



EDUCATION FINALIST: **COGNITION SCIENCE AND DISCOVERY CENTER**

INITIATIVE: **Earth and Space Lab**

OVERVIEW OF INITIATIVE - IN THE APPLICANT'S WORDS

Cognition science and discovery center in Beulah, presents an initiative to transform a portion of its expanded facility into a cutting-edge Earth and Space Lab.

A portable planetarium, with inflatable dome theater and expansive science curriculum, will provide families a multitude of immersive experiences including star and planet study, geography, and meteorology.

Four interactive Virtual Reality stations will provide high-tech simulation experiences for multiple age, interest, educational, and developmental levels. Programs include space exploration, skills training, safe driving and flight simulators, career exploration, and art and design.

These experiences enhance Cognition's STEM focus and will complement local school district curriculum, providing field-trip and assembly options. A "Mobile Lab" will be created using a cargo trailer, enabling Cognition to take both planetarium and VR experiences to organizations throughout the five-county region. Providing high-quality educational experiences that many residents are otherwise unable to access, increases opportunities for at-risk youth and low-income families.

The following sections contain certain key information from the application, as written by the applicant. While detailed financial information has not been provided here due to its confidential nature, each applicant submitted an initiative budget and supporting financial documents as part of their application. Each proposed initiative and the supporting financial documentation has undergone a thorough financial review by our Community Investment Review Committee (CIRC) and the initiatives proposed by our finalists have met our standards for moving forward.

ORGANIZATION'S VISION STATEMENT

Cognition's vision is to create an interactive science playground captivating the community and lifelong learners.

ORGANIZATION'S MISSION STATEMENT

The mission of Cognition is to be a fun place to expand minds through hands-on experiences for kids of all ages.

DESCRIPTION OF ORGANIZATION AND ITS HISTORY

Cognition is a 501 (c)(3) non-profit science and discovery center for all children and families who reside in Benzie County and the surrounding northern Michigan region. The center is located in the village of Beulah, Michigan. Cognition offers science-based experiences which promote exploration and inquiry for families and children. In order to be relevant and interesting to all ages of guests, Cognition offers a variety of activities that range from holding live tortoises and hedgehogs, to building large marble mazes or exploring electrical circuits. The program provides opportunities for participants to explore the world around them through a variety of activities including coding, robotics, art, exploration and animal discovery. Activities promote visual, auditory and kinesthetic learning which enhances a child's ability to learn about the world around them in an organic way.

The founders of Cognition recognized that there was a significant need within Benzie County to provide hands-on, educational experiences for children to explore and study the world around them regardless of abilities, socio economic challenges, etc. We recognize that families are in need of an opportunity to meet in an environment which encourages interaction and connection in an authentic way.

Cognition first opened in late 2016 in a small retail space of 800 sq ft. Since then, the center has built a membership base that represents about 500 family members and engages thousands of returning visitors each year. With thousands of visitors, hundreds of members, dozens of field trips, and a solid core volunteer team, Cognition has become ingrained in the northwest Michigan region.

In 2019, the John and Kay Miller family gifted a building to Cognition, expanding our space approximately 4,000 sq ft. Cognition was able to raise support from local individuals, family foundations, and organizations to pair with a final line of credit for this expansion project, "Operation Growth Spurt." The secured funds and hundreds of hours of community service provided for the initial building improvements and renovations, culminating in ADA compliance in a unique and inspiring environment that is open and operating. With tremendous community support, the main building renovations were completed and Cognition safely reopened to the public in August 2020. The science and discovery center has become an essential asset to the region during the isolation and limited opportunities of the pandemic. Providing children a safe place to socialize, supplement formal education, and explore in a safe, interactive environment has never been more necessary.

EXECUTIVE SUMMARY OF INITIATIVE

Cognition is an interactive science and discovery center in Beulah, Michigan, providing an engaging science playground to inspire the community and lifelong learners. “Kids” of all ages, learning styles, and abilities are welcome and appreciated. With generous commitment and support of the community, Cognition has expanded into a large barrier-free facility with increased exhibit space. This proposed initiative will transform a portion of this prepared space into a cutting edge Earth and Space Lab with interactive planetarium, Virtual Reality, and Mobile Lab programs. The proposed initiative includes start-up salaries to hire key program staff. Dedicated staff will develop and launch new experiences with focused leadership and consistency to build a robust and sustainable Earth and Space Lab program.

The first component entails the purchase of a complete portable planetarium system. The inflatable dome theater includes the hardware and software to project an array of immersive presentations covering a full range of science curriculum. This high-tech equipment will enhance the STEM (science, technology, engineering and mathematics) focus of the programs Cognition offers. Children and families in the five-county region and beyond will have the opportunity to experience star and planet study, geography, and a multitude of explorations in a unique and memorable way. The planetarium will complement and enhance the curriculum provided in the local school districts and generate field trips for various community organizations.

Secondly, Virtual Reality (VR) will be used in the Earth and Space Lab as a high-tech, engaging connection to the world around us. VR components consist of a visual and auditory headset, powered by a high-end graphics-dedicated computer. Sensors around the room enable the participant to move freely in a virtual, interactive simulation experience. VR can provide high-tech experiences that cover multiple age, interest, educational, and developmental levels. Programs include space exploration, skills training, safe driving and flight simulators, career exploration, and art and design. Purchases include VR equipment to create four hands-on stations fitted with necessary controls, software, and support tools. A variety of VR simulations and experiences will engage everyone from young children to grandparents.

