*Please submit this completed application and any relevant supporting documentation by the deadline listed on the SSC website to* *Sustainability-Committee@Illinois.edu**.The Working Group Chairs will be in contact with you regarding any questions about the application. If you have any questions about the application process, please contact the SSC at* *Sustainability-Committee@Illinois.edu**.*

# General Information

**Project Name:** Illini Gadget Garage Campus Workshops and Pop-up Clinics

**Total Amount Requested from SSC:** $12,000

**Project Topic Area(s):** [ ] Energy [ ] Education [x] Food & Waste

 [ ] Land [ ] Water [ ] Transportation

# Contact Information

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**Project Team**

|  |  |  |
| --- | --- | --- |
| **Name** | **Department** | **Email** |
| Amanda Elzbieciak | Illinois Sustainable Technology Center | elzbiec2@illinois.edu |
| Hourly employee | Illinois Sustainable Technology Center | TBD |
| Name | Department/Organization | Email Address |
| Name | Department/Organization | Email Address |

# Project Information

Please provide a brief background of the project, the goals, and the desired outcomes:

E-waste is a growing problem. Millions of tons of e-waste are generated each year in the United States; over half of it ends up in landfills and incinerators. Not only is this a waste of precious, finite materials, but also a waste of human resources that went into its manufacture, and a danger to human and environmental health through potential contamination of air, soil, and water due to heavy metals (e.g. lead and mercury) and other toxic substances found in electronic devices. While recycling is the better and still underutilized alternative to just throwing things away, the continued use and reuse of a product is best. After all, the most sustainable device you will ever find is the one that you already own. As consumers, we tend to ignore these facts. We are enamored by the latest and greatest technology and in our drive to possess it, we frequently find ourselves getting rid of still functioning devices because they’re older, slower, won’t hold a charge, or have cosmetic damage which makes them less desirable. The culture around technology has led us to believe that it’s easier and more economical to just replace devices rather than repair them, and that knowing how to repair them is limited to those who have received special training. The Illini Gadget Garage (IGG) was started to combat such perceptions.

The project was established in 2015 with funding from SSC to address the e-waste issue, encourage discussion of impacts of electronics throughout their product life cycles, educate about local recycling options, and foster a shift in our campus community mindset from a “throwaway society” to more a “repair and reuse” culture. We have established a permanent collaborative repair center in UI Research Park where students, staff and community members can bring their personally owned electronic devices for assistance in troubleshooting and guidance in performing minor repairs. This not only prolongs the useful life of electronic devices in the UI community, but also empowers individuals to feel capable of repairing and maintaining devices they own. Over half of the visitors who participated in repair at the Illini Gadget Garage in 2017 were students. In 2017 alone, we managed to divert almost 350 pounds of materials away from landfills; over 60 percent of which was diverted by rescuing devices through collaborative repair. In reaching out to students and the UI community we hosted a total of 50 repair pop-ups on campus throughout the year at the Undergraduate Media Commons and the Champaign-Urbana Community Fab Lab. We also offered a few workshops at our main location, such as a group teardown workshop where UI community members could actively participate in disassembling and reassembling a laptop without the stress of damaging a personal device, and a holiday lights repair workshop. In the future, we would like to offer additional workshops to encourage electronic device repair and empower individuals to be more hands on with the internal components of the devices they interact with everyday.

Thus, our team is applying for additional funding from the SCC with the following goals:

