This presentation will provide a snapshot of the creation, growth, and trajectory of 3D printing services at the Marriott Library. The Marriott Library’s 3D printing service has been in operation since August 2013, when the first printer was installed. The ProJet 160, made by 3D Systems, has printed several hundred unique items for students, faculty, and staff, and the service has been overwhelmingly popular. Our printer fleet has now grown to include four Lulzbot TAZ 4 printers and a Makerbot 5th Generation printer. Our 3D printing service has been a huge success in terms of enabling researchers, engaging stakeholders, and creating a trans-disciplinary community. It is important to consider the technical, managerial, and financial components of a 3D printing service, as these aspects help to identify a path to growing and improving the service. 3D printing in the academic community appears to be trending upward and shows promise in many fields of study. In keeping with the theme of the symposium, this presentation will focus on a select few points while keeping an eye toward the future.

In this presentation, we analyze 3D printing as a disruptive technology, in line with a whole host of changes that have swept campus communities over the past 50 years. As an institution, we merely have an opportunity to try and keep up. Of course, in so doing, we help to maintain the foothold of libraries as information resources for our communities. This is the guiding impulse of providing the service: To enable learning for constituents as efficiently as possible. As resource managers and advocates for our stakeholders, the goal is to put enabling technology into the hands of users, not just to print some toys.

Outside of the technical operations perspective, running a 3D printing service is all about relationships. 3D printers are becoming ubiquitous, but we must recognize the importance of bringing together various skillsets, stakeholders, and academic communities in order to more fully utilize the potential of this technology. We’ve built connections with departments all over the campus—connections that previously existed based on a different organizational need in a different time, but now are growing in new ways. The intersection of this work with the work going on in many other departments on campus is substantial. A number of projects mark the collaborative nature of this. The 3D printing industry is moving quickly, as are a new generation of DIY enthusiasts, entrepreneurs, and technologists. This presentation will provide a snapshot of the relationships that have emerged based on the arrival of 3D printing.

The intent of the Marriott Library’s 3D printing service is to enable students, faculty, and staff of the campus community to explore 3D printing without making a huge investment in time or tools. We have printed hundreds of items involving undergraduate through post-doc research, custom lab equipment, product development, creative expression, architectural structures, prosthetics, and more. We have found that this technology integrates ideas from the sciences as well as humanities, which fits well with the role of the library as an interdisciplinary space on campus. Importantly, many of our student workers are involved with the service, which allows more people to benefit from their skills
and knowledge while also providing the students with hands-on experience that will be increasingly relevant to their careers regardless of their field of study. One of our goals is to provide a learning space where members of the [campus] community can identify where 3D printing intersects with their interests and start to explore the technology in a guided environment or on their own.