course</td>
<td>$0.00</td>
<td>$0.14</td>
<td>2015-2015 (1 yr)</td>
<td>$0.70</td>
<td>$2.43</td>
</tr>
<tr>
<td>Army QW-04</td>
<td>Close Wiesbaden Recreation Site</td>
<td>$0.06</td>
<td>$0.12</td>
<td>2015-2015 (1 yr)</td>
<td>$0.61</td>
<td>$2.11</td>
</tr>
<tr>
<td>Army QW-05</td>
<td>Close Breitenau Skeet Range</td>
<td>$0.01</td>
<td>$0.03</td>
<td>2015-2016 (2 yrs)</td>
<td>$0.11</td>
<td>$0.42</td>
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<tr>
<td>Army QW-06</td>
<td>Close Tirennia Beach Recreation Site</td>
<td>$0.01</td>
<td>$0.11</td>
<td>2015-2015 (1 yr)</td>
<td>$0.62</td>
<td>$2.01</td>
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<tr>
<td>Army QW-07</td>
<td>Close Fintherlandstrasse AFH</td>
<td>$0.20</td>
<td>$4.41</td>
<td>2015-2015 (1 yr)</td>
<td>$24.84</td>
<td>$78.18</td>
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<tr>
<td>Army QW-08</td>
<td>Close General Abrams Hotel</td>
<td>$1.21</td>
<td>$1.99</td>
<td>2014-2015 (2 yrs)</td>
<td>$8.35</td>
<td>$32.47</td>
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<tr>
<td>Army QW-09</td>
<td>Close AFN AM Sites (3)</td>
<td>$0.49</td>
<td>$1.14</td>
<td>2015-2015 (1 yr)</td>
<td>$5.99</td>
<td>$19.77</td>
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<td>Army QW-10</td>
<td>Close Giessen Depot</td>
<td>$32.49</td>
<td>$38.11</td>
<td>2014-2017 (4 yrs)</td>
<td>$180.30</td>
<td>$640.98</td>
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<tr>
<td>Army QW-11</td>
<td>Close Hill 365 Radio Site</td>
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<td>$0.07</td>
<td>2014-2016 (3 yrs)</td>
<td>$0.21</td>
<td>$1.00</td>
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<tr>
<td>Army QW-13</td>
<td>Close Daumerie Caserne Site</td>
<td>$16.96</td>
<td>$7.43</td>
<td>2014-2017 (4 yrs)</td>
<td>$27.86</td>
<td>$117.70</td>
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<td>Army QW-14</td>
<td>Close Kastel AFH</td>
<td>$5.25</td>
<td>$4.00</td>
<td>2014-2016 (3 yrs)</td>
<td>$13.95</td>
<td>$62.31</td>
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<td>Army QW-15</td>
<td>Close, Water Systems Annexes (3)</td>
<td>N/A</td>
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<td>N/A</td>
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<td><strong>TOTALS</strong></td>
<td></td>
<td><strong>$57.87</strong></td>
<td><strong>$57.63</strong></td>
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<td><strong>$263.88</strong></td>
<td><strong>$960.64</strong></td>
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## Approved "Full Analysis" Actions Impacting Army ($ Millions)

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<tr>
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</thead>
<tbody>
<tr>
<td>PA-05</td>
<td>Close Barton Barracks</td>
<td>$14.01</td>
<td>$5.69</td>
<td>2016-2021 6 yrs</td>
<td>$4.56</td>
<td>$54.82</td>
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<tr>
<td>PA-06</td>
<td>Close Brussels Leased Site</td>
<td>$10.21</td>
<td>$7.19</td>
<td>2018-2021 4 yrs</td>
<td>$6.10</td>
<td>$71.22</td>
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<tr>
<td>PA-07</td>
<td>Close Schinnen Leased Site</td>
<td>$17.53</td>
<td>$5.75</td>
<td>2016-2023 8 yrs</td>
<td>($7.63)</td>
<td>$35.48</td>
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<tr>
<td>FA-03</td>
<td>Close Weilimdorf Warehouse Site</td>
<td>$3.05</td>
<td>$0.19</td>
<td>2020-2021 2 yrs</td>
<td>$3.43</td>
<td>$5.82</td>
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<tr>
