

# ZeroSixty Honored in Fast Company's 2024 Innovation by Design Awards

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ZeroSixty, and the design studio's work for FarmWise, has been named an honorable mention in the Artificial Intelligence category in Fast Company's 2024 Innovation by Design Awards. Celebrating 13 years of Innovation by Design, the 2024 honorees include nearly 500 projects, products, and services from Pentagram, the Frank Lloyd Wright Foundation, Canva, and others.



FarmWise is an intelligent agricultural equipment business focused on building the next generation of technology-driven vision systems that power tomorrow's farm equipment with ultra precision. Vulcan is FarmWise's new weeding implement that packs

cutting-edge computer vision into a lightweight, open frame for vegetable cultivation. It's powered by the Intelligent Plant Scanner, a high-performance, tightly integrated combination of camera, lighting, and computation elements that can identify, learn, scan and operate precise actuation control hardware & software for reliable and consistent sub-inch weeding accuracy in the traditional crop mix of the Western US vegetable industry.

Farmwise called on ZeroSixty, a market leading experience design & innovation studio, to design & develop their next generation Vulcan HMI interface, connecting the tractor driver with FarmWise's precision weeder – and creating a robust system of controls & connectivity to help drive cultivation precision, data collection, smooth operations, seamless interactivity and a future–proof platform to drive ongoing & future innovation.

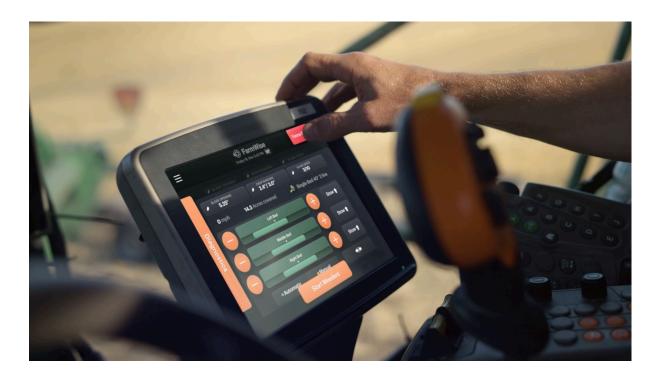


### An Insight-Driven Design Approach:

ZeroSixty's design approach illuminated the unique nature of the HMI relationship and where new and emerging behaviour existed. Founders Thomas Moeller & Kalpesh Rathod engaged in deep analysis of user needs and primary use cases, through prototyping & testing intricate control scenarios to ensure ease of use, flexibility and agility in controls, and operational simplicity.

This simplicity is what truly drove refinements and iterations – a proof of validation and readiness that revolved around the control of the physical equipment, context and continual control interaction and optimisation. The process took the team to remote

fields with prototypes and conversations with farmers. The result is a successful companion to the physical equipment, and a valuable control platform that focuses on impact.



# **Challenges:**

ZeroSixty, working in close collaboration with the Farmwise team, encountered numerous challenges designing a new platform for this type of industry and application, as in many ways it represents a new category and new relationship between human and machine. The intelligence layer, the numerous environmental variables – and a wide range of crop types, field configurations demanded a deep and comprehensive layer of control specificity, all in a hyper-usable UI that allowed operators to access and adjust everything in a simple, efficient, and intuitive interface. The level of control refinements offered by the Vulcan precision weeder in terms of weeding parameter adjustments (blade opening width, blade opening speed, margins) is extremely granular and could easily be overwhelming for any operator.

Working with powerful renderings and easy-to-understand imagery really allowed the team to take a complex system and turn into a very simple and straightforward experience. Thanks to the simplicity of the user interface, FarmWise's first customer operator trainings were impressively short: it took, on average, a day for a customer operator to go from having no knowledge of the Vulcan precision weeding implement and its capabilities to being completely autonomous, operating the equipment on their own.

ZeroSixty employed a disciplined test-and-learn approach with a full end-to-end non-functional prototype early in the process to get the platform into operators' hands, in the field. This took both the design & engineering teams to remote rural areas, speaking with farmers and equipment operators to get a better sense of typical and edge-case scenarios, operational priorities, and the natural nuances that come with designing and using a system with complexity.

These iteration and refinement cycles were critical in the product design process, driving design decisions through data and feedback – translating into a more informed, strategic solution with broader, more holistic product experience refinements – across both the physical machinery, the technology powering it, and the UX/UI that has been designed to control the entire platform.

