

2018-2019 Annual Report



FROM THE DIRECTOR

On a trail near where I live, there was a blank sign. The original message had faded away long ago. A sign that says nothing eventually becomes almost invisible. Recently, some creative soul, armed with a can of black spray paint, made it clear to all what the blank sign had been trying to say to us: “Think for yourself.”

It seems to me that this is part of what a college education is about—“to educate men and women toward maturity of intellect”—not so much to know the answers to the questions faculty and staff ask of the students, but rather for them to know how to think through the questions that are still in the future. Finding answers when the path isn’t clearly marked is an important skill to develop and is useful in tackling some of the tough problems presented to our Collaboratory students.

Don’t just think about yourself

Intellectual challenge alone is not the target. Maturing of “character and Christian faith” is also the pursuit. Therefore, Collaboratory projects are often found in the midst of broken settings. These circumstances require not only use of mental powers, but also to give of our very selves in order to restore some of the flourishing that God intends for the people He created.

Think beyond yourself

While this journey to maturity is personal, it is not individual. Preparing for “lives of service, leadership and reconciliation” implies that there is a major dose of “togetherness” on the journey. So we work with our community partners toward results—results that also build relationships.

On the following few pages you will see a glimpse of the good work God is doing through the Collaboratory. Thank you for your continued support of this work as we strive toward our vision to increase hope and transform lives through education, collaboration, innovation and service.



Doug Flemmens
Director, The Collaboratory for Strategic Partnerships
and Applied Research at Messiah College

MISSION

The Collaboratory, at Messiah College, is a center for applied research and project-based learning, in partnership with client nonprofit organizations, businesses, governments and communities in our region and around the world. Areas of engagement include science, engineering, health, information technology, business and education. Our twofold mission is:

- To foster justice, empower the poor, promote peace and care for the earth through applications of our academic and professional disciplines
- To increase the academic and professional abilities of participants, their vocational vision for lifelong servant-leadership and their courage to act on convictions

VISION

Increasing hope and transforming lives through education, collaboration, innovation and service.

IDENTITY

The Collaboratory is an organization of students, educators and professionals affiliated with Messiah College. We are Christians who aspire to obey the instructions of our Lord and Savior Jesus Christ, to love neighbors as ourselves and to share his Gospel. As God enables us to serve others today, we seek to grow as disciples of our Lord and Savior Jesus Christ, to serve as God’s stewards over the resources of our academic disciplines and to bear witness to the good news of the Kingdom of God.

STAY CONNECTED


WEB: messiah.edu/collaboratory

EMAIL: collaboratory@messiah.edu

BLOG: messiahcollaboratory.wordpress.com

 facebook.com/Collaboratory

 instagram.com/MCCollaboratory

 twitter.com/MCCollaboratory

2018-2019 COLLABORATORY LEADERS

Doug Flemmens

Director

Lily Gaudreau

Student Director

Lori Zimmerman

Program Manager

Kally Tan

Student Program
Manager

Dereck Plante

Engineering Project Manager

Shannon Walker

Administrative Assistant

Erin Brenneman

Assistant Student Director

Mik Fenn

Student Administrative
Assistant



PROJECT HIGHLIGHTS

DISABILITY RESOURCES/BIOMEDICAL

Cunningham Clubfoot Brace

- This team continues to work on developing and validating a maintenance bracing treatment method for club foot developed by prosthetist and orthotist Jerald Cunningham.
- Many of the team members took their spring break to personally meet with Mr. Cunningham in Maine. They also traveled to CURE Kenya during the summer and were able to pilot test a pressure sensor force collection device as well as actively participate in clubfoot clinics and home visits.

ENERGY

Energy Monitoring and Management System (EMMS)

- This team made great progress toward the continued development of their energy monitory system, which is designed to allow organizations with limited power sources (such as solar) to manage the limited resource among multiple users while helping to educate those users about the impact of their power-consumption choices.
- At the end of the spring semester, the team built 27 systems. Six systems went to Matt Walsh to install at the Institut Missiologique du Sahel in Burkina Faso. The remainder of the systems were installed at Theological College of Zimbabwe during the team's summer site trip to Zimbabwe.

EDUCATION

Harrisburg Science Camps

- This team faithfully prepared and delivered weekly after-school STEM (science, technology, engineering, math) material to 4th- and 5th-graders at Downey Elementary school. During the year, they conducted 16 sessions for approximately 13 students. They have sharpened their own teaching skills while inspiring their students to explore STEM topics and careers.

