



# Enhancing Logistic Systems With 3D Performance Support Applications

Great Ideas Competition | DoD Maintenance Symposium  
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## Current Challenges Facing Our Military

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- Operational tempo is at an all time high!
- Equipment sustainment constitute 65-80% of total cost of ownership
- Within Life Cycle Management, we're challenged to:
  - Improve availability and reliability of equipment
  - Improve quality of work
  - Expedite performance of work
- How can NGRain help meet these challenges?



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## Great Idea

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- Enhance Logistic Systems with 3D Performance Support Applications



## 3D Performance Support



- Improve performance of maintainers through knowledge acceleration
  - 3D visual interface to reduce time to locate knowledge
  - 3D procedures to increase comprehension of knowledge



# Application Scenarios

## NGRAIN: Enabling Performance Support Systems / Sub-Systems

3D-Enabled  
IETMs



3D Damage  
Assessment



3D Interface to  
Trouble-  
shooting



3D Job Aids



3D Interface to  
Mnt History



3D Interface to  
Parts Ordering



**Accelerate** location and comprehension of technical information (60% faster)

**Facilitate** understanding and accuracy of task performance (30% better)



# Case Study: Impact of 3D Performance Aids in Aircraft Lifecycle Management

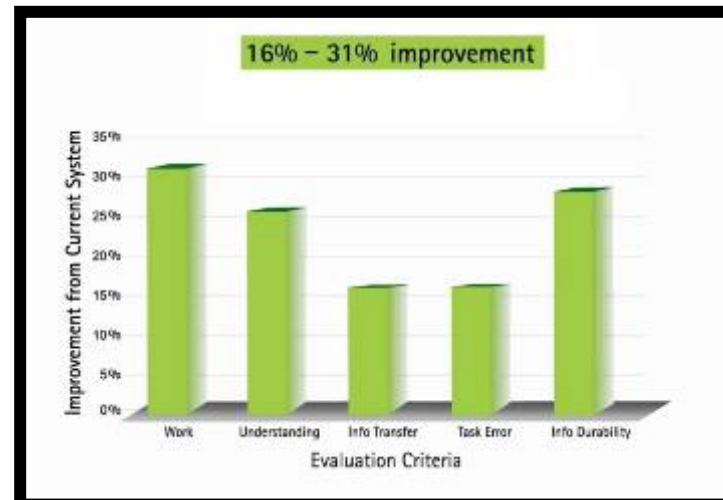


- **Objective:** Determine the effectiveness of using 3D simulations in an integrated enterprise application in conducting typical Life Cycle Materiel Manager tasks.
- **Evaluation:** 8 tasks evaluated against 6 parameters.
  - Status Quo vs. Integrated application with 3D simulations

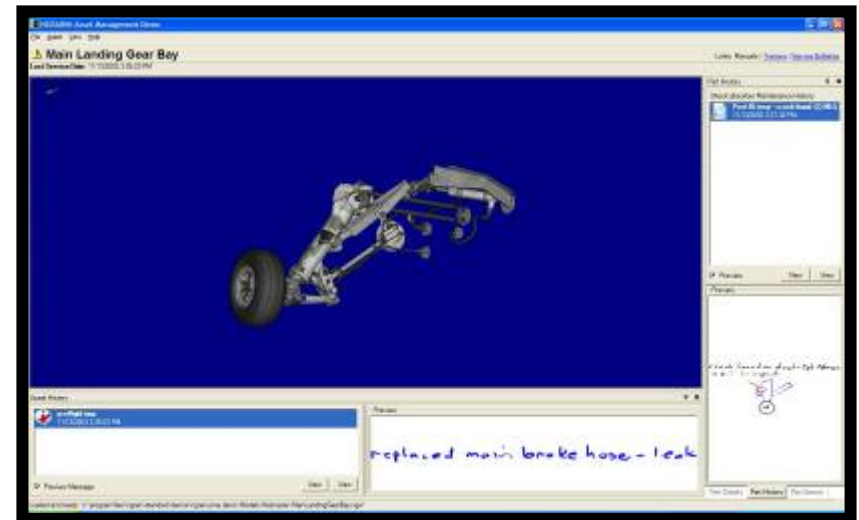


## Case Study: Results

- Tangible:
  - 26% improvement in understanding
  - 30% less time to investigate and resolve maintenance incidents
  - 31% improvement in the quality of task performance
- Intangible
  - More effective sharing of knowledge of retiring SMEs



# Demonstration





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## Summary

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- Enhancing logistics systems with 3D performance support applications provide a means to:
  - Streamline task performance
  - Improve quality of performance
  - Reduce non-value add wait times
  - Foster continuous process improvement
- Key
  - Networked environment
  - Supplements and blends with existing processes/materials



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# Thank You!

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- Come visit NGRAIN at booth #205
- For case studies and papers, visit [www.ngrain.com](http://www.ngrain.com) or email CSM (RET) Troy J. Welch at [twelch@ngrain.com](mailto:twelch@ngrain.com)

