



COLUMBUS AIRPORT MAKERSPACE PROPOSAL

Presented to the Columbus Airport Board

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Executive Summary

Introduction & Background

Discussions around a possible makerspace in Columbus have occurred for several years. A “makerspace” is a collaborative workspace inside a school, library, or separate public/private facility for making, learning, exploring, and sharing that uses high tech to no tech tools.

Several communities of similar size have successfully launched makerspaces in Indiana. The high concentration of engineering talent in and around Columbus, along with the survey data suggests there is a pent-up demand for this type of facility. The guiding team believes this to be an important community asset as the city continues to recruit businesses, and newly mobile workers post-pandemic, and retain talent already in the region.

With Cummins vacating two buildings on the AirPark campus, a makerspace was suggested as a possible use for the uniquely divided space. A guiding team of a diverse group of stakeholders was convened in November of 2020 and has been working steadily to develop a proposal based on community feedback to determine feasibility of the operation becoming a self-funded 501(c)(3).

Survey Results & Programming

Feedback from a community survey of over 250 responses was positive and identified several areas of use for the facility. Three main groups were identified: hobbyists, parents, and students.

It is suggested by the guiding team that this facility would be an excellent way to increase awareness of academic programs available on campus, serve existing AirPark students searching for additional community, as well as a centralized hub for the broader hobbyist/entrepreneurial community within Columbus. Potential for dedicated spaces for various user groups are possible and lend themselves to diversifying revenue sources (i.e., sub-leased space for new business incubation, etc.).

Safety and risk management of the facility will always be paramount, and the guiding team believes benchmarking best practices of both other makerspaces and various safety protocols of manufacturers in our region.

Financial Projections

The guiding team understands and appreciates the financial operating model for the airport. The goal of this facility is to quickly become self-funded, leasing the facility at market rates from the airport after an initial period and requiring no special long-term considerations.

Guiding Team Request to Airport Board of Directors

Two budgets are provided for review in this proposal. One calculated with no rate reduction from the outset, and one reflecting a rent abatement the guiding team believes would give the best chance at financial sustainability.

Would the board consider forgoing lease payments for the first 6 months of operation (end of 2021), a reduced rate of \$1,500 per month (50% reduction) for Jan-Dec of 2022, and then full rates of \$3,000 per month beginning in January of 2023?

The guiding team would also like to submit for board consideration provisions for a 3-year lease, with a yearly renewable option for an additional 2 years. We feel this lease arrangement would provide

stability and benefit all parties by allowing the entity to open, gain footing, and then balance its growth and cash flow as it moves towards long-term viability as a tenant.

The guiding team believes it can make provisions regardless of the ability of the board to accommodate these requests, though we do believe the long-term returns would outweigh the initial investment.

Capital Improvements

The facility is uniquely constructed and carries an unusually divided space based upon the unique needs of the previous tenant. While only minor upfitting is likely to be needed at the outset for a makerspace, minor capital improvements would be requested (through use of TIF funds) to increase usability and efficiency of the facility. It is important to note that any improvements requested would likely also be needed for other uses of the facility and would provide long-term marketability for the space regardless of the makerspace effort.

Next Steps

Pending the continuing support of the Board of Aviation, the guiding team would like to begin formalizing this pilot effort through necessary MOUs, lease agreements, and funding arrangements. While overwhelming generalized support exists, targeted actions necessary to bring this space to reality will need to be undertaken as soon as possible. It is our goal to begin upfitting and/or leveraging the facility as soon as it becomes available, both to avoid the asset going unused at the completion of the current lease, and more quickly begin the path to self-sustaining viability as it becomes an increasingly important asset to the community.

The guiding team appreciates the time and attention of the board, as well as the opportunity to present this proposal. It is our sincere desire to steward and grow this evident and unharnessed energy of the community into a source of innovation, entrepreneurship, career development, and enjoyment.

Introduction & Background

Columbus, Indiana has, for some time, had one of the highest concentrations of mechanical, industrial, and electrical engineers in the United States. With an outsized ability to draw top talent from all over the globe, its methodical application of the “Columbus Way” has continued to pay dividends for the community and its stakeholders.

Now, as we move further into the 21st Century, and notably as we begin to recover from an unprecedented global pandemic, one thing that will certainly change is the dynamics by which people will choose where they live, work, and play. No longer should Columbus rely on successful ability to draw employers, and subsequently, employees to the community, it must also convince a new category, the newly enabled remote worker, to choose Columbus, while also enriching and retaining the existing population.

While Columbus scores very well across a wide range of social, educational, geographic, and economic indicators, community stakeholders have noted the absence of one asset that an increasing number of communities of the size are employing to foster innovation, education, and sense of community: a makerspace.

Definition

“A makerspace is a collaborative workspace inside a school, library or separate public/private facility for making, learning, exploring, and sharing that uses high tech to no tech tools. These spaces are open to kids, adults, and entrepreneurs and have a variety of maker equipment including 3D printers, laser cutters, CNC machines, soldering irons and even sewing machines. Makerspaces are also fostering entrepreneurship and are being utilized as incubators and accelerators for business startups.

(<https://www.makerspaces.com/what-is-a-makerspace>)

Project History to Date

While various discussions for a makerspace have occurred among community circles for several years now, this renewed discussion began in October of 2020 when Cummins communicated that it intended to not renew its longstanding lease of two buildings at the Columbus Municipal Airport. Because of how the facility had been used, it was suggested this might be a natural spot for a community makerspace.

Not long after, in November, Dr. Steven Combs of Ivy Tech Columbus held a meeting to engage possible supporters. Over 40 attended the virtual meeting, representing a broad spectrum of community stakeholders. Based on the positive response, 15 volunteers offered to form the guiding team for the project. While Dr. Combs remains an active member of the guiding team, the construction of the new Ivy Tech facility prevented him from being able to continue leading the effort.

Several tours of the facility were held during this time. Bryan Rushton of LHP Engineering Solutions agreed to help lead the discussions on feasibility and proposed action. The guiding team consists of representatives from all three schools on the AirPark campus, the Velocities initiative, the Chamber of Commerce, Toyota Material Handling, LHP, and the Community Education Coalition, along with other various entrepreneurs and enthusiasts within the community.

In December, David Doup of Taylor Brothers toured the facility with several members of the guiding team. During this tour, it was revealed the buildings to be sturdy steel construction, with the exterior walls supporting the weight of the roof, thereby making interior configuration more inexpensive and less

Figure 1.1 – Front Page Republic Article - December 5, 2020



Mayor Jim Lienhoop has also toured the facility and included it as a feature in his “State of the City” address on February 2nd.

A survey was presented to the broader community by the guiding team in January, receiving over 250 responses, many of which represent families with multiple potential users. Much of what is put forth in this proposal stems from the results of this survey.

Initial Benchmarking

Informal interest has heard for years around the county and servicing regions, however, there are two main threads the guiding team believe are important to consider in context of the rest of this proposal.

Meet Your Maker

One of the indicators of public reception to this idea was the success of the Columbus Chamber of Commerce's recent "Meet Your Maker" event, held on March 2nd, 2019. Highlighting various resources around the City of Columbus, over 250 community members attended. The registration list for this success was used as one of the engagement channels for this effort, with the "call out" in November of 2020 for this effort netting 40 attendees. The flyer is included for reference below.

Figure 2.1 – Meet Your Maker Flyer

meet your MAKERS

Saturday, March 2, 2019
 Open House
 1:00 - 4:00 pm
 Meetup at the Garage, ages 21+
 4:00 - 6:00 pm

For innovators, inventors and entrepreneurs of all ages
 3-D print your newest invention. Tear apart a computer. Play with a robot. Test your welding skills. Print a map with a laser. Meet artists and designers face-to-face. Record a story. Make a magic wand.

Meet Your Makers is a celebration of making for all ages. It's a free, interactive event, allowing guests to visit up to ten local spaces where imagination becomes reality.

Map Key
 ● Makerspace locations
 ★ Includes hands-on activity for young kids
 ■ The Garage, ages 21+

Map of Columbus, Indiana
 Locations marked on the map include:
 A. Purdue Polytechnic
 B. Ivy Tech Welding Lab
 C. Mill Race Center
 D. Ivy Tech Community College Industrial Technology Welding Lab
 E. Gallery 411
 F. Bartholomew County Public Library
 G. Kidscommons
 H. J. Irwin Miller Architecture Program
 I. FIRST Robotics Team 4926
 J. Foundation For Youth
 K. The Garage

Meet Your MAKERS

A. Purdue Polytechnic Columbus
 4444 Kelly Street (Airport Campus)
 Manufacturing comes to life at Purdue Polytechnic. Visit us at the Advanced Manufacturing Center of Excellence to see our live 3D Printing Zone in operation, to see our CNC mill and lathe create parts, and to see how our Coordinate Measuring Machine (CMM) can precisely measure down to the micrometer level. Purdue Polytechnic Precision Measurement Center has a vast array of measurement devices and standards (gauge blocks, calibrated masses) to serve the local industrial and maker communities.