INFRASTRUCTURE

Land Development in Kenya

- The Land Development team has partnered with Living Love Ministries, an orphanage in Kenya, to provide site development plans for much-need athletic/play fields for the orphanage. They also designed a drip-irrigation system that will help Living Love extend their growing season throughout the dry season, moving closer to their goal of being self-sustaining in providing food for their nearly 30 children. In June, they traveled to Kenya along with the Solar PV team to install this system along with a solar water pump donated by Stanley Earth.

WATER/HEALTH

Sustainable Agriculture

- The team marched forward with great success in creating a best practice prototype of an aquaponics system and began the growing process of several tomato plants using the nutrients from two tilapia.

Village Water Ozonation Systems (VWOS)

- Pakistan:** The team is finishing the design of an arsenic removal and disinfection system to meet the drinking water needs of 150 students and staff at the Full Gospel Assemblies Pakistan Bible College.
- Nicaragua:** The VWOS project has initiated a partnership with Friends in Action and the Rama People in Nicaragua to plan a sustainable drinking water solution for the community living on Rama Kay Island. So far, well testing and water quality tests have been completed.
- Mexico:** There is a continued partnership with Forward Edge in Oaxaca, Mexico, planning the installation of an Ozonation system at the Christian Family Center International church. This system will support the church's feeding program and other ministries.

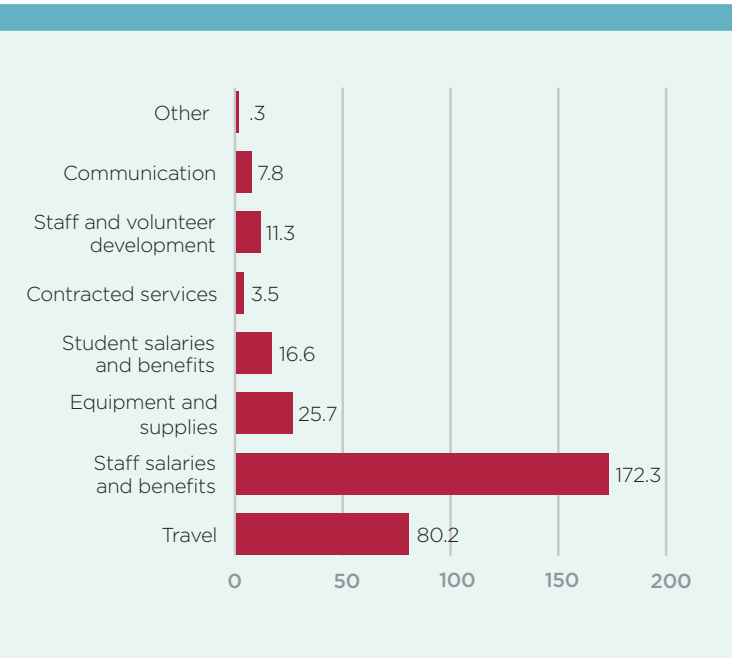
TRANSPORTATION

Basic Utility Vehicle – Firetruck

- The project team provided a working prototype, design documents, user manual and manufacturing manual to their client, the Institute for Affordable Transportation.
- The BUV and prototype will be donated to a community as recommended by the client.

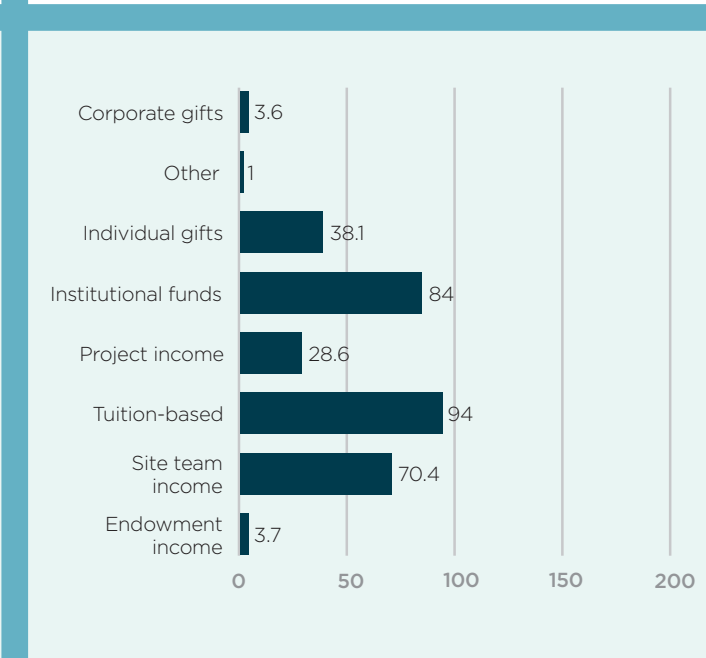
2018-2019 FINANCIAL OVERVIEW

TOTAL EXPENDITURE BREAKDOWN (1000s)



