

THE POWER OF COLLABORATIVE KNOWLEDGE

EVERYTHING RELATING TO DESIGN AND MANUFACTURING ENGINEERING IS IN FLUX: OEMs now more than ever routinely plug into global talent pools on an as-needed basis to augment capability and control labor costs. Product development cycles are accelerated with the goal of significant cost reduction. Powerful simulation software applications eliminate the need for expensive trial and error validation testing. Designs are put to the test months before physical components are ever produced. Equipment requirements and cost estimates must be defined as a precondition for every proposal. We are an extension of our customer. Perfect workflow is within reach. Development cycles get shorter yet quality and efficiency continue to improve.

WESS is the first truly single source design, engineering, sourcing, and execution solution for manufacturers around the globe. More than a partner, we are the essential collaborator. Beginning with the initial idea and progressing to launch and sustained production, WESS delivers inherent quality, durability, and performance with measurable cost reduction to our customers.

CONCEPT

DESIGN & ENGINEERING

PRODUCT ENGINEERING

PROTOTYPE & TEST

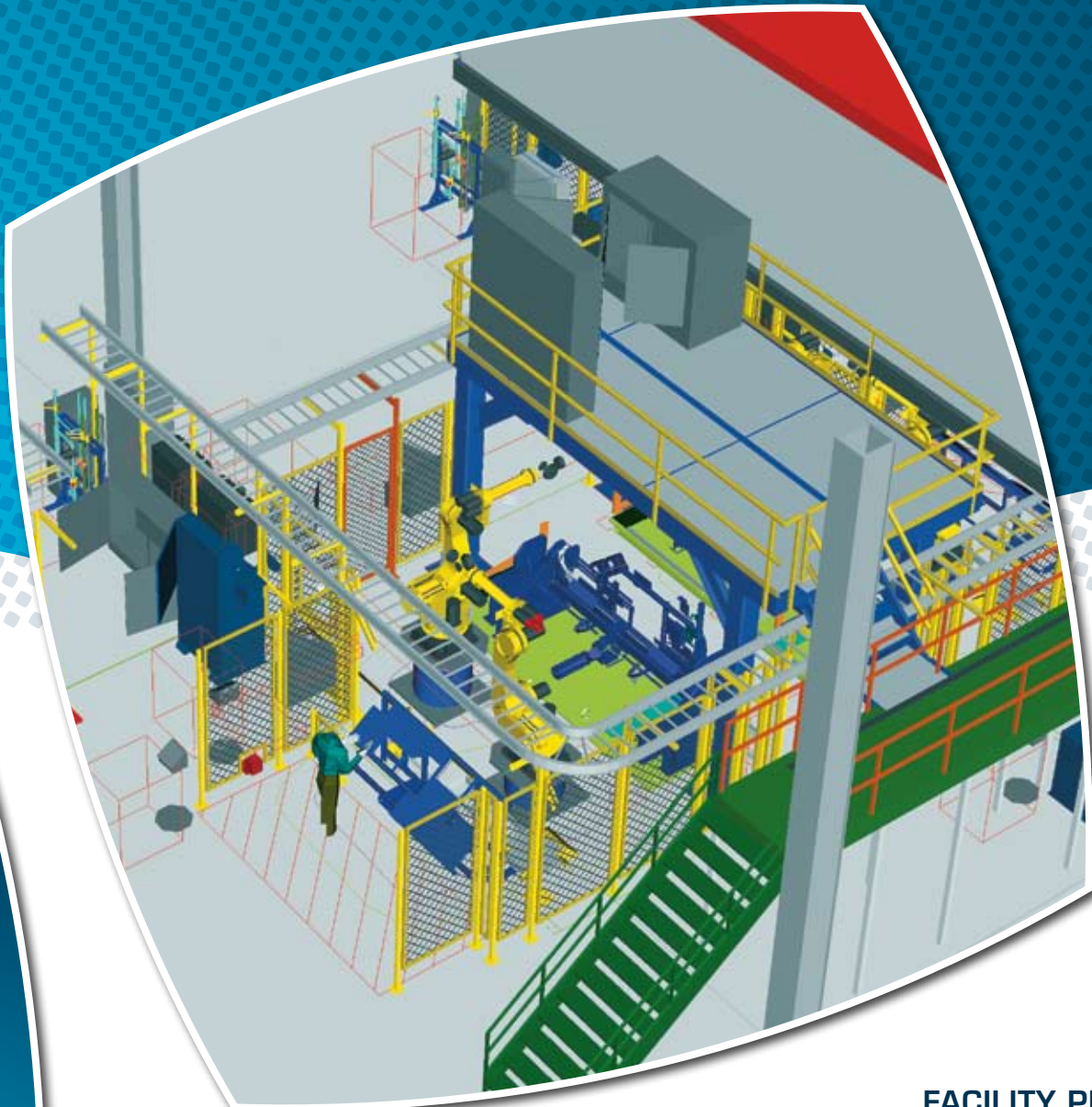
MANUFACTURING

QUALITY

SOFTWARE SOLUTIONS

**PROFESSIONAL
RESOURCES**

NOTHING BUT THE BEST, BY DESIGN



CONCEPT

FACILITY PLANNING

FACILITY PLANNING

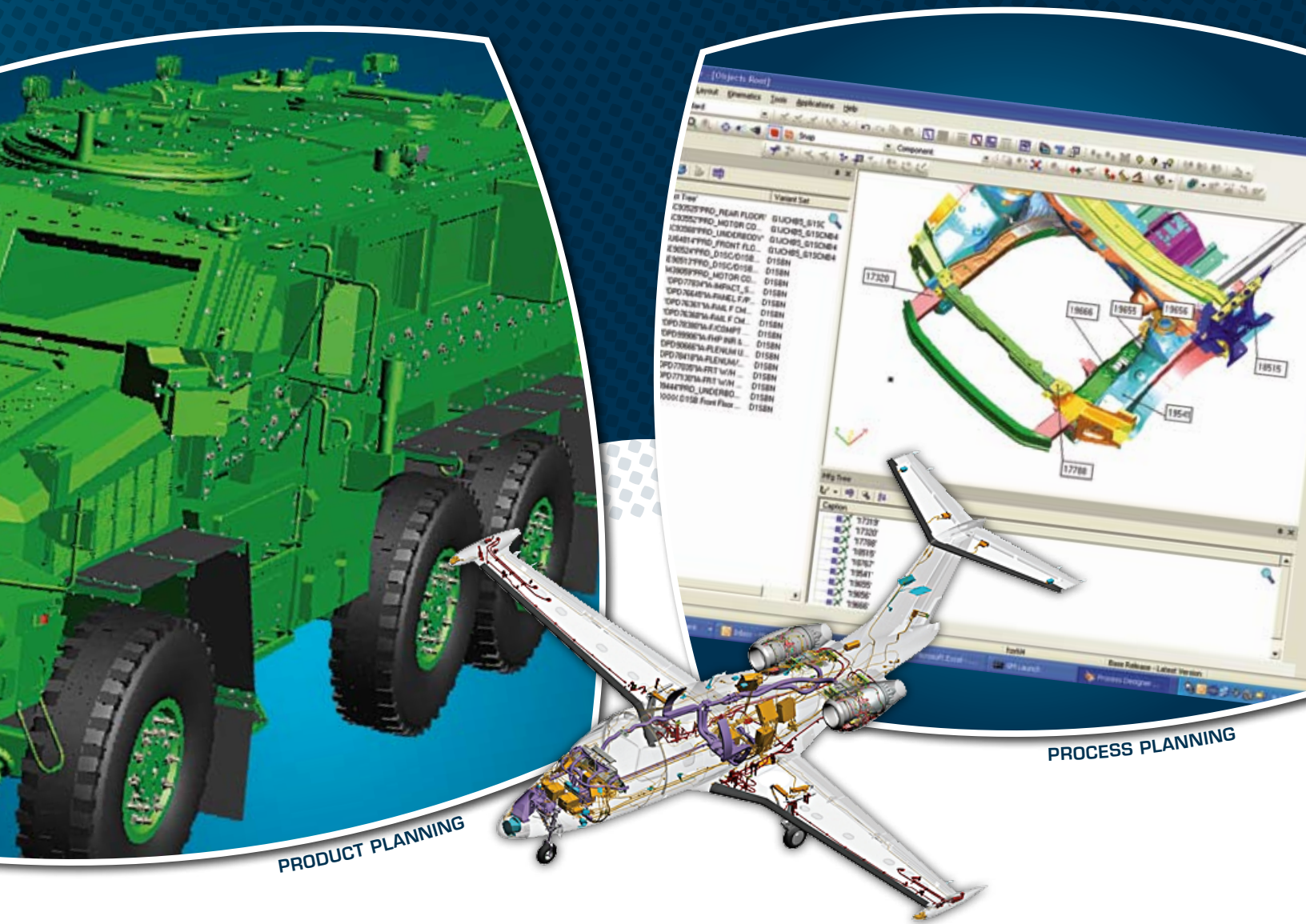
PROCESS PLANNING

PRODUCT PLANNING

CONCEPT PLANNING

LASER & WHITE LIGHT SCANNING

HELPING CUSTOMERS REALIZE DRAMATIC COST REDUCTIONS WITH MEASURED RESULTS.



