



# PROJECTIONWORKS

COMPLEXITY SIMPLIFIED.







U.S. AIR FORCE

# PROJECTIONWORKS

BY DELTA SIGMA COMPANY

**Our Story.** ProjectionWorks patented software was first developed in 2010 in collaboration with the United States Airforce Research Program. The goal was to provide a low-cost solution for delivering clear and specific optically projected work instructions onto an aircraft.

It has since been recognized as an industry standard with wide-spread application across manufacturing facilities world-wide. Primary use cases include, but are not limited to, harness assembly, mechanical assembly, paint and metrology.



# MAXIMIZE PRODUCTIVITY

We use Mixed Reality to simplify complex tasks. This is achieved through an integrated system that imports and creates 3D geometry to project simple yet concise work instructions onto any contoured surface.

## WITH MIXED REALITY

Unlike Augmented Reality which is a live video stream from a camera that is being augmented by Virtual Reality components added into the video, Mixed Reality goes one step further by enabling the user to view a real physical object and see Virtual Reality superimposed on it.



STEP 1. SELECT THE SECTION  
YOU WANT TO LEARN MORE ABOUT

## INDEX



PAINT



HARNESS ASSEMBLY



MECHANICAL ASSEMBLY



TRANSFORM

PROJECT UNLIMITED PAINT SCHEMES  
AT THE PRESS OF A BUTTON.



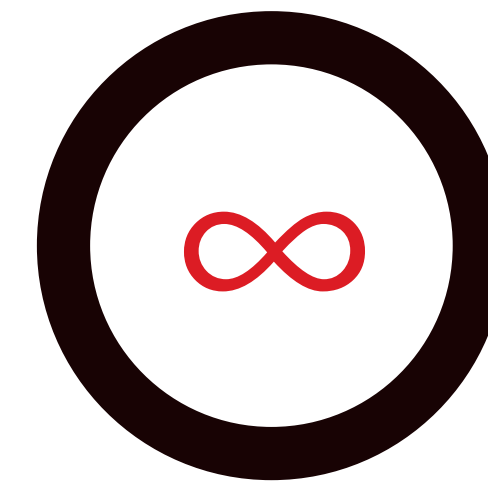
APPLY TO ANY FULL-SCALE  
PRODUCTION VEHICLE.



REDUCE  
MASKING  
TIME



INCREASE  
PRECISION



## CONSISTENCY AT SCALE

Achieve better results faster and at a lower cost. ProjectionWorks enables you to easily project complex paint schemes directly onto any 3D contoured surface. Paint schemes are perfectly aligned to provide greater continuity across entire vehicle fleets.

Our easy to use software will let your clients visualize and sign-off on the final product before you even begin the masking process. This eliminates all the guesswork, rework and inconsistencies with paint masking; saving you valuable time and money.



# HARBINGER

## MODERNIZE ASSEMBLY

ProjectionWorks simplifies the process of building wire harnesses by projecting step-by-step instructions directly onto the harness board.

Projection grants the unique ability to use rapidly reconfigurable harness boards, eliminating the need to print or store harness boards.



