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Rick Zaitonia,  
Project Manager,  
KUKA SYSTEMS

## KUKA SYSTEMS OUTFITS ENTIRE MANUFACTURING FACILITY WITH CUSTOM WORK PLATFORMS

INDUSTRY  
Aerospace Manufacturing

COMPANY  
KUKA Systems Aerospace Group

PRODUCT  
Custom Designed Work Platform System

### CUSTOM WORK PLATFORM SYSTEM for a high-profile aircraft manufacturing line

#### EXECUTIVE SUMMARY

KUKA Systems Aerospace Group needed a custom work platform system for use in a high-profile aerospace manufacturing line. Rather than tie up their resources designing and building it themselves, they contracted the project to Spika. Working closely with the KUKA team, Spika provided 30 work platform systems for the project, which were based on 15 different designs. The project was comprised of over 90 modules.

KUKA Systems, part of Germany-based KUKA AG, is an international supplier of engineering services and flexible automation systems for the Automotive, Aerospace, Energy, and Industrial Solutions segments. Some 5,800 employees worldwide work on ideas, concepts and solutions for automated production and the provision of products and services for virtually all tasks in the industrial processing of metallic and non-metallic materials. The range is marketed internationally via subsidiaries and sales offices in Europe, America and Asia. KUKA Systems North America LLC, based in Sterling Heights MI, is responsible for the North American business and the worldwide aerospace group. The KUKA Systems Aerospace Group focuses on all aspects of tooling and assembly processes for aircraft manufacturing.

15 DIFFERENT DESIGNS | 30 WORK PLATFORM SYSTEMS | OVER 90 MODULES

## Sourcing Custom Mobile Platforms

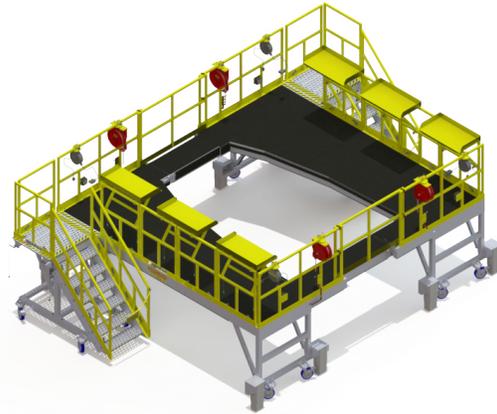
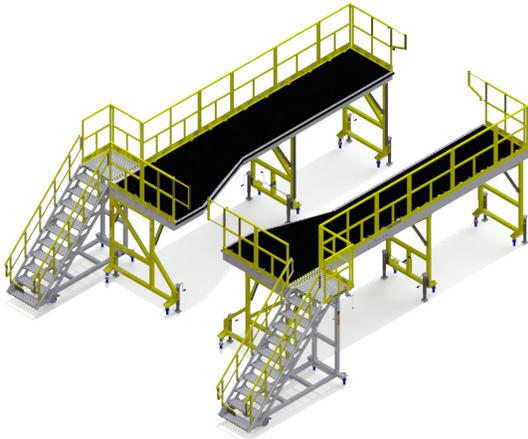


A few years ago, KUKA Systems Aerospace Group secured a contract to develop the manufacturing facility for a high-profile helicopter. Included in the project was the requirement for a series of work platforms designed to interface precisely with the helicopter and tooling at various stages of production.

While existing work platforms were available, they were cataloged, and KUKA needed something custom-designed. Additionally, most of standard work platforms were built of steel and fixed in place. KUKA needed platforms that were lightweight and mobile.

KUKA had the design capability to build the work platforms they needed, but the project involved coordinating and implementing over 600 tools. Instead of tying up their resources in designing and manufacturing work platforms, they decided to hire experts to work that part of the program for them.

They researched potential suppliers and performed site visits to ensure the companies could meet the requirements of the project. Ultimately they selected Spika to design and manufacture all the platforms required in the manufacturing line. "Spika has the production capabilities to take care of volumes, quality control systems in place to put out a good product, and a management team to help us with the designs for different manufacturing facilities," said Rick Zaitonia, KUKA Project Manager for the program.



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## Partnering with Spika



For the next three years, Spika worked with KUKA and KUKA's customer to design and manufacture work platforms for the various stages of assembly. Overall, Spika provided more than 30 work platform systems for the project, which were based on 15 different designs. The project was comprised of over

90 modules.

The platforms utilized several complex designs, including:

- Electrically controlled, dual-stage actuation for significant height adjustability
- Decks with trap doors which allowed the aircraft to pass through the platform when it was raised or lowered; the decks were equipped with sensors and limits to ensure the platform could not be lowered past a specific point with the trap decks down
- Work platform sections that could be removed and reattached to larger sections for different configurations during assembly
- Removable railings that could be used in multiple platform configurations
- Electric and electric over hydraulic floor locks to remove the working load from the casters
- Extensive air and electric supplies plumbed throughout.

## Achieving Success Together

Spika worked with KUKA to accommodate to the updates and improvements to the system throughout the process, and both KUKA and KUKA's customer were happy with the outcome.

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