A WINNING CONCEPT BEGINS WITH AN IDEA THAT QUICKLY TRANSFORMS INTO A MANDATE: Manufacture the next best thing. Make it fit within the existing infrastructure. Remain flexible. Cut the development cycle by half. Use a fraction of the customary resources. Enhance planning to include actual costs of implementing the entire production process. Coordinate efforts among a diverse group of domestic and international assets. Concentrate on internal priorities and utilize outside specialists to assist with program execution.

WESS is the total program life cycle support partner helping customers realize dramatic cost reductions with measurable results. Comprehensive planning and the coordination of diverse assets are crucial to success. WESS understands the concept stage is the foundation of all future efforts. Efficiency and productivity are anticipated functions by design.

CAPABILITIES ON DEMAND



PRODUCT ENGINEERING



ELECTRICAL ENGINEERING

ONCE ALL OF A PROJECT'S PARAMETERS, OBJECTIVES AND CONSTRAINTS HAVE BEEN DEFINED AND SPECIFIED, THE TIME HAS COME TO RAMP UP DESIGN AND ENGINEERING ACTIVITIES. OEMs no longer need to maintain massive staff levels for bringing multiple complex projects simultaneously to fruition single-handedly. Why should they? With a heavy concentration of best-in-class manufacturing engineers and the facilities to support them, efficient workflows and off-site interdisciplinary design and engineering resources are imperative to success. Customers now are able to reap the benefits of specialization without incurring the costs.

WESS stands ready to provide the design and engineering assets required to bring concept development to the next phase. Over 200 designers and engineers utilize more than 300 seats of the leading CAD and CAE applications. WESS provides teams of specialized engineers, designers, program managers, and the IT infrastructure it takes to bring complex programs together across global manufacturing networks.

OVER 200 DESIGNERS AND
ENGINEERS UTILIZE MORE THAN
300 SEATS OF THE LEADING CAD
AND CAE APPLICATIONS.



MECHANICAL ENGINEERING



**ELECTRICAL
ENGINEERING**

**MECHANICAL
ENGINEERING**

**MANUFACTURING
ENGINEERING**

FLUIDS ENGINEERING

PRODUCT ENGINEERING

PROCESS ENGINEERING

SYSTEMS ENGINEERING

DESIGN & ENGINEERING

VIRTUAL SIMULATION ACCELERATES VALIDATION



PROCESS ANALYSIS



ERGONOMIC STUDIES

PROTOTYPE & TEST

VIRTUAL PROTOTYPING
ROOT CAUSE ANALYSIS
PROCESS ANALYSIS

PRODUCT DEVELOPMENT
SOFTWARE DEVELOPMENT
VIRTUAL SIMULATION
TESTING & VALIDATION
ERGONOMIC STUDIES

A TRUE PARTNER IN THIS ENVIRONMENT IS ONE WHO IS ABLE TO EFFECTIVELY TEST AND VALIDATE THROUGHOUT THE ENTIRE DEVELOPMENT INTERVAL.



TESTING & VALIDATION



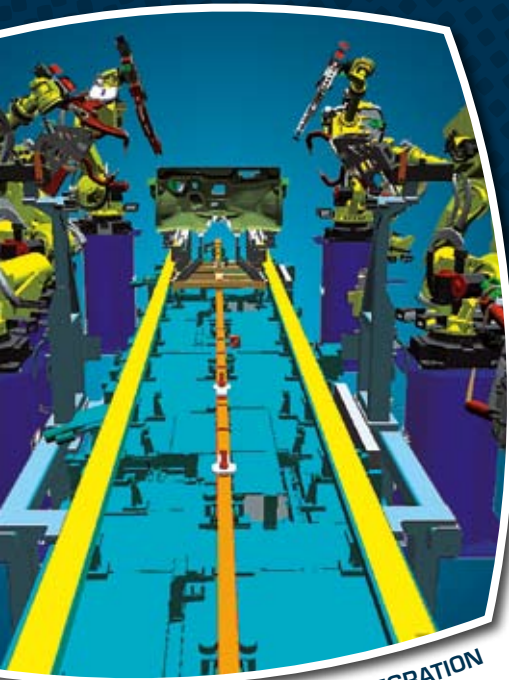
ROOT CAUSE ANALYSIS

ENGINEERED SYSTEMS AND COMPONENTS ULTIMATELY PROGRESS TOWARD FINAL EXECUTION.

