

Warner Robins Air Logistics Complex



Analysis of Resources with Visualization and Integrated Simulation Support (ARViSS) Programs

Presented By:

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The Design Knowledge Company (TDKC) Corporate Overview



Warner Robins Air Logistics Complex

Background

- Small business headquartered in Dayton, Ohio
- Founded in 1999 as one-man consulting firm
- Transitioned to R&D contracting firm in 2003
 - Opened first office (2004)
 - Topped 10 employees (2006)
 - Topped 40 employees (2010)
 - Currently 90 Employees

Profile

- Small Business Flexibility, Low-Cost/High Value
- Focus research on specific, hard-to-solve warfighter needs
- In just over ten years, we have been
 - Selected for National Tibbetts SBIR Award in 2007 and 2012
 - Awarded 5 Phase III SBIRs
 - Voted "Best Places To Work" in 2012, 2013, & 2014 Dayton Business Journal
- Nationally recognized expertise in human factors, visualization, and space-related development

TDKC Offices



Provide leading-edge research and development services to government and industry in the following areas.



Agile Work Environments to connect independent, heterogeneous data sources for a single integrated user experience.



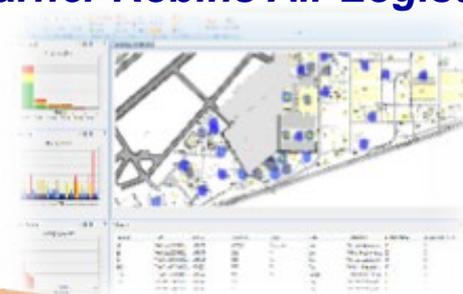
Framework for Full Lifecycle



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**Adaptable Analysis
& Visualization**

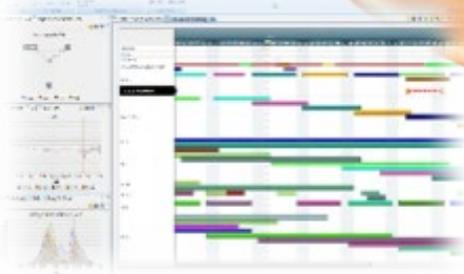


Status Reporting

ARViSS

TECHNOLOGY

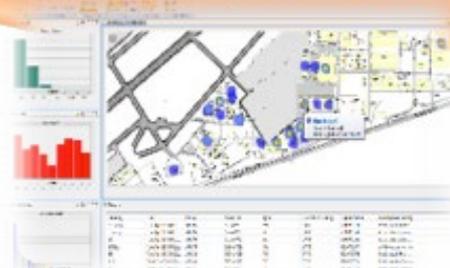
Re-planning



Workflow/Automation



Quality Control



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ARViSS Decision Support Application

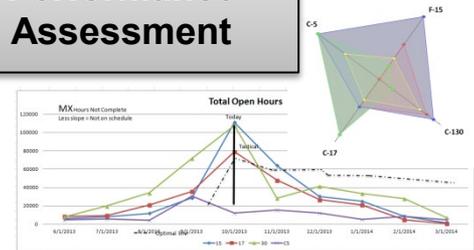


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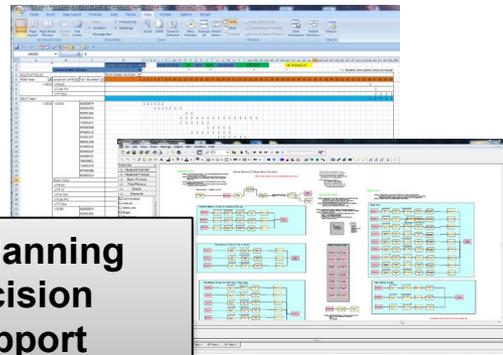
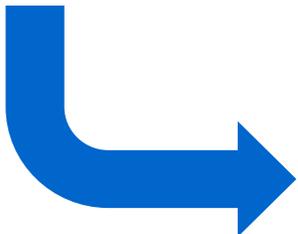
Ramp Situational Awareness



Dynamic Performance Assessment



ARViSS Users



Re-Planning Decision Support

A User-Centric Comprehensive Environment for Data Integration, Assessment and Ramp Operations Support

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Asset Lifecycle Information Management (ALCIM)



Warner Robins Air Logistics Complex



Air Force Warfighter Superiority



Providing superior depot maintenance, engineering, and development for major weapon systems



Leveraging SBIR Investment

Delivering Advanced Capability

Asset Life Cycle Information Management (ALCIM) STTP

Adaptable Analysis & Visualization

Status Reporting

Smart Machine Capability

Shop Floor Support

Re-planning

ARViSS TECHNOLOGY

Workflow/Automation

Quality Control

VALUE PROPOSITION:
ALCIM will provide much-needed situation awareness of machine assets to drive preventative maintenance and ensure flow.

