

Resources for Working with Project Sponsor Organizations and Communities

Compiled by Mike Elmes and Scott Jiusto

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This packet includes resources for instructors and program developers interested in having students work in fairly rich ways with “project sponsors.” In this context, project sponsors are organizations – government agencies, non-profit or community-based organizations, businesses, etc. - that present students authentic challenges and work with them to learn by striving to deliver value of various sorts to the sponsoring organization and often others. These materials are drawn largely from WPI’s Global Projects Program but are likely to stimulate ideas for planning projects regardless of the scale, scope and nature of partnering organization and/or community group.

Materials included:

1. Cape Town Project Centre Overview used to introduce the program and how we generally work with partners.
2. Project Description Samples: these one page documents are developed by the project sponsors and WPI center directors so that students, sponsors and faculty advisors may begin the project with a common understanding of project goals, methods and critical context. The projects always evolve from these descriptions, sometimes in dramatic fashion, and we include on each description links to the final student report, which include:
 - a. *Developing an Annual WPI Sustainability Report*: An on-campus project sponsored by a campus sustainability committee
 - b. *Recommendations for a Comprehensive Massachusetts Underground Storage Tank Cleanup Policy*: A project in WPI’s hometown with an elected government official as sponsor and a policy recommendation as outcome.
 - c. *Development of the Inspire Engineering Mentoring Program*: A London Project Center project with a non-profit organizational sponsor and a project focused on program development.
 - d. *Developing Improved Facilities for the Sizakuyenza Safe House*: A Cape Town Project Centre project illustrating a “client and community engagement” project in a very sensitive, but contained, community context in South Africa.
 - e. *Early Childhood Development in Flamingo Crescent*: Another Cape Town Project Centre project, this one illustrating a project that had students working in a very complex, multi-stakeholder community context to design and build a small informal preschool.



WPI

CAPE TOWN PROJECT CENTER

INTERDISCIPLINARY AND GLOBAL STUDIES DIVISION

ABOUT THE CENTER

KEY DATES 2015

Projects scoped:	07 Aug
Students begin at WPI:	27 Aug
Students begin in SA:	22 Oct
Fieldwork ends:	11 Dec
Reports & projects done:	17 Dec

AN OVERVIEW OF WPI AND THE GLOBAL PERSPECTIVE PROGRAM

Founded in 1865, Worcester Polytechnic Institute (WPI) is one of the oldest scientific and technical universities in the United States. For over 40 years, WPI has engaged students in project work in communities around the world, sending more undergraduate engineers and scientists abroad than any other American university. Other universities have studied this model, which combines theory and practice through project-based work.

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See student reporting and more program information at:
<http://wp.wpi.edu/capetown/>

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The mission of the Worcester Polytechnic Institute (WPI) Cape Town Project Center is to engage students, faculty and local partners in shared “action learning” projects, which are supportive of sustainable development in historically disadvantaged communities.

Since 2007, WPI has sent two dozen students and two faculty advisors annually to work on locally sponsored projects. Past projects include sustainable water and sanitation, urban planning and mapping, youth and early childhood development, energy and stormwater management, micro-entrepreneurship, multimedia communications, and sport and recreation. We



have worked in communities including Monwabisi Park, Khayelitsha, Maitland Garden Village, Mitchell’s Plain, Oude Molen Eco-Village, the Cape Town CBD, and Stellenbosch Municipality.

WORKING WITH LOCAL PARTNERS

Our students learn how to plan and execute a real world project, while project sponsors benefit by having a team of students, with on-site faculty guidance, working fulltime to analyze and develop responses to issues of the sponsor’s choosing. Projects often involve “community co-researchers,” local people who work closely with student teams as project developers with deep knowledge of local conditions and practices, and a keen interest in advancing community well-being. Our aim is to foster “Shared Action Learning” so that all parties – WPI students and faculty and local partners – all learn from one another. Ongoing, two-way communication with sponsors is integral to project success.

EXAMPLES OF WPI CAPE TOWN PROJECTS

Upgrading in Langrug Informal Settlement: with community members and local partners built a novel water and sanitation facility and planned for reblocking and a community centre.

Settlement Upgrading in Flamingo Crescent worked with community members, City of Cape Town, CORC and ISN on reblocking and other initiatives.

Sustainable Livelihoods Through Beekeeping helped Manenberg residents create a business plan and launch the Cape Flats Honey cooperative into operation.

Improving Community Spaces Through Collaborative Building helped residents of Monwabisi Park renovate a meeting hall and install an innovative sanitation system at another community facility.

Strengthening Spaza Shops surveyed and mapped spazas in Monwabisi Park and helped shopkeepers access training programs and cooperative purchasing opportunities.

