Installation Health Assessment

Strategic use of Big Data, Predictive Modelling & Visualizations in Air Force Infrastructure Investments

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Warfighters Supporting Warfighters!
Installation Health Assessment

Evolution

- Powerpoint – Excel – Sharepoint – Visualization – Predictive Analytics – Cloud
- Linking Authoritative Data w/ Decision Support Visualizations
- Building products at Enterprise, Operational and Installation levels
- Products are widely accessible across Headquarters, installations & action officers

Summer ‘16 – concept
Jan ‘17 - Dashboard
Fall ‘17 – Data Visualizations
Spring ‘18 – Predictive Analytics
Fall ‘18 – Base-level analytics
Spring ‘19 – Cloud SaaS
Utilizes Sustainment Management System (SMS) Data: 1.9M Data Points for Airfields & Buildings

Invest at FY19 $2.1B / Year, No Demolition Funding, Mission Critical “Worst First” Priority

Deferred Maintenance Backlog grows from $25B to $89B in 30 Years. Over 1/3 of portfolio “failed”
Invest $3.8B / Year, 5% Demo, Invest at component “Sweet Spot” to drive lowest life cycle costs

Deferred Maintenance Backlog grows from $25B to $45B in 30 Years. Mission Risk greatly reduced

Different policy scenarios are easily built. Air Force products are in the “cloud” as of 8 April 19
Data & Visualizations dynamically reorganize with one click: MAJCOM or Installation

GeoBase Maps – SMS Data is Linked: Kadena Airbase, Japan 2019 vs 2050 shown at FY19 Funding
1. Hire a “Chief Data Officer” & team of “Data Scientists”
   … Proficient in python, R, and Tableau / Qlik / Microsoft BI

2. “Democratize the Data”
   … Link authoritative data directly to decision visualizations
   … Make the data transparent & freely available to everyone

3. Create “easy to understand” Visualizations
   … but can be manipulated to tell the user’s specific story