B. Ivy Tech Community College Industrial Technology Welding Lab
 2555 Grissom Street (Airport Campus)
 Welcome to the state-of-the-art Toyota Industrial Equipment Manufacturing Welding Lab, operated by Ivy Tech. On site welding capabilities include SMAW (Stick), GMAW (MIG), GTAW (TIG), and OxyFuel. Try to "beat the instructor" while experiencing the on-site virtual reality welding simulator.

C. Mill Race Center
 900 Lindsey Street
 Mill Race Center is home to a well-equipped and ventilated workshop, used by Mill Race members. Stop in to see featured work of some of our talented members, as well as live demonstrations by the members of the woodcarvers club.

D. w/ Jonathan Nesci
 609 Washington Street
 w/ is a collaborative platform, curated and produced by renowned designer Jonathan Nesci, that fosters new relationships between art, design, and industry. Visit the Nobilit Fabricating show, showcasing 5 years of collaborative work with Nobilit and see a new product Nesci is launching with the Columbus fabricator.

E. Gallery 411
 411 6th Street
 Meet local makers and enjoy locally produced art at 411, a community arts gallery and cultural space for exhibitions, events, and collaborations with arts and cultural organizations. A project of the downtown Arts and Entertainment District, this space is managed by the Columbus Area Arts Council.

F. Bartholomew County Public Library
 536 5th Street
 Our library hosts a variety of technology and engineering focused programs where families can "make" their passions come alive. Stop by a coding day, tinker with LittleBits or Ozobots, decipher a cryptogram and do some hands-on design engineering at a drop-in STEAM session. Adults and kids alike will enjoy the design and recording tools in the Digital Underground. All activities are kid-friendly. Carer supervision is required for children under the age of 8.

G. Kidscommons
 309 Washington Street
 Make your way on over to Techno Tots and learn about electronic music. Get a glimpse of our newest camp, Cardboard Construction, which will be offered for the first time this summer. Tune in and turn up for our Ham Radio demonstration and get a taste for amateur radio. TechnoTots is designed for ages 3-10. Cardboard Camp for ages 7-12, and Ham Radio for ages 5-12.

H. J. Irwin Miller Architecture Program
 333 2nd Street
 The J. Irwin Miller Architecture Program, located in the former Republic building, reimagines the links between art, architecture, and the city by educating architects to be civic minded, innovative, and imaginative thinkers. Enjoy demonstrations of our laser engraving capabilities as well as hours of our woodshop, digital lab and gallery space.

I. FIRST Robotics Team 4926
 675 Reeves Way
 Learn about the FIRST program, which inspires young people to be science and technology leaders and innovators. The high school and middle school teams will conduct a robotics demo. See the workshop, outfitted with CNC, CAD, 3D printing. The tour will feature how the kids work in teams, under the guidance of skilled mentors, to build a 120 lb. robot which achieves a myriad of tasks and can even work autonomously.

J. Foundation For Youth
 405 Hope Avenue
 Visit the Boys and Girls Club makerspace where you can use a lathe to make a magic wand, laser cut a map of Columbus, take apart a computer, and share your story in our recording booth. All activities are kid-friendly.

K. The Garage
 308 4th Street
 A meetup with innovators, makers and entrepreneurs! If you are over 21, join us for a reception at The Garage from 4:00 to 6:00 pm.

To find more activities geared to entrepreneurs and innovators check out www.columbusfishtank.com or follow @columbusfishtank on Facebook.

fishtank

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Columbus Area Arts Council

PURDUE
 Polytechnic Institute Columbus

Note: The makerspace proposed in this report does not seek to displace, compete, or become redundant with any of the other community entities. Instead, it seeks to serve as a conduit for which these resources could be best leveraged, through either mutual promotion, partnership, and/or engagement.

Guidance from Existing Makerspaces

Several members from the community, and those on the extended team for this initiative, have used and/or participated in makerspaces in previous areas of residence. Notably, Jamie Copeland, helped

with the foundation of a makerspace in Louisville, KY and has provided valuable input, and connected guiding team members with leaders of the LVL1 Makerspace (<https://www.lvl1.org/>).

Likewise, makerspaces exist in various capacities all around the state.

Figure 2.2 – Existing Community Makerspaces in Indiana

- Bloominglabs – Bloomington
- Fort Wayne Makerspace - Fort Wayne
- Maker 13 – Jeffersonville
- Ruckus – Indianapolis
- SHAK – Kokomo
- MakerFactory – Zionsville

Informal conversation and benchmarking demonstrate these entities are often co-created in coordination of an enthusiastic hobbyist base and community leaders, as we are proposing to do here. Initiatives driven by enthusiasts only are possible but do take significantly more effort and are often more specialized in nature and closed to public use.



Proposed Site

The Columbus Municipal Airport will soon have two vacant buildings located on north Ray Boll Blvd near the Airport Terminal Building. Each building consists of approximately 4,500 sq. ft. of space and is broken up into many smaller rooms. In one space there are improvements including offices with multi-user desk areas and kitchenette while most other areas are ready for more industrial tenants. Several cranes/lifting units are present and available along with one restroom in each building.

The Airport Board is considering alternate uses of the buildings which could be renting out individual spaces, leasing the whole buildings to a company, or creating a coworking/makerspace area that would be beneficial to our higher education partners and those individuals across Columbus with a desire to create in the space.

Figure 3.1 – Aerial Depiction(s) of Proposed Site



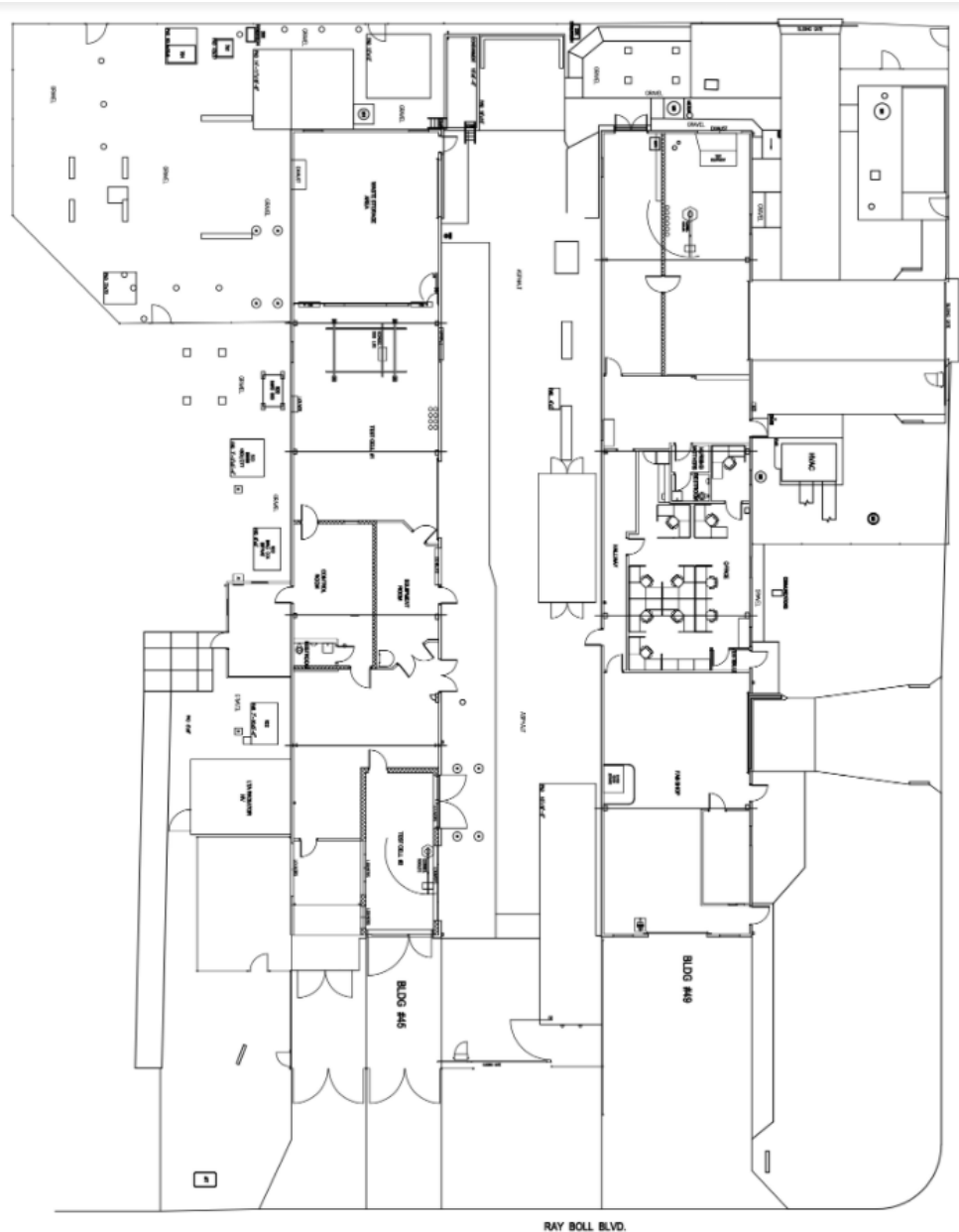
Aerial depictions to show footprint of buildings and location on AirPark campus.

