

Cal Poly Digital Transformation Hub

California Polytechnic State University

Challenge

Our challenge at the Cal Poly Digital Transformation Hub (DxHub) is to provide students with experience developing digital solutions to real-world problems by immersing them in the innovation process. We provide students from across all six colleges of the University with experiential hands-on learning opportunities. For many, this is their initial foray into the professional world, as well as their first experience working in cross-discipline teams to deliver solutions to customers at senior levels of government, education and nonprofit organizations.

Solution

As a campus-based innovation center, the DxHub team is comprised of Cal Poly employees and experts from Amazon Web Services (AWS), whom together educate and enable students to develop innovative solutions to seemingly intractable issues faced by public sector organizations. Our objective is to develop solutions that may not have been considered before.

The DxHub offers students training and resources on proven innovation methodologies, such as human-centered design, coupled with hands-on learning opportunities. Students work directly with subject matter experts from the public sector, as well as innovation and technical experts on ideation and the design of cloud-based solutions. Faculty also play a unique role, leading teams of students as an extension of their coursework, such as a business analytics fellowship with cloud practitioner training; as advisors on independent coursework, such as senior projects and master theses; and as DxHub staff, for example, an engineering professor on sabbatical, whom leads a series of space-related projects.

Learning Impact Outcomes

The DxHub model allows students to directly apply their academic subject matter to challenges affecting the world's citizens. Students further their mastery of a subject matter by applying it to problems experienced by customers, which enhances their abilities to graduate as better-qualified learners. DxHub staff also create customized learning opportunities for independent projects, such as a senior project or a master's thesis in which students select a specific challenge of interest that has been sourced by the DxHub from a public sector customer. The students gain an understanding of a customer's needs and the potential benefits of a solution in the real world as a launching pad for their careers. A number of students whom have worked with the DxHub have pursued careers in related industries, with employers such as Deloitte Consulting Cybersecurity, Salesforce, and Oracle.

Return on Investment

Measuring return on the DxHub investment is atypically done by weighing the value provided to students and faculty through educational experiences. As the world's first university-based innovation program powered by AWS, the DxHub has experienced a strong return on investment over the last two years in student achievement, value to employers, faculty involvement and overall expansion. The DxHub has created experiential learning opportunities for over 350 students, further supported by interactions with approximately 75 faculty members. Together the DxHub has been involved with 97 projects for over 50 organizations. The University-based cloud innovation center program supported by AWS and facilitated by the DxHub staff and students has significantly expanded to twelve locations around the globe. Importantly, these new centers provide further opportunities for student collaboration and exchanges in a global setting.