



I PRO 309 - Orthotics & Prosthetics Education for Latin America and the United States

history of I PRO 309

There exists a strong demand for orthotics and prosthetics (O & P) in Latin America, with approximately 2.5 million people in need of this type of care. I PRO 309 was started in the Spring of 2006 with the goal of helping to make this type of care more readily available. Initially focusing on the biomechanics and anatomy of O & P devices, I PRO 309 has progressed into areas such as studying age relations of patients needing care, pathology of malformations and consequences, and central fabrication techniques of O & P devices.

technical

- **Goal:**
To develop feasible method for creation of temporary orthoses. The group will also develop product line for business plan and understand all other technical aspects of Central Fabrication.
- **Temporary Orthosis:**
The production of a temporary orthotic onsite could allow the patient to receive immediate orthotic care. Possible material considerations include Friendly Plastic, thermoplastic sheets, and converted soccer shin guards.
- **Central Fabrication:**
Central Fabrication can be implemented to handle the heavy workload of production for orthotics that small clinics cannot.

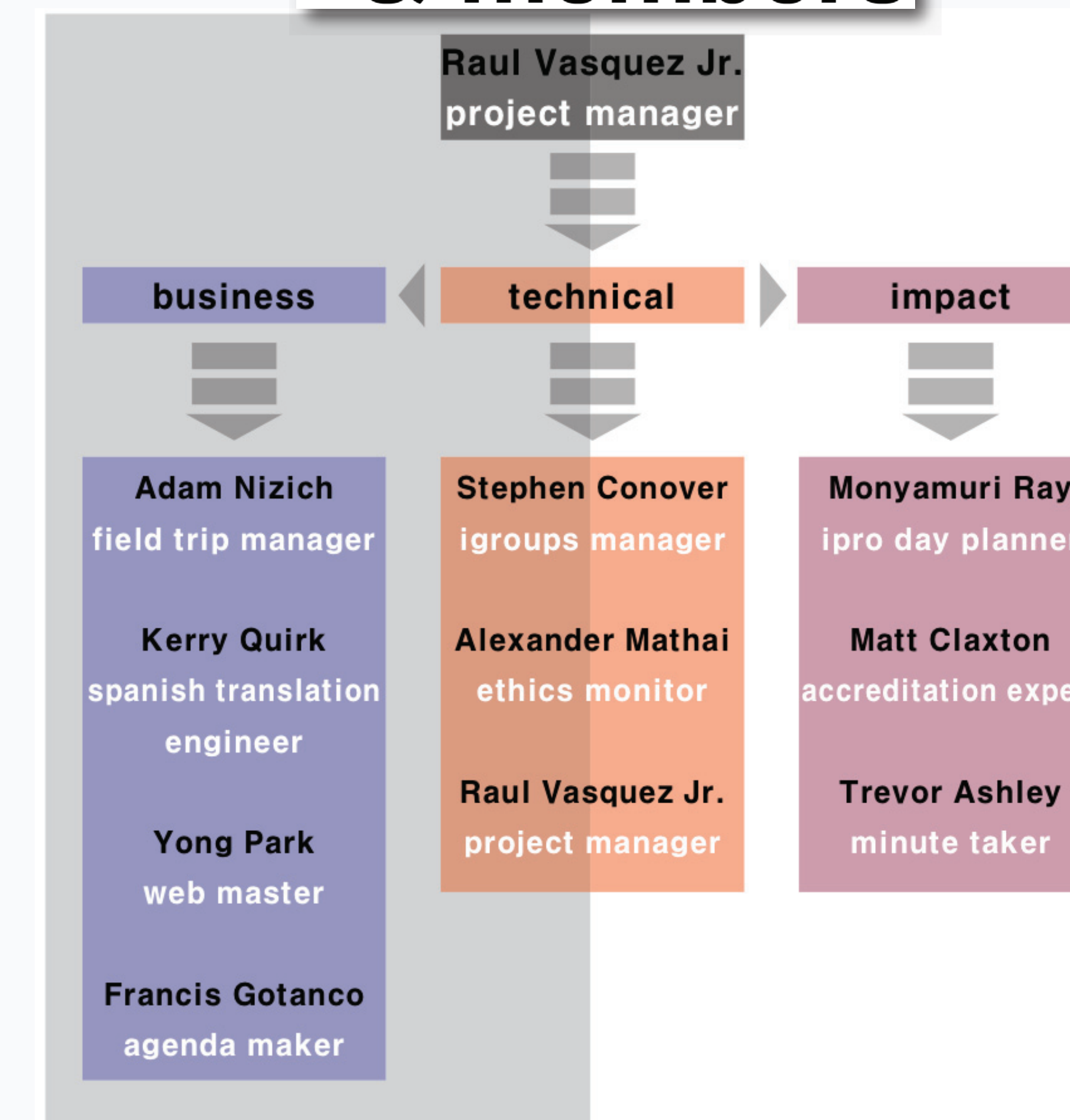
business

- **Goal:**
To develop a plan for implementation of Central Fabrication program at Centro Don Bosco. This program will cover organization, management, work study program, marketing, etc.
- **Hands On Experience:**
Internships, CO-OPs have the potential to provide the required hands-on involvement for ISPO Category III Orthotics & Prosthetics (O&P) students.
- **Work Study Programs:**
Students will have the opportunity to improve their workshop skills crafting the O&P devices. Working with a local charitable clinic, centrally fabricated O&P devices to measure will be provided for those most in need.

impact

- **Goal:**
To focus on promoting Telemedicine in Colombia with local clinics. The group will also research methods of promoting O&P care and careers in Latin America.
- **Telemedicine:**
The use of communication and information technologies to deliver medical care to individuals in remote locations. X-rays, patient histories, and even video conferences will allow patients to communicate with facilities without having to travel great distances.
- **O & P as a Career:**
Promoting O&P as a career path so that students have the ability to provide and teach within their communities as O&P professionals. This is key to creating a sustainable program.

sub groups & members



definitions

What is orthotics?

- Concerned with the design, development, fitting and manufacturing of orthoses, which are devices that support or correct musculoskeletal deformities / abnormalities of the human body

What is prosthetics?

- Artificial extension that replaces a missing body part

objectives

- Investigate possible alternative production methods for temporary cost-efficient O & P devices.
- Create a fluid business plan to be considered by an O & P facility in Bogota, Colombia
- Investigate self-sustaining funding sources for the technical school at Centro Don Bosco
- Inquire into the social and economical impact created by future improvements in O & P availability and awareness in Latin America.

market analysis

Numerous regional O & P facilities were analysed based on several factors:

- Extent of patient base
- Annual cost of facility operation
- Location relative to Bogota

More than 15 non-profit organizations specifically aim to improve the awareness of O & P services in Latin America



conclusions

- Established an alpha prototype for the business model and central fabrication which include self-sustaining ideals
- Major obstacles we faced as a team were researching and interpreting data regarding current Latin American O&P facilities
- Based on our research, the orthotics and prosthetics education in developing regions is in need of a revolution. There is still only one third of patients getting the proper O & P treatment