Figure 3.2 – Street View of Proposed Site



Exterior shot of Cummins site. The two building shells date back at least to the 1950s and are strong steel structures. Cummins has used the facility to test engines which has resulted in a unique layout that may be difficult to reconfigure for general commercial use.

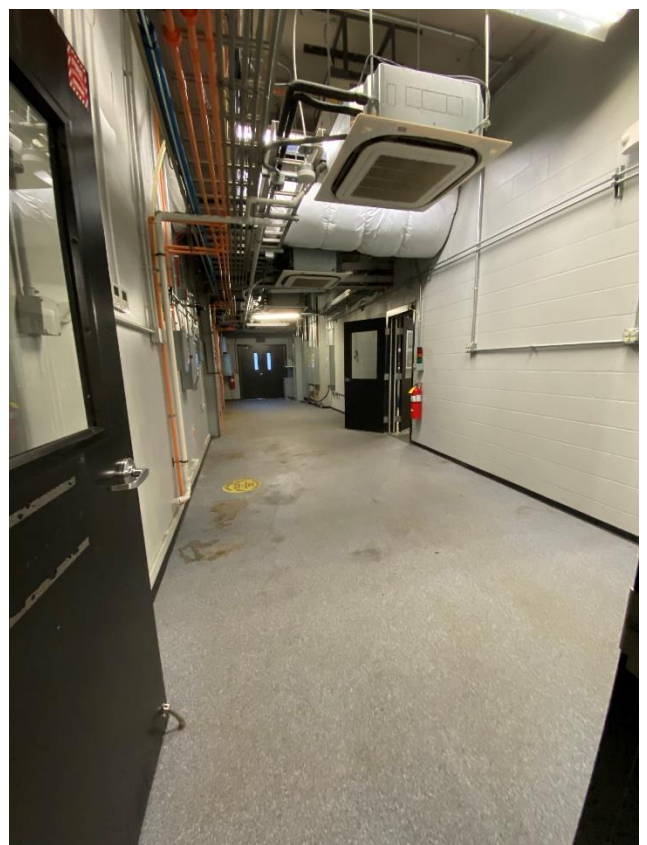
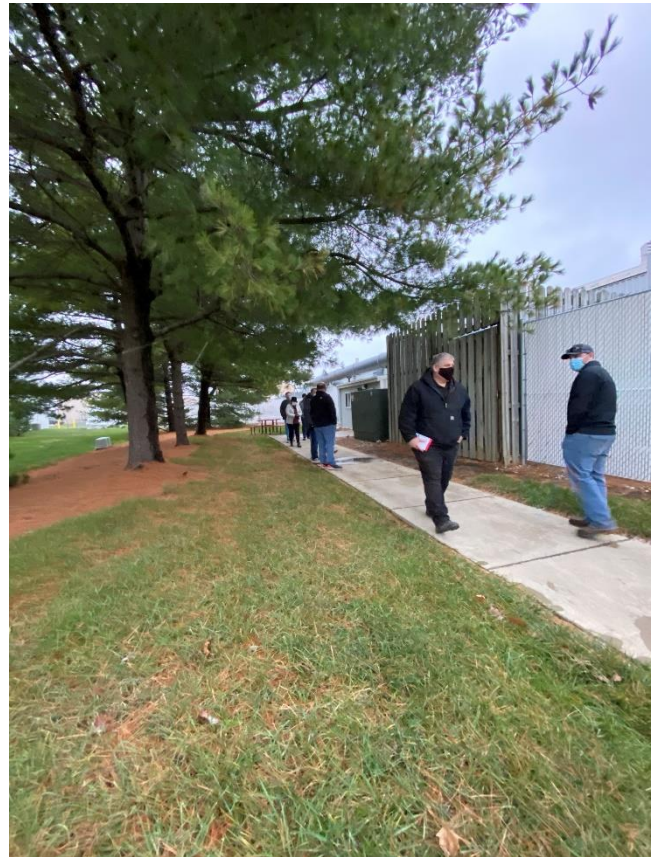
Figure 3.3 – Reference Blueprint of Facility

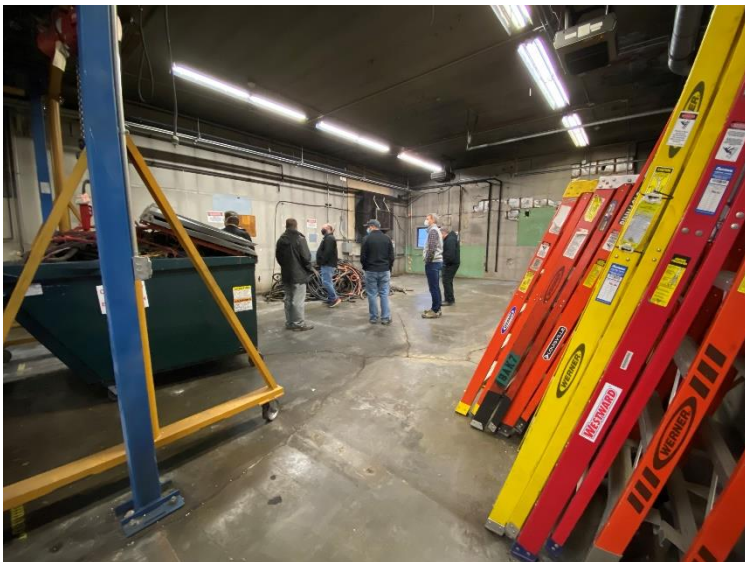


The buildings are listed as Building #45 and #49 on official sitemaps. The interior space of each building contains many divided spaces that could be utilized as-is, or, since the roof structures is supported by the exterior walls, easily reconfigured without major architectural/engineering modifications.

Figure 3.4 – Various Interior Photos

These photos were taken during several tours of the facility. Some upgrades have already been completed by Cummins, and some equipment/furnishings will be left upon request.





Alignment to a Shared Vision

The Columbus Airport's vision is "to be the airport that provides the greatest possible benefit for all users while enhancing business and educational opportunities for Columbus and south-central Indiana." With key resources like the Columbus Learning Center, the Advanced Manufacturing Center of Excellence, and others this vision continues to be realized.

As to the mission of a makerspace, the definition previously outlined notes "Makerspaces are collaborative workspace inside a school, library, or separate public/private facility for making, learning, exploring" and "...[foster] entrepreneurship and are being utilized as incubators and accelerators for business startups." The intent for this specific enterprise is no different.

The common outputs of innovation, entrepreneurship, and learning are noted. It is the broad consensus of the guiding team that leveraging this facility would be consistent with the vision of the board.

Consistency as to Funding

Because the Columbus Airport does not use property taxes as a means of funding, instead remaining self-funded through its various activities, one of the core goals of this makerspace is to become self-funded as well, requiring no special considerations for use of the space beyond what is requested later in this proposal. It intends to pay commercial lease rates for the facility and provide for its own viability as a self-funded 501(c)(3) enterprise as quickly as possible through the value it offers various users of the facility.

While initial startup is anticipated to require community support regarding funding, equipment, personnel (i.e., volunteers), and other various consumables, a pro-forma budget is offered as an estimation to self-sufficiency, 6 months to 2 years after opening, depending on the financial consideration afforded the makerspace by the airport board and/or community fundraising.