Early Childhood Development assessed ECD needs in Monwabisi Park and proposed new ways to support children and families as an integral part of community development.

SPONSORING A PROJECT

Sponsoring organizations have included government agencies, non-profit and community-based groups, businesses and educational institutions. Sponsors are not charged to participate in the programme; students pay for their own travel and housing expenses and receive no financial compensation. WPI and sponsors may collaborate on funding proposals to support local initiatives.



WPI'S ROLE:

- Students are selected based on previous academic performance, the ability to work in teams, relevant background, motivation, independence and adaptability.
- Student teams are multidisciplinary across engineering, science, management, arts and humanities; they work in teams of four on one of six projects.
- Students receive two months of intensive preparation in Worcester and prepare a formal written proposal for the project sponsor before arriving in Cape Town.
- In South Africa, teams work fulltime, or approximately 1,400 hours per project.
- Students provide an extensive project report and website, including process, results, and recommendations for future work or sustainability.
- Two experienced WPI professors reside in Cape Town for the duration of the projects to advise students and liaise with sponsors.

SPONSOR'S ROLE:

- Sponsors identify a project with a suitable scope with a brief description of what they expect the students to achieve and what support the sponsor will provide.
- A project liaison must be available to provide guidance, resources and information, and assure that projects are safe and appropriate.
- The sponsor provides a place for meetings and research, and where possible, assistance with direct project-related expenses and student travel logistics.

Developing an Annual WPI Sustainability Report

Example of: A 2009 on-campus project sponsored by a campus committee.

Final Report: <http://www.wpi.edu/Pubs/E-project/Available/E-project-042610-180335/>

Project Sponsor: The WPI President's Task Force on Sustainability

Advisors: LM and SJ

Climate change, inequality and poverty, species loss, economic instability – these and other problems have led many to conclude that a major challenge of the 21st century will be the pursuit of “sustainability” – new modes of economic development that better foster environmental preservation, economic prosperity, and social equity. Universities have a special responsibility for helping to understand this challenge and to develop new approaches to economic development and resource use. At WPI, the President's Task Force on Sustainability was created to provide leadership and coordination for campus-wide efforts directed toward enhancing the long-term sustainability of WPI's activities and in supporting WPI's educational mission with regard to sustainability. One priority of the Task Force is to develop a clear framework for communicating priorities and measuring progress toward sustainability. This IQP will help address this need by developing a proposal for an annual reporting process for sustainability. Through its research, the IQP team will address questions such as:

- How do other campuses and corporations report on their sustainability (or environmental) performance? Can existing reporting models and processes be adapted for use at WPI?
- How does the WPI Task Force define sustainability and what are its priorities for the university?
- How can various aspects of sustainability be measured? What are the necessary data needs and data collection systems?
- Who should be responsible for reporting?
- What form should the annual report take?
- The team will also produce the first annual WPI sustainability report as a key project outcome.

IQP Philosophy: IQPs are student-guided projects developed through a collaborative relationship with advisors. Students will be expected to conduct extensive background research to understand how researchers and others have sought insight into the project's core issues, problems, and potential solutions, and into the appropriate methods for conducting research for your original work in this area. Project teams are expected to exhibit great personal initiative, creativity, hard work, and dedication to quality writing, and to also find pleasure and enjoyment in their work. Teams may expect a similarly high level of commitment from your project advisors.

Project Logistics:

- Teams: 3 - 4 person teams preferred (both pre-formed teams and individuals are welcome to apply)
- Schedule: Ideally, A term will be a 1/6th unit of project planning, followed by project development of 1/3 unit in each of BCD terms. Variation on this schedule may be possible. Students and advisor(s) will meet weekly throughout project period.

To Apply: Email advisors to indicate interest and attend the informational meeting on **Tuesday, March 24 at noon in the IGSD Conference Room** (2nd floor of Projects Center).

Recommendations for a Comprehensive Massachusetts Underground Storage Tank Cleanup Policy

Example of: A 2015 Worcester Community Project Center (i.e., in WPI's hometown) with an elected government official as sponsor and a policy recommendation as outcome.

Final Report: <http://wp.wpi.edu/wcpc/projects/projects-by-term/fall-2015/the-office-of-senator-james-eldridge-underground-storage-tank-policy-proposal-for-massachusetts/>

Project Sponsor: Massachusetts State Senator Jamie Eldridge's Office

Background: Senator Eldridge is a Middlesex and Worcester County state senator. He is committed to environmental protection and advocates for strong environmental responsibility. He is interested in filing legislation to protect and repair land that has been impacted by oil spills and leaking underground storage tanks.