<td>FA-06</td>
<td>Close Baumholder Waterworks Sites</td>
<td>$2.77</td>
<td>$0.99</td>
<td>2016-2020 5 yrs</td>
<td>$1.09</td>
<td>$11.12</td>
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<tr>
<td>FA-13</td>
<td>Close Amelia Earhart Hotel</td>
<td>$31.01</td>
<td>$2.71</td>
<td>2020-2028 8 yrs</td>
<td>($11.89)</td>
<td>$22.59</td>
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<td>FA-15</td>
<td>Partially Close Artillery Kaserne</td>
<td>$25.95</td>
<td>$11.66</td>
<td>2016-2020 5 yrs</td>
<td>$17.50</td>
<td>$64.81</td>
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<tr>
<td>HASET PH-07</td>
<td>Merge Supporting Activities Mission to NATO and US Military Delegation</td>
<td>$0.03</td>
<td>$0.62</td>
<td>2016-2017 2 yrs</td>
<td>$2.70</td>
<td>$8.81</td>
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<td>HASET FH-03</td>
<td>Restructure DoDEA Europe Regional and District Housing</td>
<td>$0</td>
<td>$4.24</td>
<td>2016-2016 1 yrs</td>
<td>$20.39</td>
<td>$84.80</td>
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<td>HASET FH-04</td>
<td>Consolidate Commissaries in Europe</td>
<td>$56.25</td>
<td>$7.47</td>
<td>2016-2024 9 yrs</td>
<td>($19.64)</td>
<td>$138.67</td>
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<td>HASET FH-05</td>
<td>Consolidate Defense Media Activity (DMA) Sites in Europe</td>
<td>$3.92</td>
<td>$8.32</td>
<td>2016-2016 1 yr</td>
<td>$42.99</td>
<td>$117.64</td>
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<tr>
<td>Scenario</td>
<td>Description of Scenario</td>
<td>One Time Cost</td>
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<tr>
<td>PA-02</td>
<td>Partially Close Mainz Kastel (Phases 1 and 2)</td>
<td>$2.88</td>
<td>$4.53</td>
<td>2016-2017 1 yr</td>
<td>$25.66</td>
<td>$59.05</td>
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<tr>
<td>FA-01</td>
<td>Close Mainz Kastel (Phase 3)</td>
<td>$36.44</td>
<td>$15.32</td>
<td>2016-2021 6 yrs</td>
<td>$8.49</td>
<td>$180.64</td>
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<td>FA-02</td>
<td>Partially Close Pulaski Barracks</td>
<td>$8.66</td>
<td>$2.41</td>
<td>2016-2020 5 yrs</td>
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<td>FA-11</td>
<td>Realign Patch Barracks</td>
<td>$60.22</td>
<td>$7.64</td>
<td>2016-2027 12 yrs</td>
<td>($40.98)</td>
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<td>PL-03</td>
<td>Close Husterhoeh Kaserne Realign to Kaiserslautern Army Depot</td>
<td>$3.80</td>
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<td>2016-2018 3 yrs</td>
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<td>PL-04</td>
<td>Partial Closure of Camp Darby</td>
<td>$21.72</td>
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<td>2016-2019 4 yrs</td>
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<td>FM-03</td>
<td>Divest Select Medical Services at Vicenza</td>
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<td>FL-12</td>
<td>Reduce Pisa Ammunition Storage Area (PASA)</td>
<td>$0.00</td>
<td>$0.10</td>
<td>2016-2016 1 yr</td>
<td>$0.61</td>
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<tr>
<td>PL-02</td>
<td>Close AAFES Depot Gruenstadt Site - Contract Bakery Operations; Discontinue Water Operations</td>
<td>$0</td>
<td>$6.05</td>
<td>2016-2016 1 yrs</td>
<td>$34.12</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td><strong>$298.50</strong></td>
<td><strong>$109.36</strong></td>
<td></td>
<td><strong>$165.16</strong></td>
<td></td>
<td><strong>$1,339.90</strong></td>
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