Broader Fit within the AirPark Campus

With the Columbus Learning Center, Advanced Manufacturing Center of Excellence, IUPUC, Purdue Polytechnic, and the planned Ivy Tech Facility, along with several public, private, and non-profit organizations within the Airpark, the guiding team contends this would be a natural fit for the campus, especially given the divided nature of the facility.

Airport assets are also favorably leveraged. For example, some donations for equipment, furniture, and consumables for the makerspace have been offered. Through coordination with airport director Brian Payne, temporary storage, and transportation to the makerspace once ready are possible. This relatively inconsequential effort by the airport is massively beneficial to the makerspace, as it allows flexibility in donations, and cost-effectiveness for what is to be a non-profit enterprise.

From an academic standpoint, IUPUC has specifically expressed constraints to its newly created Mechanical Engineering discipline, with donated equipment unusable in a classroom setting, and student cohorts unable to have a defined space to congregate or engage in physical, hand-on activities and projects both for coursework and extracurricular use. This proposed facility is perfectly suited at minimal cost to give students a dedicated space for projects, studying, and general congregation. Its adjacency to the main academic campus is also favorable.

Purdue Polytechnic has expressed that excess tooling and equipment has been stored in the certified measurement lab of the AMCE. Representatives have expressed strong desire to be able to move the equipment not only so that it might be able to be used, but also to return the measurement center to its original design for maximum accuracy and efficiency of operations.

While Ivy Tech has facilities such as the simulated welding lab on the AirPark campus, these are not well-suited to hobbyist-grade projects. However, it is believed students and technicians can help support the makerspace, with the intended practical benefit of developing interest in course offerings and career paths. These are just some of the synergies identified by the guiding team in short order.

Community Survey Results

To better understand what the community would most engage with in this space (and thus ensure adequate usage and financial contributions to achieve self-sufficiency), a survey was disseminated via Google Forms for 3 weeks, from January 13th to February 3rd. A response rate of 256 responses was received after disseminating the request through the Republic, BCSC, and respective organizational reach by the guiding team.

The results demonstrated there is significant support from the public for a makerspace for social gatherings, classes and workshops, events, and to learn/use heavy equipment and machinery.

Beyond general interest in the space, 140 responded that they were interested in getting email updates about the progress of the project as well as 50 who responded that they would be interested in volunteering, donating to the Makerspace, or sponsoring its development. We believe those who responded to either or both of those questions, in addition to those who attended the initial call out meeting, will be the initial core audience, and ambassadors who will drive growth. Special marketing consideration has been allotted in the pro forma budget to further bolster these enthusiastic participants.

Demographics

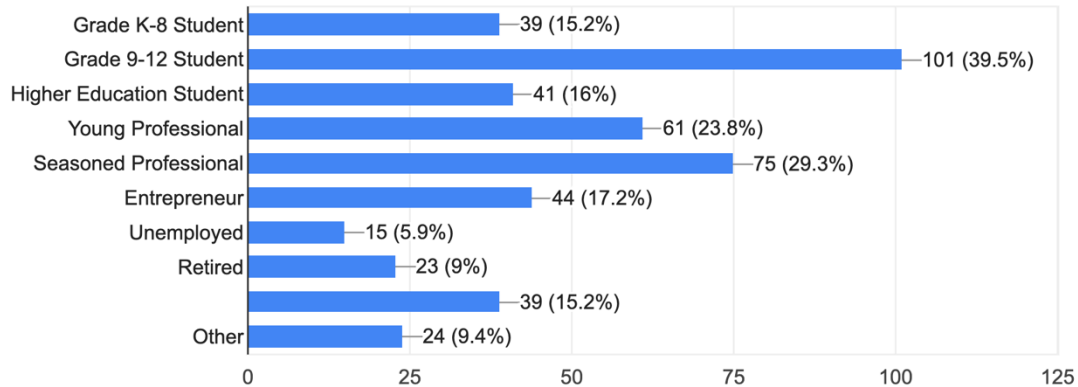
The survey also provided insight into the demographics for who would use this space. When asked “which best describes you or someone in your family who would use this space?” Almost 40% of responses represented students in K-12 through higher education. This survey data supports our plan of partnering with local post-secondary schools to provide a space for students to practice what they learn in the classroom physically.

Another point that emerged from the survey data is that 44, or around 17%, responded that they identify as an entrepreneur. One goal of the Makerspace is to spark innovation and new technologies by providing an incubator space for entrepreneurs and makers in Columbus. Other write in responses to questions in the survey also indicated that there was a demand for mentorship, entrepreneurial classes and how-to’s. This space would reflect the historical innovation of Columbus and provide new outlets for product development, technological solutions and more.

Figure 4.1 – Survey Demographics

3/21: Which of these best describes you or someone in your family who would use this space?

256 responses

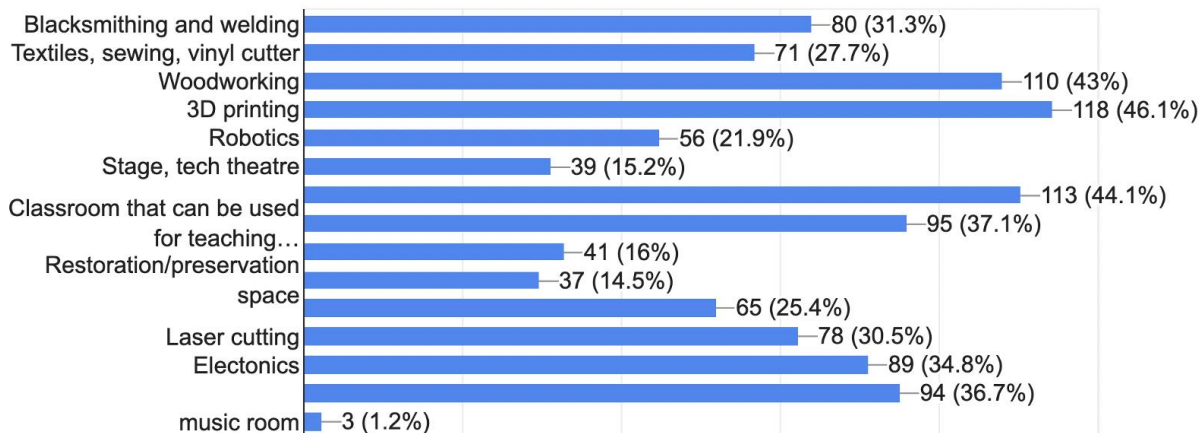


The survey also revealed the demand for different equipment and services for people with diverse interests. When asked what hobbies and activities people were interested in, answers ranged from motorcycles to beekeeping to using a bandsaw. Since there was such a wide array of interests and hobbies, the list of what machinery people would like to see in the space was at length. We believe that in the beginning it will be most important to provide equipment most wanted by everyone. This includes 3D printer(s), classroom space, computers, power tools, textile materials and vinyl cutter(s), etc. This is in addition to any equipment requested or donated by our community and educational partners.

Figure 4.2 – Various Demand for Equipment and Spaces

11/21: What machinery/spaces would be most useful to you? (Select all that apply)

256 responses



Although provisioning equipment for every interest and activity that might be raised, this space can still cater to more portable hobbies by allowing members to bring their own equipment or take a class and share equipment, within appropriate processes and safety considerations. When asked how someone would use the space on a typical day, 35% responded they would bring their own equipment and 77%

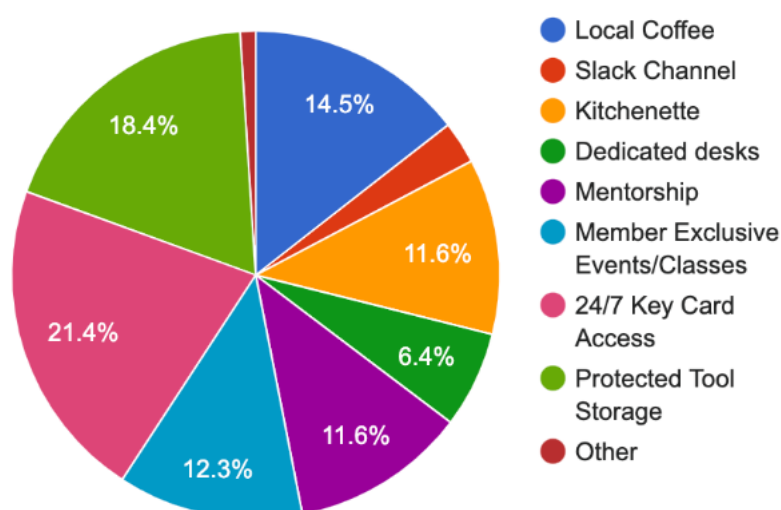
said they would like to attend workshops and classes. This data shows that simply providing a space for people to make, create and share their skills is valuable to the community.

