PLP Innovation and Technology Opportunity Grant Program Application
(Category A)

1. One paragraph project summary.

Cut It Out: Laser cutting services and instruction at the Los Gatos Library
Desktop laser cutters are highly versatile and relatively simple pieces of equipment that allow users to create detailed cuts or engravings in a wide variety of materials such as wood, cardboard and plastics. Through growing increasingly popular, their high price point for the average consumer makes access to them prohibitive. The Los Gatos Library plans to offer laser cutting services to patrons by purchasing two laser cutters that would be used for individual self-serve patron use. Instructional workshops will be offered to teach patrons the basics of using the technology. We also plan to incorporate the laser cutters into our established STEAM programs for youth.

2. Explain how this project fits with the library's strategic directions.

This project fits within the Los Gatos Library's strategic plan under the category of "access to evolving technology resources". Due to high price points for the initial purchase of quality laser cutters, the Library believes it will be filling an access need in the community.

3. A detailed description of the proposed project including the population served and the demographics of that population.

We plan to purchase to two laser cutters for the purpose of this service. One cutter will use a Class 4 laser with a feed capacity to handle larger project sizes, while the second cutter will use a Class 1 laser that will be the default for smaller projects.

Though laser cutters and 3D printers are not comparable pieces of equipment, we have learned from the difficulties of hosting programs with 3D printers in terms of the inverse proportion of patron interest in relation to speed in which the device can produce results. Unlike 3D printers, laser cutters are relatively fast, allowing far more use and access in a given time period, they require less troubleshooting and do not require knowledge of modeling or coding for basic use, however based on past experience with 3D printers as a service, we believe that the most viable option to offer laser cutters as a service is to have a minimum of two laser cutters available to facilitate speed during staff-lead instruction workshops and programs, as well as facilitate access during individual patron use periods for what we believe will be a highly in demand service.

For individual patron use, patrons would supply their own materials and reserve use of the cutters for two-hour blocks of time, which is sufficient in our research to complete projects of intermediate complexity. Existing library-owned computers would be repurposed to be dedicated to the laser cutters. Instruction on use of the laser cutters would be offered weekly and incorporated into our established "Tech Tuesday" workshops in order have patrons be self-sufficient on the equipment.

Additionally, we plan to incorporate the laser cutters into our monthly STEAM programs for youth (ages 10-14) and our upcoming Girls Who Code programs (ages 14-18).

The Library serves a population 34,000 individuals of all ages.

4. Goals and objectives of the project.

The goal of the service is to make this technology more accessible to the public, allow members of the community to expand their technological skill sets, and expand problem-solving and entrepreneurial experiences.

5. Project timeline (activities).

As the laser cutter technology we have decided to purchase is designed to be plug and play, we anticipate rolling out the service to public self-service easily within a three month timeframe (notes below illustrate months starting on date of grant award announcement).
Month 1 – purchase of equipment, receiving and installation, lead staff learning equipment
Month 2 – staff training, program planning
Month 3 – self-service public use available, open public instruction incorporated into our already established "Tech Tuesdays" technology instruction classes
Month 4-12+ – incorporation of laser cutters into monthly youth STEAM programming, and continuation of patron self-service use

6. Evaluation of the project.

The emphasis of the use will be as a patron service, which we believe with a high degree of confidence will be in demand. We will rate the program a success if we have over 200 unique users with over 500 hours of reserved time on the equipment. Through anecdotal information gathering, we believe we will easily reach this number.
For STEAM programs we will rate the success of the program based on the monthly use of the equipment with total youth access and experience with the equipment at 150 youth.

7.   Project budget. (Indirect costs are not allowed).

1x Glowforge Pro laser cutter (Class 4 laser, large project cutting capacity) +tax	$6,600
1x Glowforge Plus laser cutter (Class 1 laser, small project cutting capacity) +tax	$4,400
2x cutter exhaust air filtration units +tax	$2,200
Expendable program supplies (cardboard, thin plywood, acrylic)	$ 500
2x mobile equipment carts +tax	$ 400
Shipping	$ 300
Total	**$14,400**

8. Sustainability analysis.

Highly sustainable after the initial investment in equipment. Self-service options for the public require only minimal staff support. Ongoing needs for future years include only minimal expendatures for inexpensive expendable materials for STEM programming use (approx. $300-400 a year) which is easily covered in our programming budget.