Problem Statement: Just recently, an issue has flared up in the City of Marlborough, which Senator Eldridge represents, regarding oil spills and underground storage tanks. A gas station had a major leak, and it contaminated a couple of nearby houses, yet the applicable law, MGL c. 21J, only provides funding for cleanup of the property with the underground storage tanks, but not abutting property. This leaves the neighboring property in a difficult and potentially hazardous situation.

The relevant law (MGL c. 21J) is the Massachusetts Petroleum Product Cleanup Fund and was established by Massachusetts General Law Chapter 21J. (For more information see: <http://www.mass.gov/dor/businesses/programs-and-services/underground-storage-tank-program/ust-programs/petroleum-product-cleanup-fund.html>)

There is a bigger question of how the Massachusetts Department of Environmental Protection, and other state agencies, respond to oil spills. What do Massachusetts state agencies do to educate the public when an oil spill or storage tank leak occurs? Do they work with the community to facilitate a full cleanup, and ensure that the neighborhood benefits? What do environmental agencies in other states do? Relevant MA agencies may include: the Department of Environmental Protection; and the Executive Office of Energy and Environmental Affairs.

There are a few bills that have been filed in the Massachusetts statehouse, but Senator Eldridge would like to file a comprehensive bill that is protective of neighboring property.

Deliverables/Outcomes

The ultimate goal of this project would be a thorough comparative analysis of environmental cleanup practices in different states, specifically oil spill cleanups. What do Massachusetts environmental agencies do to protect the community from oil spills and storage tank leaks. How do other states handle this issue? This research would culminate in a recommendation report on the most important components for legislation that Senator Eldridge might propose at the statehouse.

Engagement

We will give the students every opportunity to attend relevant committee meetings. Throughout their IQP, they will connect with state environmental agency officials and state legislators, both within Massachusetts and in states with progressive environmental cleanup legislation.

Development of the Inspire Engineering Mentoring Program

Example of: A 2014 London Project Center project with a “client sponsor” and a program development focus.

Final Report: <http://www.wpi.edu/Pubs/E-project/Available/E-project-050114-171223/>

Project Sponsor: London Transport Museum

Sponsor Liaison: EP (email)

Advisors: SJ and LE

Student Team: MJ, TK, LP, SQ (team email)

The London Transport Museum’s (LTM) Inspire Engineering Project aims to inspire and excite young people about engineering and the transportation sector through STEM (Science, Technology, Engineering and Mathematics) enrichment activities at participating schools. The Museum has developed an Engineering Ambassador program wherein individuals from Transport for London (TfL) volunteer to speak to students about their careers and support other STEM activities. Currently, the 115 active Ambassadors support activities delivered on the Museum’s site as well as outreach work delivered at 8 partner schools.

Recently, TfL has partnered with a new university technical college (UTC) in Greenwich, providing support for the development of the engineering curriculum. UTCs are a new form of schools in the UK that are partnered with business to provide students with industry experience. One way which this is achieved is through regular classroom visits from industry professionals. The Greenwich UTC would like to take these classroom visits one step further by creating a mentoring program between TfL engineers and AS level (ages 16-17) engineering students. The LTM is interested in developing this project as part of the wider aims of the Inspire Program and to complement the existing training available for Engineering Ambassadors. In addition, LTM hopes this mentoring scheme will be a model that can transferred to other partner schools.

The LTM would like a WPI team to assist them in the design and development of a mentoring program that is based on successful mentoring models to enable TfL staff to meet Greenwich UTC’s objectives and curriculum aims. The program will also need to take into account the views of the Engineering Ambassadors and be set at the appropriate level of engagement for the mentees. The model will include a supportive training program that incorporates an initial training for mentors and follow-up supporting sessions throughout the lifetime of the mentoring scheme (e.g. 1-2 school terms). The key objectives of this project will be to:

1. Research established mentoring models within engineering for a variety of age groups and create a list of recommended models for the project;
2. Consult with LTM staff and Engineering Ambassadors to select the appropriate model;
3. Develop a bespoke mentoring model that fits into TfL, LTM and Greenwich UTC’s objectives and is adapted to fit child safeguarding guidelines;
4. Develop a training program that fully supports the Engineering Ambassadors involved in the mentoring program; and,
5. Recommend a detailed a schedule of mentoring sessions and activities that can then be trialed at the Greenwich UTC.

Developing Improved Facilities for the Sizakuyenza Safe House

Example of: A 2014 Cape Town Project Centre project illustrating a “client and community engagement” project in a very sensitive, but contained, community context.