Memberships

This guiding team does not expect memberships to be the initial main source of income for this project. However, we see the value of membership revenue as well as the community it can build for those who want to get something extra out of the space, and it will become an increasingly important source of revenue as the makerspace matures and moves towards vibrancy and self-sufficiency. Paid membership should be seen as a signal that the space is being utilized effectively.

Figure 4.3 – Membership Perk Options

16/21: What kinds of features would you want to see included with a membership option? (Select all that apply)



Nearly 18% responded in our community survey that they would pay more than \$25 per month for a membership with several responding they would pay more than \$50 per month. The other 82% indicated being interested in paying \$25 per month. It is worth noting that in benchmarking about \$40 per month was an average cost, though some models were more incremental, instead charging by the hour. The guiding team would not suggest this model based upon the difficulty in billing and the importance of consistent recurring revenue.

The largest demands for membership perks were 24-hour key card access and dedicated tool storage and workspace. This was followed by member exclusive events and one-on-one mentoring. We believe the ideal member is someone who would use the space at least weekly, currently has a few tools of their own and seeks community around their hobbies and interests. Our targets for the first 50 memberships we hope to achieve within the first 10 months will be the previously mentioned core audience. This is a total of more than 180 people. If we are able to sign on 50 members within the first 10 months as predicted, this would provide a minimum of \$2,000 a month in additional revenue which can be used for additional expansion of programming, space updates, etc.

Management Structure

To start, this enterprise will function as a pilot project under the Columbus Area Chamber of Commerce's 501(c)(6) designation. The Chamber has only requested that the fees associated with the accounting and auditing of the makerspace be covered as part of the operating expenses. It is important to note that this is not intended to designate the Chamber as the 'head' of this project, but rather enable it to support the project as a community effort.

Once financial viability has been demonstrated and sufficient community interest, action, and participation has been achieved, it is planned to seek designation as an independent 501(c)(3) organization. The initial goal for this is 2 years or less, based on financial projections provided elsewhere in this report.

Initially, a part-time manager for the effort would be hired to help maintain day-to-day organization and coordination of makerspace activities. This would include scheduling programming, ensuring protocols are adequately defined and followed, as well as volunteer efforts. Managing membership, donations, and providing reports to the governing body, likely a volunteer board. Official oversight structure and bylaws remain undetermined at this time, though multiple templates are noted.

Risk Management

Any discussion of facilities, process, programming, and management, safety is to be always considered paramount. Makerspace activities can be inherently dangerous, with heat, sharp objects, heavy objects, and slippery/unsafe materials in use. The following points are noted regarding risk management at the facility:

- Insurance will classify the facility similarly to a machine shop. These are the rates that are quoted.
 - Like a machine shop, operators of equipment are expected to be qualified and equipment is to remain in serviceable shape.
 - Fortunately, we believe many volunteers exist both to supervise, support, and operate equipment as needed, as well as maintain equipment to adequate standards. It is possible equipment will be subject to periodic outside inspection/maintenance as required by OSHA regulations, etc. Though this will not be operated as a for-profit or occupational facility, it is anticipated (and follows responsible logic) that equipment should be maintained within prevailing OSHA and other industry compliance standards.
- Benchmarking other makerspace facilities who have long, successful track records, it is believed adequate risk management can be achieved, though ensuring compliance will be an ongoing effort.
- Users of hazardous equipment must be qualified to use such equipment. A system of record for qualified users is integrated into the Proximity-branded access software, which, combined with Nest-style remote monitoring security cameras, should be able to demonstrate and audit compliance.
 - Additional processes will be in place to prevent non-qualified users from accessing equipment at inappropriate times.
 - The facility manager will be responsible for driving compliance and will answer to the board of directors for the makerspace.

- A culture of safety will be always communicated. It is believed with the various manufacturers in town, the makerspace will be able to benchmark and replicate various safety processes, PPE requirements, etc. (such as Lock Out Tag Out protocols, etc.).
 - Budgets take into account the purchase of adequate PPE at all times.

Programming

Previously, there has been an abundance of participation in ‘Maker’ events in Columbus. With the 2019 ‘Meet Your Maker’ event hosting 250+, the guiding team believes there will be an increased pent-up demand coming out of the pandemic. STEM, Robotics, and computing camps for children are also popular amongst Columbus students, often through the local Foundation for Youth and Columbus Youth Camp. We hope to build on this demand by providing several types of programming and events for members and the community at this space. Programming and events will be vital to the value of the makerspace. Not only do they build community, but they also spark ideas and innovation. The events space as well as events may also be a source of potential revenue for the space or for members. Classes and events may be free or paid depending on the intent.

Examples include:

- **Meet Your Makers Demonstrations**
 - This would emulate the previous Meet Your Maker event. This event is an open-house style showcase of what people in the community have made and are working on. This can be anything from a 3D printing outputs, to fine arts, to robotics demonstrations.
- **Entrepreneurial Speakers, Pitch Nights & Other Events**
 - There are several entrepreneurial leaders and startups in the Columbus area. These events would provide them space to share knowledge through speaking events, practice their pitch in front of an audience, and network.
- **Workshops and Classes**
 - Classes and workshops may be weekly, on weekends, or at random. They may be taught in the classroom or out on the floor using machinery. They may be led by educators or by community leaders. Several survey responders have already shared that they are interested in teaching a class.
- **Hack-a-thons**
 - A Hack-a-thon is a fun, social event in which hackers come together in a sprint-like event to collaboratively tackle a problem intensively. Hack-a-thons may be weekly or monthly, or however often the community would like them to be.
- **Educational Camps for K-12**
 - Many other Makerspaces provide intensive seasonal camps for children and teens to learn STEAM skills. The Columbus makerspace could eventually emulate those and provide K-12 students with educational and recreational opportunities.
 - Camps, potentially done in partnership with the Columbus Foundation for Youth/Columbus Youth Camp, are possible, such as the “Remote Control Car IoT Camp” hosted by Faurecia and LHP Engineering Solutions in years past.
- **Weekly Build Nights**
 - A weekly build night at a makerspace is similar to what happens at the facility every day but is hosted and led by an instructor or guide and is worked on collaboratively. These

have a more social nature and may be a quick project that can be taken home upon completion.

- **Social Events**
 - Survey responders indicated an interest in movie nights at the makerspace, parties, game nights, etc. These social events would simply be for anyone who would like to spend time with others doing something fun in the makerspace.
- **Arts and Crafts Fairs**
 - Arts and Crafts Fairs may be like other showcases or demonstrations or social events like weekly build nights in which people craft together.

Possible Facility Configuration

Through several tours in and around the facility, the guiding team has identified some initial high-level designations for its use of the space.

Notably, the classroom/events center already has several assets secured, including a donation from the Community Education Coalition of 200+ stackable chairs that are being replaced as the services within the Learning Center are re-aligned to community needs. This would more easily facilitate near-term use of the facility in the designated classroom area, possibly soon enough to aid with social distancing requirements that might be necessary going into the fall 2021 academic term.

Several workspaces already have equipment ready to be donated or provided on-loan from various donors. This should facilitate an initial opening without much reconfiguration of the facility or initial investment.

The facility is also segregated enough (especially when considering it is two separate buildings with a courtyard in the center) that it should allow one area to be upfitted or reconstructed as necessary without disturbing the adjoining areas too dramatically. This will be good not only for noise abatement across the facility, but also better serve the evolving needs of the space.