Logistics Enterprise Support

LifeMeter TECHNOLOGY

Depot Interface

LifeMeter Equipment

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ARViSS Provides Flexible Manufacturing Support



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Input Data

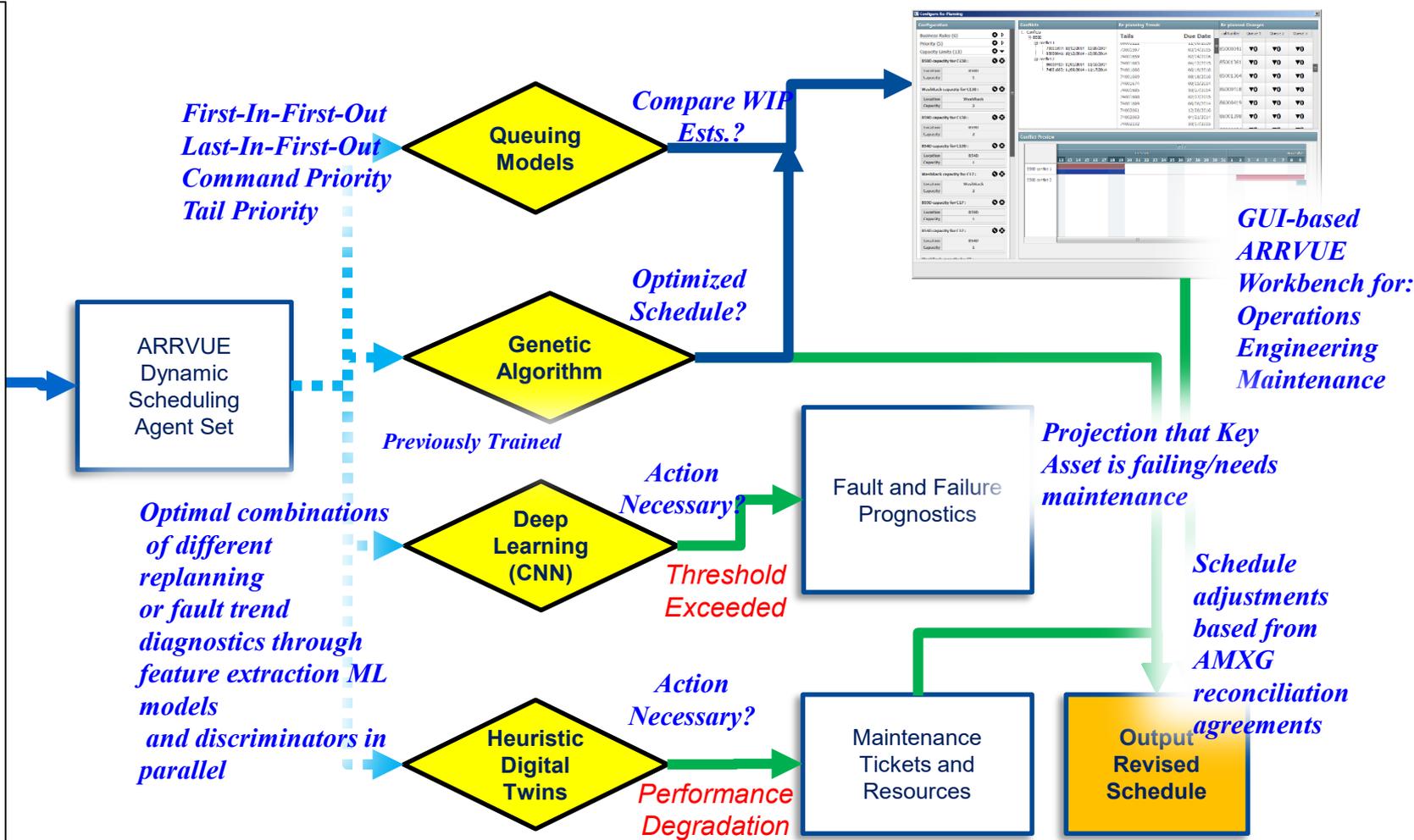
AMXG/CMXG Plans and estimated time (LDMS)

AMXG/CMXG Performance and Quality (OEE)

CNC Machine Diagnostics/Prognostics (SBIR P1/2)

Digital Twin Model Meta-Data

Historical Performance Data



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