Cost savings begin as the conceptual transforms into the actual. It is imperative for the integrity of the combined product design and manufacturing direction to be proven every step along the way. No longer dependent on physical prototypes in the beginning stages, preliminary analysis now takes place in the virtual world. The development cycle shrinks based on the dynamic demands of the marketplace. A true partner in this environment is one who is able to effectively test and validate throughout the entire development interval. Every step in development is one toward final execution.

WESS doesn't just build virtual and physical prototypes. **We also create entire virtual workspaces, assembly lines, material handling techniques, and literally everything else you can imagine.** We also establish and analyze human safety and ergonomics in this virtual environment. WESS works in conjunction with our customers to figure it all out before one dime is spent on equipment and components.

CUSTOM SOLUTIONS EFFICIENTLY APPLIED



SYSTEM INTEGRATION



SOURCING & PROCUREMENT



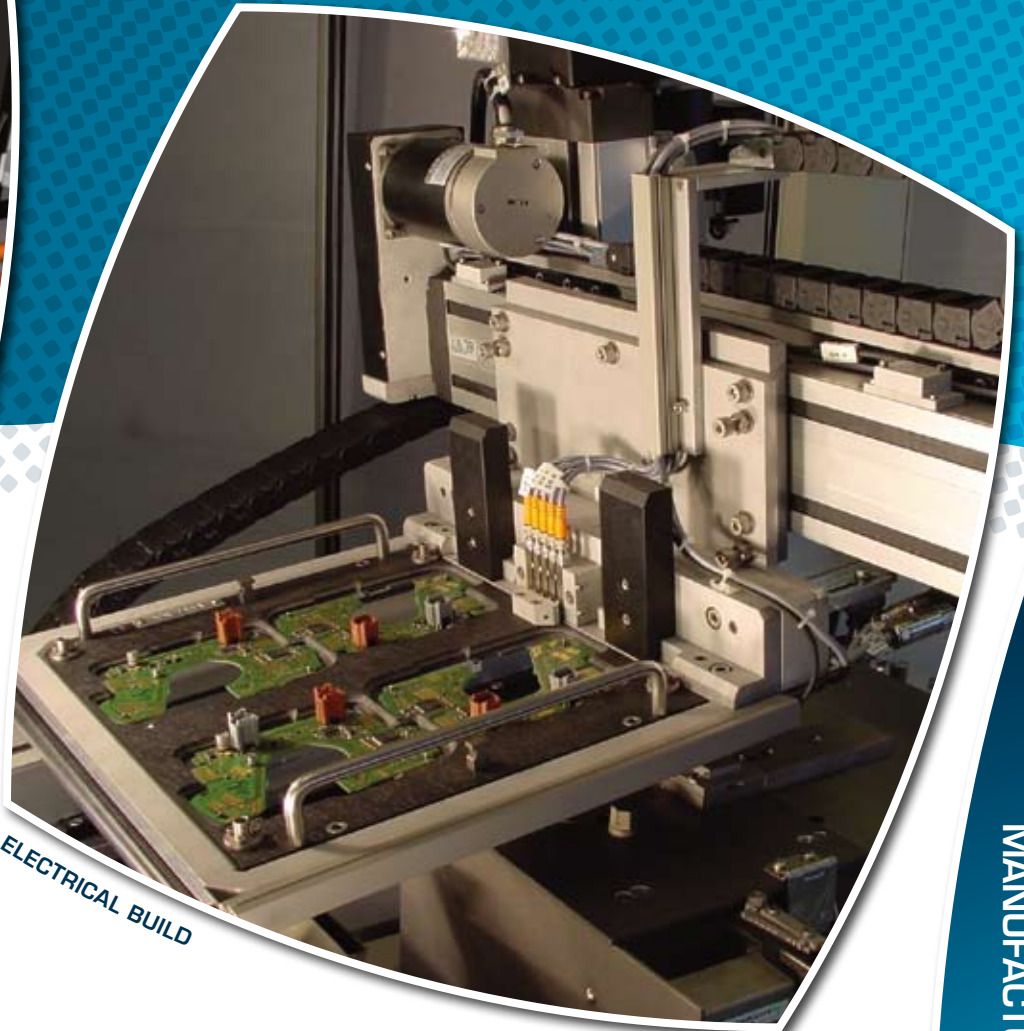
CUSTOM SOLUTIONS

SUCCESSFUL TESTING AND VALIDATION LEADS TO EFFICIENT MANUFACTURING AND PRODUCTION.