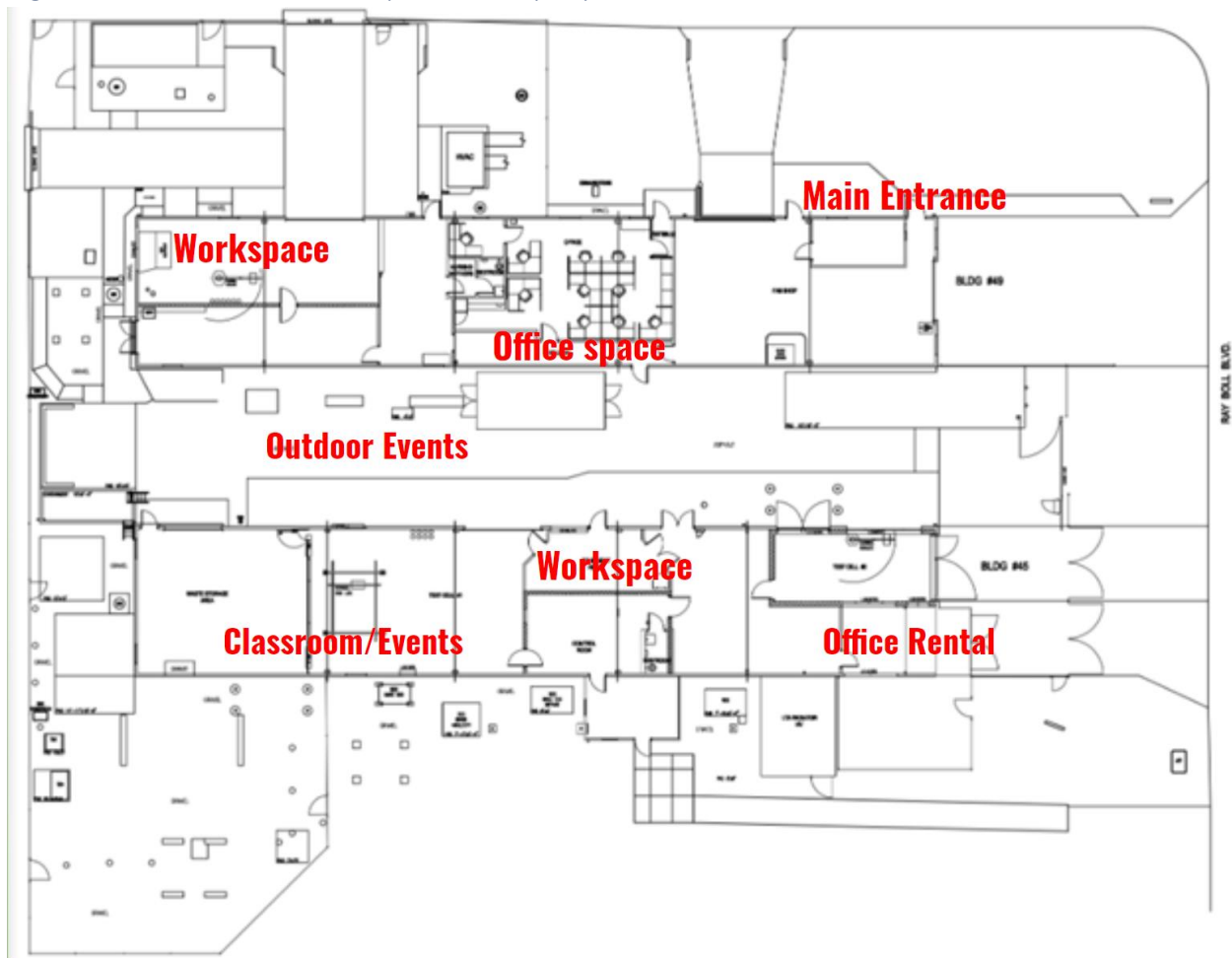
Office/Incubator Rental

The diagram below denotes an office rental space. The board believes that there is an opportunity to sub-lease some sections of the building to new entrepreneurial ventures that perhaps do not yet need a dedicated facility or can yet afford more complete coworking options (such as those found in the Workshop in Columbus), but would benefit from the resources and environment of the makerspace. This revenue is projected in the pro-forma budgets and would begin to take the place of the “Fishtank” co-working space within the Chamber of Commerce, especially for ventures that are more industrial/physical in nature.

University Usage

Financial projections also include contributions from all three higher-education institutions on the AirPark campus. The guiding team includes representatives from all three institutions, as well as a member of the Community Education Coalition. Informal discussions indicate to the guiding team that the universities would be interested at some level of contribution in exchange for making the space available to students. This could range from activity funds covering memberships for current students, to dedicated spaces for programs, such as the IUPUC Mechanical Engineering program.

Figure 5.1 – Potential Use of Space/Facility Layout



Pro Forma Financials

Because the guiding team is still early in the process, pro-forma financials are based on the summation of various early discussions, the community survey, and benchmarking of existing facilities. The guiding team believes these to be reasonable (if not conservative) in their assumptions, however, final numbers may end up looking much different as specific sponsorships and revenue sources are formalized.

Assumptions

The following assumptions are used and are expected to be adjusted as details become clearer. Some assumptions include a monthly cost-averaging approach, wherein some months may see significant costs, while others see relatively lower consumption. For example, seasonality on utility usage is considered, as are professional services. A once-yearly auditing fee to the chamber for the pilot's financial auditing might use most of the professional services budget for one month, while, again for the sake of example, a marketing campaign with a vendor might be undertaken during the fall near "back to school" season or in the winter months when outdoor activity is restricted due to the weather. Additionally, if funds are procured from a grant or gift from a local corporation, these line items may be adjusted to best balance the prevailing needs of the organization.

The following pages contain the assumptions used to build the financial projections in each operating budget and are oriented in a horizontal format on the page for easier viewing due to sizing.

Figure 5.1 – Facility Use Rates

Facility Use Rates	
Individual Member	\$40
Family Memberships	\$60
Storage	\$20
Incubator/Rental Space	\$500
Class Fees	\$50
Event Rental Rates	\$125

Figure 5.2 – Potential Facility Utilization Rates by Month

The following utilization rates are estimated based upon time of year, seasonality, potential opening, and targeted actions such marketing efforts. The numbers are formatted by calendar year to ease viewing in the orientation of this proposal. Spreadsheets with the continuous rates are available upon request.

	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21						
	1	2	3	4	5	6						
Forecasted Members/Activity #s												
Members (Individual)	10	15	25	30	33	36						
Members (Family)	5	10	15	20	23	26						
Storage Units	5	10	15	20	23	26						
Incubator Rentals	0	0	0	1	1	1						
Classes Per Month	0	2	2	2	3	3						
Event Rentals	0	0	1	1	1	1						
	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
	7	8	9	10	11	12	13	14	15	16	17	18
Members (Individual)	39	42	45	48	50	50	50	50	55	55	55	55
Members (Family)	29	32	35	38	40	40	40	40	40	40	40	40
Storage Units	29	32	35	38	40	40	40	40	40	40	40	40
Incubator Rentals	1	2	2	2	2	2	3	3	3	3	3	3
Classes Per Month	3	5	5	5	5	5	10	10	10	10	15	15
Event Rentals	2	2	2	2	2	3	3	3	3	4	4	4
	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23					
	19	20	21	22	23	24	25					
Members (Individual)	55	55	60	60	60	60	60					
Members (Family)	40	40	40	40	40	40	40					
Storage Units	40	40	40	40	40	40	40					
Incubator Rentals	3	4	4	4	4	4	4					
Classes Per Month	15	20	20	20	20	20	20					
Event Rentals	4	5	5	5	5	5	5					

Initial Operating Budget

Two high-level pro-forma operating budgets are offered, one showing full commercial lease rates and estimated costs, and the other showing a reduced lease rate to be requested. These financials will continue to increase in granularity as more formal investigation continues, up through official request for quote, MOUs, and other contracted agreements. These rates are subject to change, though most have been verified through informal requests with relevant Chamber members or organizational/industry affiliation/knowledge. They also do not take into consideration the potential for exchange of goods/services (barter arrangements), or discounts for goods/services rendered by willing community members and businesses. As before, these budgets are formatted to ease viewing in the orientation of this proposal.

