TESLA WORKS PROJECT PLAYBOOK

IV. Resources

In this section:

A. Tesla Works Officers

The Officers are here to help you and your project. There are nine Officer positions that are up for election every year. The positions are as follows:

- **President and Vice President:** Keep the group running. They are knowledgeable about almost everything. They also handle relationships with the University and other students.
- **Secretary:** Handles organization, room reservations, documentation, and records of official Tesla Works proceedings.
- **Treasurer:** Manages money. They can help with funding, donations, and grants.

- **Purchasing Manager:** Buys your stuff. Coordinates how projects receive approved purchase requests and reimbursements. Can help you find the best and cheapest way to get your supplies.

- **Project Director:** This is the Officer you will hear from the most. They are here to make sure you can be a successful project, and to be a liaison between Project Managers and the Officers Board. Feel free to talk to them about your project. They will listen and help you with anything you need.

- **Communications Director:** Manages social media, advertising, and the weekly email. Feel free to ask them to help promote things for your project.

- **Outreach Coordinator:** Runs general meetings, outreach events, and collaborations with other groups. You will work with them when presenting or participating in any of these.

- **Friday Night Project Manager:** Runs mini projects every Friday night after the general meeting. If an aspect of your project could be turned into a fun Friday Night Project, let them know.

A current list of the people on the Officers Board can be found on Basecamp or GopherLink. You can also contact all the Officers by emailing tesla@umn.edu.

B. Useful Online Resources

1. Basecamp

Basecamp is the primary communication and project management platform of Tesla Works. Your project should have been set up with one as soon as it was approved. Basecamp is available as a website, a desktop application, and a mobile application.

Basecamp has a variety of features to help you communicate with members and keep all your files in one place. You can add members to your project, post messages or announcements, assign to-dos, add and edit documents, and use Basecamp's built-in calendar to help set deadlines. Basecamp also has a file management system that helps future members and future Project Managers look back on previous work.

If you or your members don't know how to use Basecamp, a how-to guide can be found at z.umn.edu/basecampguide.

2. Google Drive

Many projects use Google Drive to organize and share files. It's more organized and versatile than Basecamp file storage, so many projects will use it along with Basecamp. If you use Google Drive, please share your files with tesla@umn.edu.

3. when2meet.com

When2meet is the go-to Tesla Works scheduling tool. Group members can add the times they're available and when2meet overlays all of them onto a single calendar, so you can quickly see the best time for everyone. It's easy to use and free.

C. Places to Work

1. Exceed Lab

The Exceed Lab is a workspace in Keller Hall to which you can get U-Card access. Tesla Works uses this space for smaller Friday Night Projects, and many projects use it for their meetings as well. The Exceed Lab has two rooms: 2-160 (a woodshop) and 2-164 (an electronics lab). There are also storage spaces available to reserve in the lab.

Location: Keller Hall 2-160 & 2-164
To gain access go to:
https://sites.google.com/a/umn.edu/exceed/access-exceed

2. Anderson Labs

The Anderson Labs are a collection of different workspaces around the University. The Exceed Lab is technically included in this group. Separate training is required for each Anderson lab, and for some of the more dangerous/expensive tools in each lab. See the Anderson Labs website for more information.

Website: z.umn.edu/alabs

a. General Workspace – Student Design Lab

Tesla Works uses this space for larger Friday Night Projects as it is much bigger than the Exceed Lab, and some projects meet here or use it for build days. A large number of 3D printers and laser cutters are available in this lab. This space is often referred to as just “Anderson.” It is open during regular hours, and you can also get after-hours U-Card access if you go through training.

Location: Mechanical Engineering 2-134

b. Student Shop

The Civil Engineering Student Shop has large equipment that can be very useful for large projects. This shop has a large CNC machine, 3D printers, 3D scanners, welding facilities, and woodworking tools.

Location: Civil Engineering 335

c. Metalworking and other Machining – Student Machine Shop

This space has a lot of useful metalworking and machining tools including metalworking mills, lathes, computer-controlled milling machines, and a water jet cutter.

Location: Mechanical Engineering 176

3. Bioproducts and Biosystems Engineering Makerspace

The Bioproducts and Biosystems Engineering Makerspace is a large lab space located on the St. Paul campus available for BBE students. They have a variety of equipment including woodworking and metalworking tools, an electronics bench, a laser cutter, a 3D printer, and a variety of hand tools. To gain access, use the following link and click enroll me: https://ay16.moodle.umn.edu/course/view.php?id=9531. You will then have access to the training modules you need to complete to use the tools.

For more information go to: https://bbe.umn.edu/undergraduate/makerspace

4. CDES Design Labs

The College of Design maintains several labs for its students. There is also a materials shop in Rapson that allows students to purchase fast prototyping materials with Gopher Gold. There may be a fee to use some of the equipment in these labs.

For more information go to: https://design.umn.edu/students/facilities/hall

5. Outdoor spaces

   For certain large projects or demos, outdoor space is required. The University has a strict policy on the use of outdoor spaces, so ask an Officer for help reserving spaces or getting permits.

D. Places to Store

If you need help getting storage, talk to the Project Director.

1. Exceed Lab Cabinets/Paint Room

   You can register for storage space with the Exceed Lab. There are 2 main storage spaces: the cabinets inside the lab for smaller projects and Keller 2-149, known as the Paint Room, for larger ones. Storage space can be requested at any time and must be renewed every semester.