1. Hire a student hourly to assist our existing staff member with the functions essential to operating the IGG, such as but not limited to: assisting with workshops, investigating common problems and solutions of electronic devices, promoting our services, and working collaboratively to repair non-functioning electronics with a variety of individuals both at our main location and out at pop-ups in the community. During fall 2017, our project had two hourly employees to serve as repair guides, working with volunteers and clientele on collaborative repairs. One of these team members has accepted a position elsewhere, and though she will continue in a volunteer capacity as her schedule allows, two hourly staff are needed to ensure adequate service.
2. Host a series of free workshops in order to help address common problems in a way designed to result in success and a sense of accomplishment. This will foster empowerment and combat the perception that device repairs are activities only possible or conceivable for certain subsets of the population. As these workshops will involve a great deal of hands on work and attention to detail in collaborating with those new to working on electronic devices and building new skills, we will set aside a small portion of funds to compensate for our project coordinator’s time and involvement in assisting with these efforts as well. Funding the development of these workshops, to be offered to UI students at no charge, will also help the IGG’s efforts to become financially self-sustaining, since once developed and piloted as part of this grant, these programs may be offered again in subsequent semesters to a broader audience (i.e. non-students) for a registration fee.
* Soldering for Beginners
	+ This workshop will focus on building repair confidence and skills by teaching visitors the basics of soldering. Through hands on learning, they will gain an understanding of the required tools and steps necessary to solder and will be given a small item to practice upon. A workshop basic soldering was one of our most popular suggestions when polling the UI community regarding desired workshop topics via our social media platforms. We would require registration for the workshop to ensure that we have an adequate number of soldering irons and materials available for the workshop. The practice solder projects will be theirs to keep, along with a handout covering basic techniques on soldering for future reference.
* Clean Those Gizmos
	+ This workshop will focus on prolonging the life of existing devices through maintenance. Many items that come to the IGG are just in need of some minor care. From cleaning dust and debris out of laptop fans and charging ports to removing battery corrosion from forgotten devices to drying out devices that have gone through the washing machine, we want to help you get your devices in good working order again. Participants will need to register in advance of the workshop so we can gather the appropriate tools and supplies needed to disassemble the device, if needed, and clean it. We will prepare a common cleaning care guide handout for visitors to take home, as well, from the workshop.
* Group Teardown 2.0
	+ This workshop will focus on building repair confidence by allowing visitors to practice on a device without the stress of breaking something that they personally own. We’re looking to delve into an identical set of broken devices to understand how to open, repair, and close an electronic device. An added benefit is having other individuals there to collaborate with as we go through the device, doing so helps to alleviate the stress of making mistakes and provides different perspectives and approaches of how to solve problems.
1. Provide pop-up repair clinics to students, staff, and visitors to the UI campus. This will allow us to continue reaching out to the UI community by making our repair assistance available on campus via pop-ups. Twice a week we will conduct 4-hour sessions at various campus locations (e.g. Illini Union, engineering campus, libraries, etc.) to assist anyone who stops by with questions related to their devices or with physical repair of their broken electronics. As some repairs may not be able to be completed during these pop-ups sessions– due to time restraints or the need for tools which are not easily transportable – we will operate additional hours at our physical workshop in the Research Park area for follow-up appointments.

Please provide a brief summary of how students will be involved in the project:

Students (undergraduate and graduate) will continue to be involved as volunteers at the IGG, performing troubleshooting, assessment, and collaborative repair of devices along with IGG clientele. Courses, special student projects, and Registered Student Organization activities may also be held in conjunction with the IGG, as has been the case in previous years. Students will also be involved as clientele, benefiting from the repair of their items and/or the provision of information and assistance regarding recycling and reuse options. As noted above, we would like to hire an a student hourly employee to assist with project operations. And if funded, the aforementioned series of workshops would be offered free-of-charge to UI students.

Please provide a brief summary of the project timeline:

The following represents a tentative timeline for activities supported by requested funds. It should be noted that additional grants, contracts, and sponsorships will continue to be sought to make the IGG financially self-sustaining. Such activities are beyond the work plan for this grant, and are thus not included on this timeline.

**August 2018:** Prepare first workshop (Clean Those Gizmos). Put out call for student hourly position. Begin interviews.

**September – December 2018**: Host on campus pop-up repair clinics twice a week while UI is in session.

**September 2018**: Complete interviews and hire student hourly. Train student hourly. Present first workshop. Prepare second workshop (Group Teardown 2.0).

**October 2018**: Present second workshop. Prepare third workshop (Soldering for Beginners).

**November 2018**: Present third workshop.

**December 2018**: Prepare final report.

Additional comments

It should be noted that the IGG project operated throughout Fall 2017 using funds donated by corporate sponsors and individuals. The project coordinator will continue to seek donations, and is working departmental staff to develop a means for accepting workshop registration and other fees for programming in order to support the project. The requested funds from SSC will not only ensure that students remain involved in our project as staff, volunteers, and patrons, but also allow us to provide assistance to students through the proposed workshops while developing, testing, and refining those programs for a broader audience in the future.