Figure 5.3 Pro-Forma Budget – Unabated Costs

2021													
Month	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21							
Operating Month #	1	2	3	4	5	6							
Expenses													
Rent	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000							
Utilities	\$750	\$750	\$750	\$750	\$750	\$750							
Insurance	\$300	\$300	\$300	\$300	\$300	\$300							
Makerspace Manager	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500							
Internet	\$250	\$250	\$250	\$250	\$250	\$250							
Materials (Consumables, etc.)	\$500	\$500	\$500	\$500	\$500	\$500							
Marketing/Promotional Materials	\$0	\$500	\$500	\$500	\$500	\$500							
Professional Svcs*	\$750	\$750	\$750	\$750	\$750	\$750							
Proximity Key Card	\$250	\$250	\$250	\$250	\$250	\$250							
Trash/Cleaning	\$400	\$400	\$400	\$400	\$400	\$400							
Koorsen/Cintas (Fire Inspection, etc.)	\$250	\$250	\$250	\$250	\$250	\$250							
Total	\$8,950	\$9,450	\$9,450	\$9,450	\$9,450	\$9,450							
Income (Possible)													
IUPUC	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000							
Purdue Polytechnic	\$500	\$500	\$500	\$500	\$500	\$500							
Ivy Tech	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000							
Memberships (Individual)	\$400	\$600	\$1,000	\$1,200	\$1,320	\$1,440							
Memberships (Family)	\$300	\$600	\$900	\$1,200	\$1,380	\$1,560							
Incubator Space Rental	\$0	\$0	\$0	\$500	\$500	\$500							
Event/Rental Space*	\$0	\$0	\$0	\$125	\$125	\$125							
Class Fees	\$0	\$100	\$100	\$100	\$150	\$150							
Storage	\$100	\$200	\$300	\$400	\$460	\$520							
Total	\$3,300	\$4,000	\$4,800	\$6,025	\$6,435	\$6,795							
Operating Running Balance	(\$5,650)	(\$5,450)	(\$4,650)	(\$3,425)	(\$3,015)	(\$2,655)							
(Balance Sheet)	(\$5,650)	(\$11,100)	(\$15,750)	(\$19,175)	(\$22,190)	(\$24,845)							
2022													
Month	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	
Operating Month #	7	8	9	10	11	12	13	14	15	16	17	18	
Expenses													
Rent	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Utilities	\$750	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250
Insurance	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300
Makerspace Manager	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Internet	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250
Materials (Consumables, etc.)	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Marketing/Promotional Materials	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Professional Svcs*	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750
Proximity Key Card	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250
Trash/Cleaning	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400
Koorsen/Cintas (Fire Inspection, etc.)	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250
Total	\$9,450	\$9,700	\$9,700	\$9,700	\$9,700	\$9,700	\$9,700	\$9,950	\$9,950	\$9,950	\$9,950	\$9,950	\$9,950
Income (Possible)													
IUPUC	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Purdue Polytechnic	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Ivy Tech	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Memberships (Individual)	\$1,560	\$1,680	\$1,800	\$1,920	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,200	\$2,200	\$2,200	\$2,200
Memberships (Family)	\$1,740	\$1,920	\$2,100	\$2,280	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400
Incubator Space Rental	\$500	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Event/Rental Space*	\$125	\$250	\$250	\$250	\$250	\$250	\$375	\$375	\$375	\$375	\$375	\$375	\$375
Class Fees	\$150	\$250	\$250	\$250	\$250	\$250	\$500	\$500	\$500	\$500	\$750	\$750	\$750
Storage	\$580	\$640	\$700	\$760	\$800	\$800	\$800	\$800	\$800	\$800	\$800	\$800	\$800
Total	\$7,155	\$8,240	\$8,600	\$8,960	\$9,200	\$9,200	\$10,075	\$10,075	\$10,275	\$10,275	\$10,525	\$10,525	\$10,525
Operating Running Balance	(\$2,295)	(\$1,460)	(\$1,100)	(\$740)	(\$500)	(\$500)	\$375	\$125	\$325	\$325	\$575	\$575	\$575
(Balance Sheet)	(\$27,140)	(\$28,600)	(\$29,700)	(\$30,440)	(\$30,940)	(\$31,440)	(\$31,065)	(\$30,940)	(\$30,615)	(\$30,290)	(\$29,715)	(\$29,140)	(\$29,140)
2023													
Month	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23						
Operating Month #	19	20	21	22	23	24	25						
Expenses													
Rent	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000						
Utilities	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250						
Insurance	\$300	\$300	\$300	\$300	\$300	\$300	\$300						
Makerspace Manager	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500						
Internet	\$250	\$250	\$250	\$250	\$250	\$250	\$250						
Materials (Consumables, etc.)	\$500	\$500	\$500	\$500	\$500	\$500	\$500						
Marketing/Promotional Materials	\$500	\$500	\$500	\$500	\$500	\$500	\$500						
Professional Svcs*	\$750	\$750	\$750	\$750	\$750	\$750	\$750						
Proximity Key Card	\$250	\$250	\$250	\$250	\$250	\$250	\$250						
Trash/Cleaning	\$400	\$400	\$400	\$400	\$400	\$400	\$400						
Koorsen/Cintas (Fire Inspection, etc.)	\$250	\$250	\$250	\$250	\$250	\$250	\$250						
Total	\$9,950	\$9,950	\$9,950	\$9,950	\$9,950	\$9,950	\$9,950						
Income (Possible)													
IUPUC	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000						
Purdue Polytechnic	\$500	\$500	\$500	\$500	\$500	\$500	\$500						
Ivy Tech	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000						
Memberships (Individual)	\$2,200	\$2,200	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400						
Memberships (Family)	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400						
Incubator Space Rental	\$1,500	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000						
Event/Rental Space*	\$375	\$500	\$500	\$500	\$500	\$500	\$500						
Class Fees	\$750	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000						
Storage	\$800	\$800	\$800	\$800	\$800	\$800	\$800						
Total	\$10,525	\$11,400	\$11,600	\$11,600	\$11,600	\$11,600	\$11,600						
Operating Running Balance	\$575	\$1,450	\$1,650	\$1,650	\$1,650	\$1,650	\$1,650						
(Balance Sheet)	(\$28,565)	(\$27,115)	(\$25,465)	(\$23,815)	(\$22,165)	(\$20,515)	(\$18,865)						

Request for Rent Abatement by the Guiding Team to the Board

The guiding team understands and appreciates the fiduciary constraints on the operation of the AirPark campus. With that in mind, and with positive reception to the continuation of this effort, the guiding team would like to request the following:

Based on projections from the pro-forma financials provided, would the board consider forgoing rent payments for first 6 months of occupation (through Dec 2021), with a 50% reduction in rate (\$1500 per month) from Jan-Dec 2022, and full market-rate payments beginning in January 2023 of the lease?

During this critical period, the makerspace will seek to find stable financial footing, upfit the building (during which time limited revenue-producing activity would be constrained), and funding otherwise earmarked for rent strategically re-invested into a well-executed marketing process.

The guiding team has prepared a pro-forma budget for this scenario (found on the following page), and the projections suggest the ability to balance a budget by the end of 2021 and become fully self-sufficient around 1 year of operation. We believe this not only to be positive for the community value the makerspace provides, but also provides longer-term security of an extended lease for the AirPark on a unique facility where the design can be leveraged rather than worked around.

Again, the guiding team appreciates the financial constraints placed on the board, therefore, any discount or abatement that the board can find agreeable would be hugely beneficial and contribute to a higher percentage of long-term viability for this effort. Alternative budgets and funding efforts have been prepared and can be identified, but this may also slow the path to self-sufficiency for the enterprise, possibly beyond the targeted Year 2 mark.

Proposed Lease Length

The guiding team believes that an initial 3-year lease, with an option for two 1-year extensions to the lease would be ideal. This would allow stability for the makerspace as it grows and formalizes, and would allow the airport board flexibility over the long term if the facility footprint of the airport needs to evolve for long term growth.

Again, the guiding team would like to engage with the board on the opportunity and believes there is ability to work with whatever the board finds agreeable regarding leasing terms.