Final Report: <http://wp.wpi.edu/capetown/projects/p2014/sizakuyenza/>

Sponsor: Sizakuyenza (Liaison - GK, Project support/House Mother - Mrs. P)

Partners: The Safe Home Management Team (House Mother, Social Worker, and Centre Manager) and Working Team of women and children living at the Safe Home.

Sizakuyenza is an independent registered non-profit organisation focused on developing precedent-setting community health wellness programmes that can be upscaled nationally in future. The platform of our community engagements are community women’s groups which we want to grow from 20 to 50 groups in the next period.

The Safe House was opened in 2007, as a response to the high incidence of violence against women and children within the Philippi community. The Safe Home as community base intervention was geared at protection of women and children, while also reducing domestic violence within the community.

The goal of this project is to work closely with the Safe House partners to plan and begin implementing significant improvements within the boundaries of the Safe House yard, and to use that activity to support healing, hope and creativity among the approximately six women and twelve children provided for there, now and in the future. The yard today is a small area fully enclosed by a block wall that contains a garden and grassy area, a few playground pieces, and a broken water feature. Areas for improvement already identified are:

1. Plan a small crèche that can serve the transient children from the Safe House (as well as women who have been integrated into the community)
2. Redesign and implement a new play area for kids
3. Move and improve the garden/ veggie patch.
4. Repair the water feature (a small circulating pool) & install irrigation system from existing underground water pump supply.
5. Add a storage shed/internal painting/repairs.
6. Other ideas and dreams as may be generated through the project.

Supporting, sharing and learning together with the Safe House teams will be an integral element of the project. The team should research how projects of this sort have been organized elsewhere to help empower women and children who have been victims of abuse, and should also make a concerted effort to approach all project work as an opportunity for healing and growth for all involved, as well as an exercise in “planning and doing.”

Possibilities for engagement include facilitating a children’s playgroup onsite (depending on age groups) and technical skills development with women geared at income generation (e.g., upcycling saleable products for market).

Early Childhood Development in Flamingo Crescent

Example of: A 2014 Cape Town Project Centre project illustrating a “client and community engagement” project with high risk/reward calculation (an intensively complex, collaborative, multi-stakeholder, time-constrained, uncertain community context).

Final Report: <http://wp.wpi.edu/capetown/projects/p2014/flamingo/project-outcomes/>

Sponsor: Centre for Early Childhood Development (CECD Liaison: EA)

Other Key Partners: Flamingo Crescent ECD Team (ER), Informal Settlement Network (ISN - TJ), Community Organisation Resource Centre (CORC - SW), City of Cape Town Informal Settlements Department (LP), and design consultant (OJ).

Flamingo Crescent is a small informal settlement of about 200 people located in Lansdowne currently undergoing a “reblocking” effort in collaboration with the key partners listed above. In 2013, WPI students worked closely with the partners to plan for reblocking and respond to the community’s interest in providing a safer, healthier, more educational environment for children. To advance these interests, the goals of this project are to:

- Develop a small, 2-story multipurpose centre (~70 square meters/floor) to house an ECD centre (“crèche”) on the ground floor and a community activities space above;
- Develop a recreational play area in the center of Flamingo Crescent to serve crèche children and community members;
- Create and support a community-based team for managing the new center and playground;
- Create, train and support a community-based ECD team for staffing the crèche;
- Assure that all facilities, training and management efforts are in accord with regulatory requirements and will support formal recognition of the ECD component;
- Document and critically assess the collaborative process for developing and operating the facilities and make recommendations for better integrating plans for ECD and a multi-purpose center as essential elements of informal settlement upgrading strategies in SA.

The partners agree to operate on a consensus basis with the following general roles and responsibilities:

- The CECD will provide overall project leadership; funding to design, build and equip the multipurpose centre (MPC) and play area; training and support for the community management and ECD teams; and guidance for the WPI student team.
- The Informal Settlement Network (ISN) and Community Organisation Resource Centre (CORC) will provide leadership for engaging the community in forming teams and participating in all aspects of facilities design and operation, and will provide on the ground logistical support for construction activities and for the WPI student team.
- The City of Cape Town Informal Settlements Department will coordinate with governmental agencies as necessary to assure the success of the project;
- The WPI Student Team will work closely with community and other partners to advance all aspects of the project. The team will lead the play area design and build process; contribute to MPC design and costing; document the collaboration process; facilitate networking, etc.

Timeline:

- Basic project and partnership process agreed and MPC design consultant identified: Aug
- MPC design process: Aug - Sep
- MPC construction: Sep - Oct
- WPI student team fieldwork: 23 Oct - 12 Dec
- ECD and MPC management training and education: Nov - Dec, then ongoing.
- Play area design & build: Nov - Dec