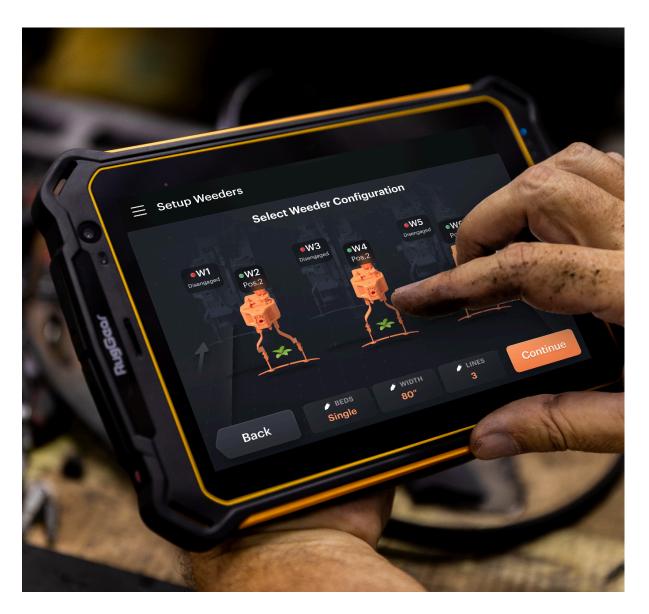


#### **Leveraging Artificial Intelligence:**

The entire Vulcan platform is powered by Al and machine learning that continually adjusts, senses, and analyses real-time crop and cultivation data. The use of intelligence and deep refinement of a machine learning model are critical components to the ongoing precision and accuracy of the Vulcan platform. This is about leveraging emerging technology for analysis and accuracy purposes, leveraging new and forward-looking tools to learn and decipher complex data sets into refined operational algorithms. In the FarmWise Vulcan, machine learning is employed to detect crops from weeds and beneficial plants and locate the plant's meristem, enabling extremely precise (sub inch) weed removal using soil disrupting blades. FarmWise has accumulated one of the largest plant databases currently serving a concrete use case creating value for

farmers. ZeroSixty has helped enable and bring to life a powerful platform that makes control, management and operation of the Vulcan machinery a seamless part of farming operations, harnessing the power of Al and ML into a true market leading product.

To merge this innovative and highly sophisticated technology out in the field is a fascinating merging of worlds. And the early data and feedback received, shows the impact and real-world benefits are significant.



## Impact in the Field

"Wow, I can really tell the person who designed this user interface deeply understands agriculture and the use case of precision weeding and cultivation in vegetables"

Clay Mitchell, Founding Partner at Fall Line Capital, a FarmWise investor.

"The UI is awesome. I even see applications for it far beyond guiding the tractor driver to operate with the optimum settings. I could see this creating huge benefits for field supervisors by giving them the ability to monitor productivity and job quality from a distance, if they were provided with remote access to it".

JOSH ROBERTS, DIRECTOR OF ORGANIC AG OPERATIONS, TAYLOR FARMS

"This machine does everything I thought it would. It is going to become a workhorse for me, a key asset in my equipment fleet and for my operation."

TYLER JOHNSON, GROWER, AMIGO FARMS

"We've been working with FarmWise for many years and we're excited about this new Vulcan generation. The technology has proven itself."

LARRY SANTOS, SENIOR FARM MANAGER, TAYLOR FARMS









## **About ZeroSixty**

ZeroSixty is a multidisciplinary design studio that collaborates with partners globally to deliver high-quality, high impact products, services, and experiences that move people, businesses and brands forward.

ZeroSixty is led by award-winning designers Thomas Moeller and Kalpesh Rathod, who recognise that what businesses need from traditional agencies and large consultancies has changed. With a belief in the business of design: creating category leading design & execution, and in the design of business: creating new value through transformation of the old – ZeroSixty works within multiple industries helping clients to reimagine, redesign, redefine, and revolutionize.

With a focus on business results and experiences that have impact in the real world, ZeroSixty's capabilities span multiple disciplines to bring visions to market. They include Experience Strategy, Product Design, Digital, Brand, and Industrial Design.

Recent client partnerships include a next-gen spatial UI video game for a popular TV series and popular network streaming company, a 'creator community' AI platform, a real-estate tech platform, HMI automotive interfaces that leverage AI at the experience level, new global online identity for a leading aerospace company, an in-flight entertainment platform for the modern age, a new brand identity for a US facilities group, and digital interface design for connected kitchen appliances.

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## **About Fast Company's Innovation by Design Awards**

The Innovation by Design Awards, which can be found in the Summer 2024 issue of *Fast Company*, honor the designers and businesses solving the most crucial problems of today and anticipating the pressing issues of tomorrow. The competition, now in its 13th year, features a range of blue-chip companies, emerging startups, and promising young talent. It is one of the most sought-after design awards in the industry.

"This year's honorees show how essential creativity is to the process of innovation," said Brendan Vaughan, editor-in-chief of *Fast Company*. "It's inspiring to see how some of the best minds across industries are using design to shape our world for the better."

The judges include renowned designers from a variety of disciplines, business leaders from some of the most innovative companies in the world, and *Fast Company*'s own writers and editors. Entries are judged on the key ingredients of innovation: functionality, originality, beauty, sustainability, user insight, cultural impact, and business impact.

Winners, finalists, and honorable mentions are featured online, and winners and finalists are featured in the Summer issue of *Fast Company* magazine, on newsstands July 30, 2024.

To see the complete list, go to <a href="https://www.fastcompany.com/innovation-by-design/list">https://www.fastcompany.com/innovation-by-design/list</a>.

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