

STATEMENT OF PROGRAM

Facilities Management & Planning at the University of Nebraska at Kearney believes that embracing new technologies is one way to effect positive change on our daily processes. This search for innovation led to experimenting with 3D printing in late 2017. We felt the availability of affordable 3D printers had the potential to change the landscape of inventory management in facilities operations. 3D printing offers a unique solution to meet the demands for obtaining hard to purchase components of aging facilities. In addition to providing discontinued parts, 3D printing could drastically reduce the need for warehouse space and allow for solutions to problems previously thought to be unsolvable.

Challenges faced by our inventory and purchasing personnel include discontinued parts, long lead items, and limited warehouse space for stock. When parts are discontinued, substantial investments need to be made to replace the various systems in place. In many cases, simply having a single part could extend the life of the original system significantly. But, finite warehouse space leads to less than preferred stock levels. Likewise, long lead items can create excessive hardships on facility users and functions as they wait for necessary parts to arrive.

We began using 3D printing to help assist with these challenges. Instead of a warehouse full of parts, we hope to utilize an electronic library of 3D models to print parts on demand. We have developed several key parts that are currently being produced and installed across campus. In some cases, we are saving a modest amount in both time and money. In other cases, we are seeing significant savings in addition to substantial decreases in equipment downtime. To date, we believe this effort has been tremendously successful and have taken steps to expand the program, including academic collaborations that will help broaden our capabilities.