Overall total expenditures: \$317,498
Unachieved giving target: \$59,400
Target revenue: \$382,836

TOTAL REVENUE SOURCES (1000s)



Overall total revenue : \$323,436
Spending reductions: \$47,400
Target spending: \$364,898

THANK YOU TO OUR INVESTORS AND PARTNER ORGANIZATIONS

TRANSFORMATION INVESTORS

Invested regularly in the Collaboratory up to \$500 this year
Bethany Blackwood
Michael & Rebecca Brown
Daniel Dourte
William & Emily Jones
David & Nancy Knight
Nathaniel & Jennifer Nichols
Timothy & Lisa Roesler
Earl & Elisabeth Swope
Paul & Kimberly Tucker
Leslie Weiland

CORNERSTONE INVESTORS

Invested in the Collaboratory \$500 - \$999 this year
Mel Brough
Curtis & Laura Edgin
Douglas & Joanne Flemmens
Stephen & Krista Frank
Kate Johnstone
Robert & Susan Kline
Nancy Lenhert-McLellan
Brittany Lighthall
Nathan & Naphtali Mitten
Gavin Stobie
Deborah Tepley & Luke Jackson

MAJOR INVESTORS

Invested in the Collaboratory more than \$1000 this year
Daniel & Karisa Barlow
Pat & Brenda Brown
Nathaniel & Jacqueline Diedrich
Keith & Carol Good
Glenn & Kelly Heisey
John & Nancy Howell
Elizabeth Imboden
John Meyer
Roger & Joann Sider
Clayton & Elizabeth Swartz
David & Ariela Vader
Gerald & Ruth Wolgemuth

MAJOR FUNDING PROVIDED BY

Brethren in Christ Foundation
D H Funk & Sons LLC
Dillsburg Brethren in Christ Church
Friends of TCZ
Gannett Fleming Inc.
Intel Corporation
Modjeski & Masters
World Vision Inc.

ADDITIONAL CORPORATE FUNDING

Association for Bridge and Construction Design
E & E Metal Fab, Inc.
Paulus Orchards
Presbyterian Church in America Foundation

PARTNER ORGANIZATIONS

Access Development/Water4
Aligned Works
Burkina's Promise
Jerald Cunningham
Cary Cupka
Centre for the Advancement of the Handicapped
CURE International
Engineering Ministries International (EMI)
Eric Shoemaker/Ability
Prosthetics and Orthotics
Forward Edge/Trigo y Miel
Friends in Action
Full Gospel Assemblies
David Germeyer
GO Ed
HALO Trust
Harrisburg Public Schools
IEEE Smart Village
In Peace and Love
Institute of Affordable Transportation
Living Love Ministries
Macha Research Centre of Zambia
Office of Disability Services, Messiah College
Open Door Development/SIM
Paxton Ministries
Rider Musser Development
Rio Missions
Sight and Sound Theatres
Theological College of Zimbabwe
Water Mission
Wheels for the World/Joni and Friends
World Vision

GIFTS IN KIND

- Donated office and work space from Messiah College
\$105,000
- Estimated student volunteer service value
\$62,081
(8,563 hours)*
- Estimated professional advisor volunteer service value
\$196,000
(2,800 hours)
- Estimated faculty support value
\$70,000

GRAND TOTAL:
\$433,081

*Does not include hours spent by students earning course credit.
Total student hours = 19,303.



THE COLLABORATORY FOR
STRATEGIC PARTNERSHIPS AND
APPLIED RESEARCH

One College Avenue Suite 3034
Mechanicsburg PA 17055

Address Service Requested

DOKIMOI ERGATAI



ABOUT US

STUDENT MEMBERS PER SECTOR

Advancement	8
Biomedical	43
Communications tech	9
Disability resources	19
Economic empowerment	17
Education	6
Energy	30
Infrastructure	34
Sustainability	6
Transportation	13
Water	34
Other	8
Total student members	227

COUNTRIES WHERE WE SERVE

Algeria	Mexico	United States
Burkina Faso	Nicaragua	Vanuatu
Ghana	Pakistan	Zambia
Kenya	Panama	Zimbabwe

CONTACT US

The Collaboratory, Messiah College, Suite 3034,
One College Avenue, Mechanicsburg, PA 17055

collaboratory@messiah.edu

messiah.edu/collaboratory

717-796-1800, ext. 7226