# KEY FEATURES

UP TO  
**70%**  
INCREASE EFFICIENCY

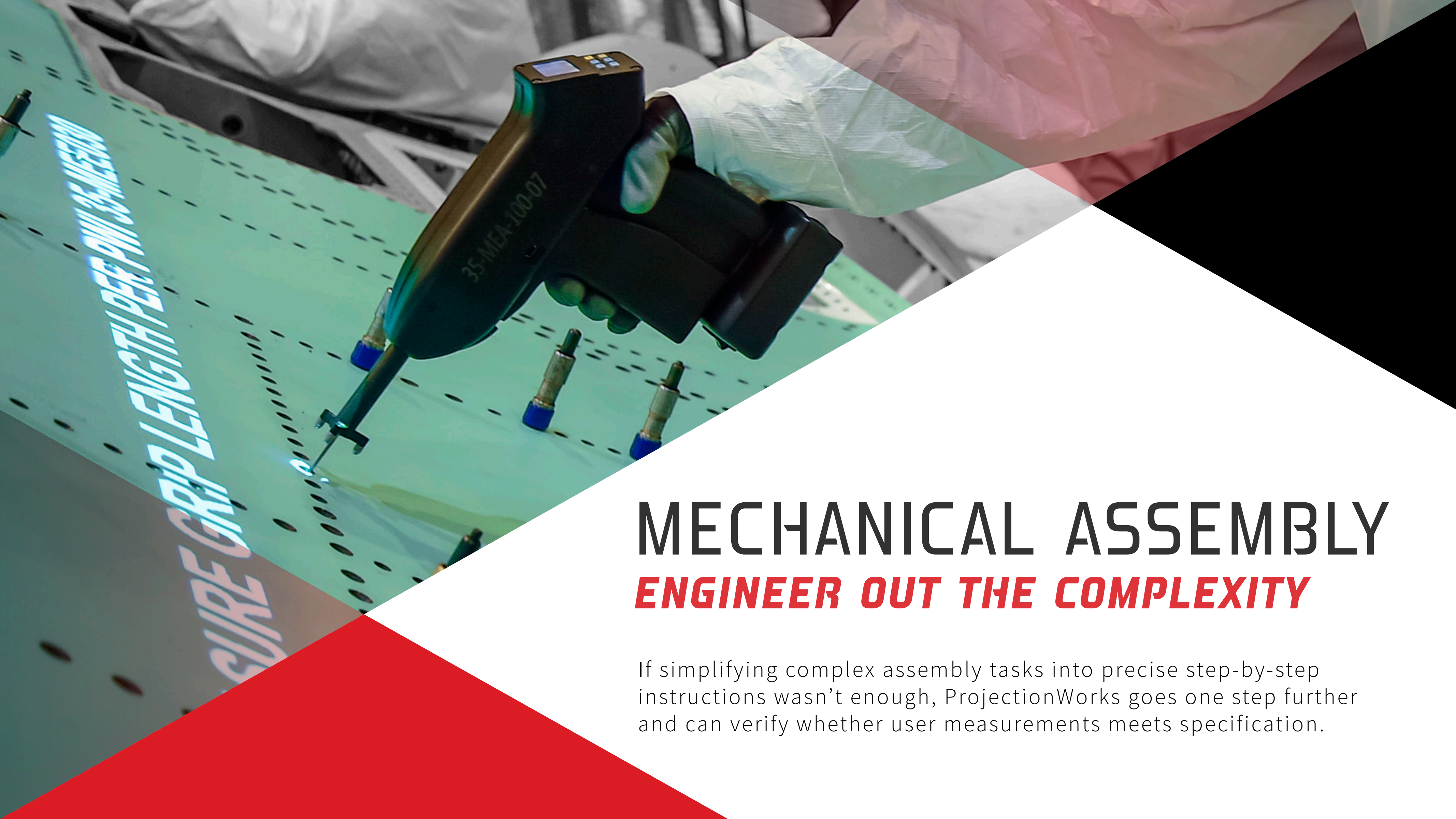
4

1. Reduce harness rework due to human error.
2. Eliminate wasted space storing harness boards.
3. Easily distribute changes to work instructions or board layout.
4. Seamlessly integrate with Zuken's Harness Builder.

UNLOCK MAGNETIC  
RECONFIGURABLE  
HARNESS BOARDS

Part Number: 04034-20-  
Feature ID: W472A-20-4





# MECHANICAL ASSEMBLY

## ***ENGINEER OUT THE COMPLEXITY***

If simplifying complex assembly tasks into precise step-by-step instructions wasn't enough, ProjectionWorks goes one step further and can verify whether user measurements meets specification.



# THE MOST POWERFUL TOOL IS KNOWLEDGE.

When assemblers have persistent access to knowledge provided by an **mixed reality** display increased quality and faster assemblies become **actual reality**.

AVERAGE EXPECTED RESULTS

INCREASE

71%

PRODUCTIVITY

Boosting performance of your least experienced worker increases productivity of the entire team.

69%

STANDARD  
DEVIATION

REDUCE

92%

REWORK