As the third major component of this initiative, Cognition plans to utilize a cargo trailer to make the Earth and Space Lab mobile. The Mobile Lab will enable the discovery center to take both the planetarium and VR experiences to other places throughout the five-county region, reaching as many children and families as possible. These experiences will serve the at-risk youth of this low-income region and provide high-quality experiences that many families are unable to access.

The Earth and Space Lab will be a valuable educational resource for science and discovery, providing the northwestern Michigan region and all its visitors a bright and adventurous future.

COMMUNITY TO BE SERVED

Cognition is located on US 31 across from the Cherry Hut Restaurant in Benzie County. Benzie County is located on the shore of Lake Michigan and enjoys many surrounding inland lakes. It celebrates many rural residents including individuals who live in the towns of Benzonia, Beulah, Frankfort, Honor, Lake Ann, and Thompsonville. As the smallest county in Michigan, Benzie covers 355 square miles. In 2019, 38% of the county's population were at or below the ALICE/Low Income threshold (2021 United Way Report). The area represents a unique dichotomy of local low income families that live in the area year-round, and a high percentage of seasonal residents.

Cognition serves families from the five-county region and beyond. The discovery center is utilized by local full-time residents and vacationers as well as individuals from Grand Traverse, Leelanau, Kalkaska, and Antrim, and other neighboring counties. The regional population fluctuates depending on the time of year. Summer months and holidays experience a surge in population which is noted for participation at Cognition, as well. Summer visitors are often looking for things to do in the area for quality family interaction.

Children and families of all ages, socio-economic status, and cultural and racial backgrounds benefit from the program offerings and facilities. Guests attend Cognition in various groupings which include personal family outings, extended family groups, private and public school field trips, teen specific programs, homeschool groups, court-ordered supervised family visits, and day care center outings.

NEEDS OF THE COMMUNITY TO BE SERVED

The region has limited resources beyond the basic academic programs provided by the schools. Opportunities for children to participate in enrichment activities are limited by comparison to their suburban and urban counterparts. This lack of opportunity limits student career explorations and thus narrows their awareness of occupations providing greater economic stability. The community struggles to provide early exposure for young people to gain awareness of the vast opportunities in technical trades. Therefore there is a disconnect between education and future employment opportunities.

Access to after-school programs for elementary and middle school students is another need. Only one other comparable summer day camp experience is offered in the county. Local schools are limited in supplemental resources for modern STEM (science, technology, engineering, math) enrichment, arts, and extracurriculars. Teenagers have limited options for healthy social experiences and recreation outside of school and work. Improved internet accessibility has been identified as an infrastructure need in the area as well.

Cognition has been working diligently to meet the needs of youth of all ages by providing educational enrichment, after school options, exploration of STEM concepts, and exposure to different career paths. Success is clearly demonstrated by increased community participation, membership increases, and positive reviews. The building donation and

completed expansions are evidence of this success and continued impact. The Earth and Space Lab proposal will enhance this impact significantly, especially in creating relevant educational activities for teenagers.

The region lacks preschool programs, quality daycare, and other developmental experiences for the young child. Cognition provides interactive and developmental activities for preschool age children, thus enhancing their kindergarten readiness. Research indicates that the earlier the intervention, the greater success children have as they progress through the educational system, including postsecondary training. Parental support is provided through modeling interactions with children, thus enhancing their collaboration and social-emotional development. Family interaction, intergenerational connections, and recreational activities for families of all ages are needs that Cognition has identified in the organization's Strategic Plan.

The five-county region depends on an influx of seasonal tourists and visitors to spend time and money at local businesses. The region is also in need of new residents to fill employment positions which would subsequently increase school enrollment. Cognition benefits the community by increasing the attractiveness for visiting families and potential new residents.

Students and families who meet the ALICE/free and reduced lunch status struggle to find activities for on-going participation, STEM enrichment, and access to technology in the area. This generates an unintended consequence for those individuals who can not afford money for travel outside the region to visit museums, children's centers, science centers, and planetariums that are more accessible downstate. Experiences for children and families not otherwise attainable in the community are critical. Cognition is a location for all to gather within the five county region, and all families are welcome regardless of their ability to pay.

SUSTAINABILITY OF THE PROPOSED INITIATIVE

The Earth and Space Lab initiative is a clear route to long-term sustainability of the programs it entails and to Cognition. The new opportunities provided by the Lab will draw more guests to the center, increasing admission and membership income. The Mobile Lab will expand capacity to serve the five-county region, increase awareness of programs at the center, and generate additional program income. The overall increased income will provide for maintaining program staff, curriculum, promotional materials, maintenance, and cleaning the equipment. Cognition has sustained all of its current exhibits and programs for the past four years with program income, fundraising, grants, and individual contributions. We are confident that this initiative will improve our previous sustainability efforts. Increased participation will be tracked by the number of individuals using the Lab and other programs. Financial sustainability will be measured through income tracking, reviewed monthly by Cognition's Board of Directors.

With more to offer, Cognition will be in a better position to deepen relationships with the area school districts and community organizations for a more robust alliance. The increased awareness and activity will support volunteer recruitment, generate more program income, and support fund raising efforts for continued improvement and expansions. The Earth and Space Lab will enhance regional opportunities, the local community, and its home science and discovery center for years to come.