   Cabinet Storage:
   https://sites.google.com/a/umn.edu/exceed/reserve-storage-space
   Paint Room Storage:
   https://sites.google.com/a/umn.edu/exceed/storage-room-registration

2. Tesla Works Storage Unit

   Tesla Works rents a storage unit at North Star Mini Storage in St. Paul. Typically, only very large or Archived projects are stored here, since it's inconvenient to transport and access materials. If your project falls into either of those categories, talk to the Project Director.

E. Popular Purchasing Places

- Home Depot (General Supplies): https://www.homedepot.com/
- Ax-Man (Surplus): https://www.ax-man.com/
- Menards (General Supplies): https://www.menards.com/
- Lowe's (General Supplies): https://www.lowes.com/
- Walmart (General Supplies): https://www.walmart.com/
- Habitat for Humanity Restore (Discounted Construction Supplies): https://restore.tchabitat.org/shop
- Rapson Design Workshop Store (Prototyping Supplies): https://design.umn.edu/students/facilities/hall
- Goodwill Outlet on Fairview and University (Discount Home Supplies): https://www.goodwilleasterseals.org/shop/ways-to-shop
- Hack Factory (Makerspace): https://www.tcmaker.org/blog/hack-factory
- Amazon (General Supplies): https://www.amazon.com/
- McMaster-Carr (Specialty Hardware): https://www.mcmaster.com/
- Discount Steel (Metal): https://www.discountsteel.com/
- Digikey (Electronics): https://www.digi.com/
- Adafruit (Electronics): https://www.adafruit.com/
- ECE Depot (Electronics): https://depot.ece.umn.edu/
- Chem Depot (Chemicals, Chemisty Supplies): https://chem.umn.edu/support-services/chemistry-research-stockroom
    - There are also many liquid N_2 and dry ice containers around Smith and Amundsen, and ice machines in Kolthoff, Smith, and Amundsen. Purchases from the Chem Depot require extra bureaucracy work by the Officers, so try to keep use of these resources to a minimum.
- UMN ReUse Program (General Supplies): https://facm.umn.edu/waste-recovery-services/reuse
- Electronics Recycling Bins around campus
- Dumpsters

F. Funding

1. Through Companies

Tesla Works is a **501(c)(3) tax-exempt organization**. As such, we can receive tax-deductible donations to projects. This could help incentivize companies into donating supplies and equipment for your project. We currently deal with donation possibilities on a case-by-case basis, so contact the Treasurer for assistance.

Companies that have donated before:

- Sick AG
  - Donated sensors to Autonomous Vehicle Project (Autonomous Research Collective)
- CenterPoint Energy
  - Helped fund the Light Show
- Protolabs
  - Donated a 3D printed metal engine to LPRD Rocketry
- Orbital ATK
  - Donated use of facilities to LPRD Rocketry

2. Grants through the University

For assistance with applying for any of these grants, contact the Treasurer. Usually, Tesla Works itself must apply for the grants on behalf of your project, and will often submit a combined application for multiple projects.

- The CSE Expo:
  - The CSE Expo is an event that shows off projects in STEM to middle schoolers, and the College provides funding for participating projects. Applications are accepted during Fall Semester, and the Expo is held in April. Funding is available for participating projects. Talk with the Project Director if you'd like to be involved in this.
  - cse.umn.edu/r/cse-expo/
- CSE Small Grants:
  - The CSE Small Grant is a biannual opportunity to obtain funding through CSE. Grants can be used for travel and other large

expenses. Applications are due early in each semester – contact the Project Director if you anticipate a need for funding from the CSE Small Grant.
    - cseorgs.umn.edu
- SUA Grants:
    - SUA has a variety of different grants available for special events throughout the year. Funds are allocated on a rolling basis, so make sure to get any applications in early.
    - sua.umn.edu
- MSA Events Grant:
    - MSA also provides small grants for special events throughout the year. Again, funding is allocated on a rolling basis, so apply early.
    - msa.umn.edu

G. Other Student Groups

1. Innovation Coalition

The Innovation Coalition is a collection of student groups on campus who want to promote a community of innovation. This coalition brings together engineering, design, and business. If your project needs design students or wants to become a business, students from these groups can be a great resource.

2. Generation MN

Generation MN are the people who know people. If you want to be connected to mentors or people in industry, or need funding for your project, they are the group to talk to.

3. Global Systems Engineering (GSE)

GSE is a group of industrial engineering students who want to use their skills to help other student groups. If you want something in your project to be optimized, set up a meeting with them.

H. Useful Links

1. Tesla Works

    - Project Proposal Form: z.teslaworks.net/newproject
    - Purchase Form: https://finance.teslaworks.net/purchaserequest
    - Purchase Request Template: z.teslaworks.net/template
    - Constitution: z.teslaworks.net/constitution
    - Bylaws: z.teslaworks.net/bylaws
    - Safety Procedures Template: z.umn.edu/twsafetemplate
    - Safety Procedures Example: z.umn.edu/twsafeexample

2. Safety guides

    - Exceed Lab: https://sites.google.com/a/umn.edu/exceed/safety-and-user-guide
    - Anderson Labs: https://cse.umn.edu/r/anderson-innovation-labs-safety/