Machines are designed and the electrical, mechanical, hydraulic, and pneumatic schemes are laid out. All system components are specified, put out to bid, and sourced. The equipment enters the build stage and the need for process experts becomes acute as the time comes to get the lines up and running. Installation and programming is key to success. Teams of specialized technicians descend on the facility and the combined efforts of all of those involved begin to materialize. Custom solutions designed specifically for the task at hand all fall into place. What was virtually derived is now efficiently applied.

WESS is your complete manufacturing partner. We instinctively focus on our customers' ultimate objectives from day one. WESS strives to cut costs without sacrificing quality. WESS provides manufacturing and assembly services that are UL and CUL compliant as well as ISO and Q1 certified. In summary, customers benefit most when WESS is involved from the very beginning of a project.

WHAT WAS
VIRTUALLY DERIVED IS NOW
EFFICIENTLY APPLIED.



ELECTRICAL BUILD

MANUFACTURING

SYSTEM INTEGRATION

SYSTEM INSTALLATION

PROGRAM MANAGEMENT

SOURCING &
PROCUREMENT

CUSTOM SOLUTIONS

MACHINE BUILD

MECHANICAL BUILD

ELECTRICAL BUILD

QUALITY THROUGHOUT THE ENTIRE DEVELOPMENT CYCLE



LASER & WHITE LIGHT SCANNING

QUALITY

CONTINUOUS
IMPROVEMENT

DIMENSIONAL ANALYSIS

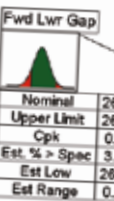
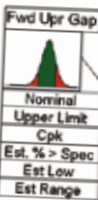
CHECKING FIXTURE
DESIGN & BUILD

