



I-Teams Global Project Form

	Project Name: POWERED JOINT BRACES TO HELP THE MOBILITY IMPAIRED	Project Manager: Kailas Narendran	Revision: Draft 3.0
		Sponsor: Deshpande Center	Date: 1-27-04
Project Description		Strategy and Resources	
<p>Strategy:</p> <p>Ten million of the 21 million Americans with disabilities have difficulty lifting a light object or need help with activities of daily living. Twenty percent of the \$200 billion that the disabled spend on physical therapy is paid for out of pocket. These statistics point to a need for affordable devices that both augment strength and hasten rehabilitation.</p> <p>This project aims to create an active joint brace: a wearable, unencumbering exoskeleton that augments physical capability by working in tandem with existing musculature. It will allow people who have suffered from neurological trauma, such as spinal cord injury patients, to rebuild strength, rehabilitate, and gain independence. Funds from a prior Deshpande Center Ignition Grant helped create a working prototype that is currently engaged in a pilot clinical study and has shown initial promise in enabling quadriplegics to move their arms for the first time since their injuries.</p> <p>Existing technology that has dominated the robotic rehabilitation market - complex, expensive and unreliable – targets only a few customers. The joint brace, on the other hand, is cost-effective, easily controlled by the user and could afford self-driven therapy for a large patient population.</p> <p>Project Background:</p> <p>The project has had its first cut at a business plan in the of Fall 2003. Subsequently, the team won the \$1K competition and received a Deshpande Center Innovation Grant.</p> <p>Project Objectives: (Please outline objectives here)</p> <p>The student team will research and determine optimal sales channels for the device, as well as determine regulatory pathway and roadmap to achieve FCS (first customer shipment) goals. In addition, the team will conduct more in-depth research into the competition and potential partnerships.</p>		<p>Resources (current team members): [Names, roles, responsibilities]</p> <p>Kailas Narendran – full-time (paid). EE & Software development John McBean (2nd year Masters) – mechanical systems development Raja Surapanani (Undergrad) – funding search and grant applications Hocking Cheng (MBA / HST) – worked on project in 15.390 in Fall '03 Jenny Hu (UROP) – mechanical systems Dan Nunes (UROP) – electrical systems Dr. Woodie Flowers – project advisor Steve Kelly, Catalyst</p> <p>Resources (needed): [Roles, Skill-sets, Interest/Motivation]</p> <p>NOTE: Applicants do NOT need to have all these skills (or possibly any) to contribute.</p> <ul style="list-style-type: none"> - Medical device background (ideal, not necessary) - Interest and experience with writing grant proposals. - Class II FDA devices and experience with regulatory pathways for new medical devices. - Excited about working for a rapidly emerging, cool new technology that will improve the lives of hundreds of thousands of individuals. - Revision and further development of current business plan. - Medical marketing experience 	

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<p>Stakeholders:</p> <ul style="list-style-type: none">- Deshpande Center- MIT TLO	<p>Project Stage:</p> <p><input type="checkbox"/> <u>Ready for market (start company less than 1 year)</u> Team is well under way and has potential customers (ready to start a company)</p> <p><input checked="" type="checkbox"/> <u>Ready for market with some effort (1-2 years)</u> Prototype in progress and still looking for customers/markets</p> <p><input type="checkbox"/> <u>Long-term research (more than 2 years)</u> Exploring: need business plan</p> <p>Milestones: (Please outline goals and approximate dates)</p> <ul style="list-style-type: none">- Begin clinical trail – Feb 2004- Incorporate and form outside entity – May 2004- Start Regulatory Process – March 2004- Funding search – Yesterday- First customer shipment – Nov 2004
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