Figure 5.4 Pro-Forma Budget – Cost Abatement

2021												
Month	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21						
Operating Month #	1	2	3	4	5	6						
Expenses												
Rent	\$0	\$0	\$0	\$0	\$0	\$0						
Utilities	\$750	\$750	\$750	\$750	\$750	\$750						
Insurance	\$300	\$300	\$300	\$300	\$300	\$300						
Makerspace Manager	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500						
Internet	\$250	\$250	\$250	\$250	\$250	\$250						
Materials (Consumables, etc.)	\$500	\$500	\$500	\$500	\$500	\$500						
Marketing/Promotional Materials	\$0	\$500	\$500	\$500	\$500	\$500						
Professional Svcs*	\$750	\$750	\$750	\$750	\$750	\$750						
Proximity Key Card	\$250	\$250	\$250	\$250	\$250	\$250						
Trash/Cleaning	\$400	\$400	\$400	\$400	\$400	\$400						
Koorsen/Cintas (Fire Inspection, etc.)	\$250	\$250	\$250	\$250	\$250	\$250						
Total	\$5,950	\$6,450	\$6,450	\$6,450	\$6,450	\$6,450						
Income (Possible)												
IUPUC	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000						
Purdue Polytechnic	\$500	\$500	\$500	\$500	\$500	\$500						
Ivy Tech	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000						
Memberships (Individual)	\$400	\$600	\$1,000	\$1,200	\$1,320	\$1,440						
Memberships (Family)	\$300	\$600	\$900	\$1,200	\$1,380	\$1,560						
Incubator Space Rental	\$0	\$0	\$0	\$500	\$500	\$500						
Event/Rental Space	\$0	\$0	\$0	\$125	\$125	\$125						
Class Fees	\$0	\$100	\$100	\$100	\$150	\$150						
Storage	\$100	\$200	\$300	\$400	\$460	\$520						
Total	\$3,300	\$4,000	\$4,800	\$6,025	\$6,435	\$6,795						
Operating Running Balance	(\$2,650)	(\$2,450)	(\$1,650)	(\$425)	(\$15)	\$345						
(Balance Sheet)	(\$2,650)	(\$5,100)	(\$6,750)	(\$7,175)	(\$7,190)	(\$6,845)						
2022												
Month	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Operating Month #	7	8	9	10	11	12	13	14	15	16	17	18
Expenses												
Rent	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Utilities	\$750	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250
Insurance	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300
Makerspace Manager	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Internet	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250
Materials (Consumables, etc.)	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Marketing/Promotional Materials	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Professional Svcs*	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750
Proximity Key Card	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250
Trash/Cleaning	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400
Koorsen/Cintas (Fire Inspection, etc.)	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250
Total	\$7,950	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,450	\$8,450	\$8,450	\$8,450	\$8,450
Income (Possible)												
IUPUC	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Purdue Polytechnic	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Ivy Tech	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Memberships (Individual)	\$1,560	\$1,680	\$1,800	\$1,920	\$2,000	\$2,000	\$2,000	\$2,000	\$2,200	\$2,200	\$2,200	\$2,200
Memberships (Family)	\$1,740	\$1,920	\$2,100	\$2,280	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400
Incubator Space Rental	\$500	\$1,000	\$1,000	\$1,000	\$1,000	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Event/Rental Space	\$125	\$250	\$250	\$250	\$250	\$375	\$375	\$375	\$375	\$375	\$375	\$375
Class Fees	\$150	\$250	\$250	\$250	\$250	\$500	\$500	\$500	\$500	\$500	\$750	\$750
Storage	\$580	\$640	\$700	\$760	\$800	\$800	\$800	\$800	\$800	\$800	\$800	\$800
Total	\$7,155	\$8,240	\$8,600	\$8,960	\$9,200	\$9,200	\$10,075	\$10,075	\$10,275	\$10,275	\$10,525	\$10,525
Operating Running Balance	(\$795)	\$40	\$400	\$760	\$1,000	\$1,000	\$1,875	\$1,625	\$1,825	\$1,825	\$2,075	\$2,075
(Balance Sheet)	(\$7,640)	(\$7,600)	(\$7,200)	(\$6,440)	(\$5,440)	(\$4,440)	(\$2,565)	(\$940)	\$885	\$2,710	\$4,785	\$6,860
2023												
Month	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23					
Operating Month #	19	20	21	22	23	24	25					
Expenses												
Rent	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000					
Utilities	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250					
Insurance	\$300	\$300	\$300	\$300	\$300	\$300	\$300					
Makerspace Manager	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500					
Internet	\$250	\$250	\$250	\$250	\$250	\$250	\$250					
Materials (Consumables, etc.)	\$500	\$500	\$500	\$500	\$500	\$500	\$500					
Marketing/Promotional Materials	\$500	\$500	\$500	\$500	\$500	\$500	\$500					
Professional Svcs*	\$750	\$750	\$750	\$750	\$750	\$750	\$750					
Proximity Key Card	\$250	\$250	\$250	\$250	\$250	\$250	\$250					
Trash/Cleaning	\$400	\$400	\$400	\$400	\$400	\$400	\$400					
Koorsen/Cintas (Fire Inspection, etc.)	\$250	\$250	\$250	\$250	\$250	\$250	\$250					
Total	\$9,950	\$9,950	\$9,950	\$9,950	\$9,950	\$9,950	\$9,950					
Income (Possible)												
IUPUC	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000					
Purdue Polytechnic	\$500	\$500	\$500	\$500	\$500	\$500	\$500					
Ivy Tech	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000					
Memberships (Individual)	\$2,200	\$2,200	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400					
Memberships (Family)	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400					
Incubator Space Rental	\$1,500	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000					
Event/Rental Space	\$375	\$500	\$500	\$500	\$500	\$500	\$500					
Class Fees	\$750	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000					
Storage	\$800	\$800	\$800	\$800	\$800	\$800	\$800					
Total	\$10,525	\$11,400	\$11,600	\$11,600	\$11,600	\$11,600	\$11,600					
Operating Running Balance	\$575	\$1,450	\$1,650	\$1,650	\$1,650	\$1,650	\$1,650					
(Balance Sheet)	\$7,435	\$8,885	\$10,535	\$12,185	\$13,835	\$15,485	\$17,135					

Building & Capital Improvements

Because the facility was tailored to such a specific use for decades, the building, as expected, does need some modification to be utilized effectively, whether this be as a makerspace facility or most other light industrial/commercial uses. As noted earlier, these upgrades should, fortunately, be relatively minor when compared to new construction or traditional redevelopment/remediation efforts undertaken by the city. Large projects that would pose a significant threat, such as underground storage tanks, have been removed and remediated by Cummins already, and they are ensuring that any potential concerns have been dealt with for the duration of their occupation and use of the facility has been addressed.

Energy Usage & Solar Considerations

Toyota Material Handling benchmarked similar facilities within its portfolio, along with discussion with other makerspace facilities to derive estimated monthly electricity/utility costs found in the pro-forma budgets. Acceptable electrical service is also available to the site to run the equipment that is likely to be used.

Solar energy was considered to offset long-term operating costs (especially important for a non-profit enterprise) and may still be a viable option, however, initial operating budgets do not take the offsets into consideration, as costs for the system were estimated between \$100k-200k, with a potential ROI of around 17 years (consistent with industry standards).

If the makerspace pilot continues forward, it may be discovered that energy efficiency improvements such as additional insulation may be made and the use of TIF redevelopment funding may be beneficial.

Cummins has also advised the HVAC systems are oversized for normal usage of a facility that size, due to the excessive heat demands created by the engine testing performed previously and recommended to the guiding team to investigate “right-sizing” HVAC units. The guiding team has, as of the time of this writing, yet to obtain a quote on what this would cost, or what the potential energy savings would be versus the operation of the oversized units. However, if the efficiencies gained are within acceptable ROI considerations, the guiding team may request potential use of TIF dollars for this purpose.

It has also been noted that the garage doors to the facility could be upgraded and likely achieve additional security and energy efficiency. Overhead Door has been noted as a likely supplier, though a quote has not been obtained at the time of this writing.

Though final configuration would have to be sorted out with Cummins prior to the end of their lease, most of these upgrades are considered ‘nice to have’ and would likely not be required initially to utilize the facility as a makerspace.

Figure 6.1 Proximity Access Control

Benchmarking The Mill co-working space in Bloomington, Proximity security solutions, combined with Google Nest camera monitoring, has proven to be an effective solution, with compelling price points. A one-time charge for a \$500 module controls up to 4 doors through the digital door access. Given the distributed nature of the facility, it is estimated that up to 4 of these units might be needed, along with requisite installation costs that have yet to be determined. Features of the Proximity solution are noted below:



Membership Management

Manage member profiles, flexible membership types and check-ins for your workspace



Digital Door Access

Control door access and provide members with digital keys via iOS and Android mobile apps



Wi-Fi Access Control

Enable secure network access with customizable permissions for members and guests



Reservation Management

Automate scheduling for conference rooms, phone booths or any reservable resource



Guest Management

Send members notifications for guest arrivals, package deliveries or food deliveries



Billing and Payments

Collect payments for recurring memberships, day passes, reservations or service amenities

Next Steps

Pending the continuing support of the Board of Aviation, the guiding team would like to begin formalizing this pilot effort through necessary MOUs, lease agreements, and funding arrangements. While overwhelming generalized support exists, targeted actions necessary to bring this space to reality will need to be undertaken as soon as possible. It is our goal to begin upfitting and/or leveraging the facility as soon as it becomes available, both to avoid the asset going unused at the completion of the current lease, and more quickly begin the path to self-sustaining viability as it becomes an increasingly important asset to the community.

The guiding team appreciates the time and attention of the board, as well as the opportunity to present this proposal. It is our sincere desire to steward and grow this evident and unharnessed energy of the community into a source of innovation, entrepreneurship, career development, and enjoyment.