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ACTIVITIES (D5)

Knowledge management for space activities in the digital transformation age (2)

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Massachusetts Institute of Technology (MIT), United StatesDEVELOPING A COMMUNITY OF PRACTICE TO PROMOTE KNOWLEDGE SHARING ACROSS
THE GLOBAL CUBESAT INDUSTRY**Abstract**

The relatively low costs and short timelines associated with CubeSat development have promoted the accessibility of space and resulted in over 1000 CubeSats being launched to date. However, the success of CubeSat projects still depends on the availability of local expertise and an organization's ability to exchange knowledge. Inexperienced or geographically isolated groups are often left without the technical support required to complete their projects, and thus struggle to establish strong internal competencies. Meanwhile, those with existing knowledge bases fail to look outside their own membership to capitalize on the lessons learned from external projects.

The proposed method for sharing existing knowledge and promoting project success is the formation of a novel Community of Practice (CoP) for CubeSats, via an open-source web platform. Such a CoP allows individuals within the CubeSat industry to exchange and develop expertise collaboratively, while reducing the barriers of entry for inexperienced and remote organizations. This presentation describes an online CoP solution built to include project case-studies, documented best-practices, and anecdotal experiences from both successful and unsuccessful projects. To illustrate the importance of establishing public knowledge transfer practices at a global level, data was gathered from interviews with space industry professionals and students from around the world, where several common needs were identified. Through the creation of an international CoP composed of public information exchanges, the CubeSat industry can collectively learn, innovate, and share knowledge in an effective and accessible manner.