PREVENTIVE
MAINTENANCE
PROGRAMS

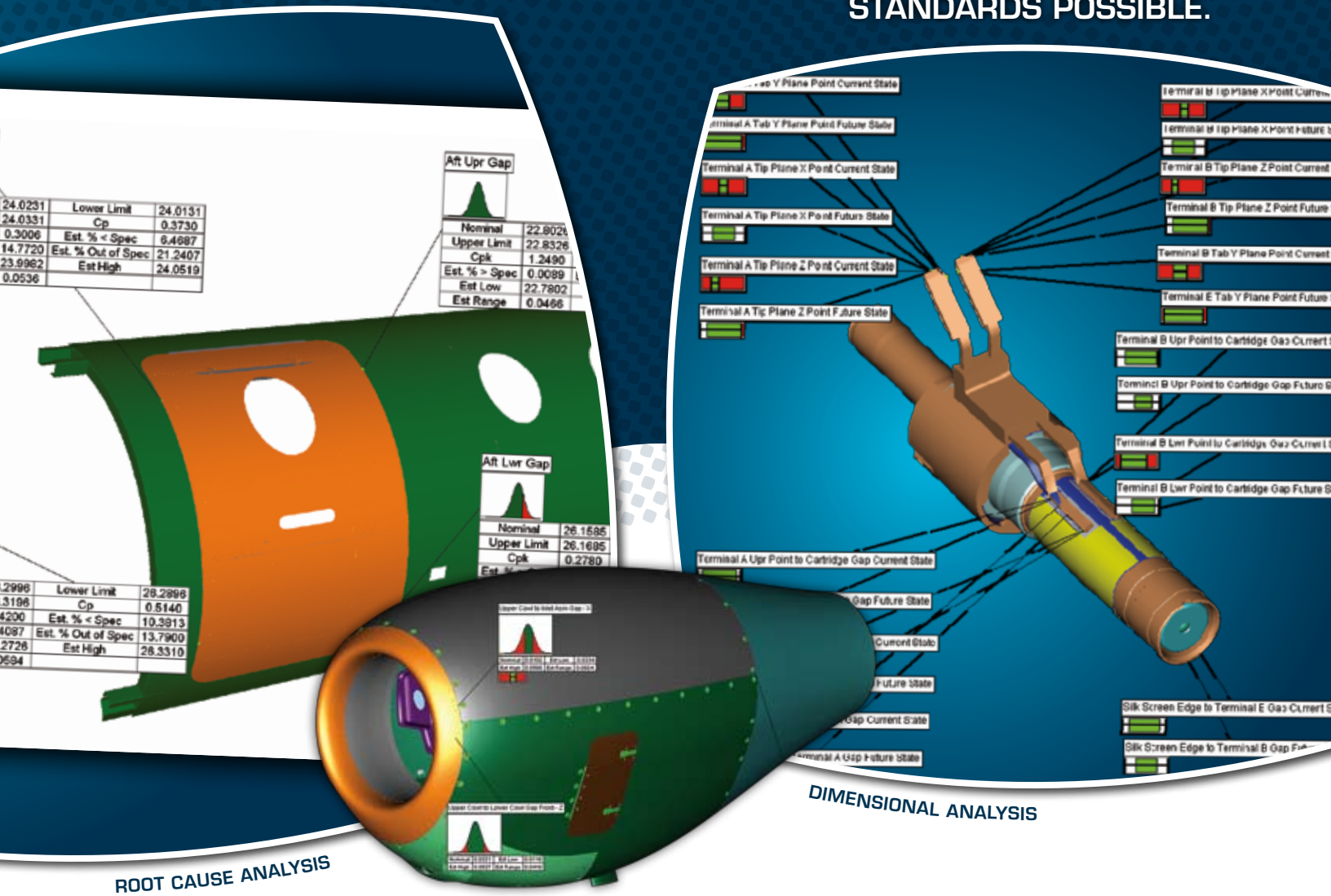
PROCESS & DESIGN
OPTIMIZATION

LASER & WHITE
LIGHT SCANNING

ROOT CAUSE ANALYSIS



CONSTANT EVALUATION AND PREVENTIVE MAINTENANCE ARE CRUCIAL TO CUTTING COSTS, INCREASING UPTIME, AND MAINTAINING THE HIGHEST QUALITY STANDARDS POSSIBLE.



ROOT CAUSE ANALYSIS

DIMENSIONAL ANALYSIS

QUALITY IS NOT AN ANOMALY: IT IS A FUNCTION OF COMPREHENSIVE PROCESSES AND STRICT ADHERENCE TO OPERATIONAL PROTOCOLS. When outside talent is required to get the job done, there is no time to bring new team members up to speed. A partner is required that is able to operate as an extension of the organization. What was right in the past must be improved for the future. Design and engineering must translate across platforms optimized for implementation around the globe. Constant evaluation and preventive maintenance are crucial to cutting costs, increasing uptime, and maintaining the highest quality standards possible.

WESS has long maintained a comprehensive understanding of and operates within the standardized engineering processes and protocols of our customers' organizations. Our personnel embrace practices that promote teamwork. We believe even the best systems can be continuously improved. Constant optimization promotes systemic evolution with the goal of increasing quality, efficiency, and productivity.

RIGHT PEOPLE. RIGHT PROCESSES. RIGHT TECHNOLOGIES.



NEW PROGRAMS AND PRODUCT LAUNCHES REQUIRE SIGNIFICANT CAPITAL INVESTMENT.

Pooling together the software solutions and workstations is a complex endeavor. Matching these investments with the right technicians is a challenge. Constantly training personnel in the ever changing world of software applications, programming languages, and qualifying for required certifications simply is no longer feasible. Collaboration is often the best course of action, especially in light of rapid development cycles. A partnership with a highly specialized, interdisciplinary organization of industry professionals with the tools and infrastructure needed is imperative, now more than ever.

WESS stands by you with the designers, engineers, hardware and software available on-site or off-site. WESS complements each of our service offerings with the professional resources and software solutions required to get the job done. **Contact us today to begin the conversation about how WESS is perfectly positioned to assist you.**

WESS COMPLEMENTS EACH OF OUR SERVICE OFFERINGS WITH THE PROFESSIONAL RESOURCES AND SOFTWARE SOLUTIONS REQUIRED TO GET THE JOB DONE.



PROFESSIONAL RESOURCES & SOFTWARE SOLUTIONS

PROGRAM/PROJECT MANAGERS

MULTIDISCIPLINARY ENGINEERS

CAD DESIGNERS

ON-SITE/OFF-SITE GLOBAL SOLUTIONS

TECHNOLOGY TRANSFERS TRAINING

OVER 300 SOFTWARE SEATS



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