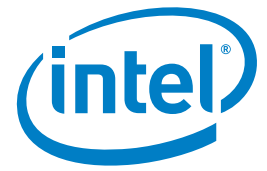


## CASE STUDY

### Intel® Solid-State Drives

Manufacturing

Mission-Critical Computing



# Sowing the Seeds for Greater Efficiency

## Agricultural equipment manufacturer brings designs to life faster with Intel® Solid State Drive-powered workstations

France-based KUHN is one of the world's leading farming machinery manufacturers, prioritizing the delivery of the highest quality products. When the workstations on which it runs its core product-design software began to run slowly, KUHN sought a more reliable, higher-performance solution. A comparison between a traditional hard-drive-based workstation and one powered by an Intel® Solid-State Drive (Intel® SSD) found that the latter delivered 20 percent better performance for the design application. KUHN has implemented 35 new workstations based on Intel SSDs, and plans to roll out more to other departments.



“The design team has been very happy with their new Intel SSD-based workstations. They can get more done every day now that they are not battling with sluggishness in the application, and this means they can create new designs faster as well.”

Jean-Francois Wagner,  
IT asset manager, KUHN

### CHALLENGES

- **Speed up design.** Ensure designers and engineers can work as efficiently as possible when bringing new ideas to the marketplace
- **Support user experience.** Keep core software running smoothly with minimal downtime or waiting for applications to respond

### SOLUTIONS

- **Model comparison.** Core application was run on both Intel SSD and SAS hard-drive-based workstations to compare performance and responsiveness
- **Switch to SSD.** Workstation powered by Intel SSDs delivered 20 percent better performance

### IMPACT

- **Greater efficiency.** Workstations can now boot-up faster and handle more demanding, complex designs
- **Happy users.** Engineers no longer spend time waiting for slow workstations, allowing them to focus more on their core roles and increase productivity

### Standards to Maintain

KUHN has a history of commitment to its customers that goes back nearly 200 years. The company has filed 1,600 patents over the years, and builds 60,000 farm machines annually, which support a range of farming activities including plowing, soil preparation, seeding, spraying, grass harvesting and animal feeding. A philosophy of delivering the highest quality products to farmers has enabled the company to build a reputation as one of Europe's premier farm machinery manufacturers.

It is no surprise, then, that KUHN places great importance on the capabilities and performance of its product designers and engineers. These teams deliver the innovative products that keep the company at the head of its industry. The faster they can bring new ideas to the marketplace, the better the competitive position KUHN can maintain. Making sure they have the best possible tools to do their job is of direct importance to the success of the business.

### Needing the Right Equipment

The core design application at KUHN, which the 35-strong product design team spends the majority of its time using, is called PTC Pro/ENGINEER\*. As the workstations they used began to age, designers had started to notice that the application's performance and responsiveness were not what they used to be.

“Many of the designs the team works on are highly complex,” explains Jean-Francois Wagner, IT asset manager, KUHN. “Often, a user would try and open a design only to find it took minutes to open. Even turning on the workstations in the morning could be painful, with it not being unusual to take about five minutes for them to boot up.”



## Farming machinery leader fast-tracks product design with Intel SSD-powered workstations

Of course, a designer without his plans is as ineffective as a farmer without a tractor, and this situation could not continue. Users were fast becoming frustrated and efficiency was suffering, so KUHN looked for a solution.

"We needed workstations that would reliably cope with the heavy burden placed on them," says Wagner. "Faster response times for our core application were essential, as was the ability to boot-up quickly. We were willing to investigate a variety of possibilities to ensure that we ended up with the best solution to meet our users' needs."

### Careful Evaluation

KUHN decided to run a comparison of the traditional hard-drive technology it currently used against a solid-state drive (SSD) option. "We wanted to ensure the claims made about SSDs in terms of faster response speed and boot-up time would be true for us," recalls Wagner.

The team installed a 160GB Intel SSD in one HP Z400\* workstation, and a 300GB SAS hard-drive in another. Both were set to run the PTC Pro/ENGINEER application and the results were compared. After a few rounds of tests, KUHN was satisfied with the reliability

of its results. It found that the application performed 20 percent<sup>1</sup> faster when running on the Intel SSD-powered workstation, enabling it to keep up with high-demand use, even when dealing with complex designs.

Besides running the core application faster and more reliably, KUHN found that the workstation equipped with the Intel SSD also booted-up faster and ran other applications (such as the Microsoft Office\* suite) more smoothly.

### Quicker to Market

Having witnessed these improvements on the test machine, KUHN purchased 35 new HP Z400 workstations powered by Intel SSDs. "The design team has been very happy with their new equipment," comments Wagner. "They can get more done every day now they are not battling with sluggishness in the application, and this means they can create new designs faster as well."

Wagner and his team are now eager to extend the benefits of these new SSD-based workstations to other areas of the business, and plan to purchase another 60 machines for use by KUHN's research and development department.

### Spotlight on KUHN

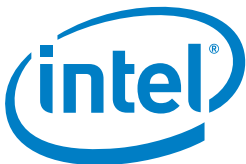
Created in 1828 by Joseph Kuhn as a modest village forge, KUHN was an early specialist in the production of scales and weighing apparatus. It has since evolved to offer high-quality machinery for all aspects of farming and agriculture. Headquartered in France, KUHN employs approximately 4,200 people worldwide, with sites in France, the Netherlands, the U.S. and Brazil.

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