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Physicists and Economic Growth: Preparing the Next Generation

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For many years it has been recognized that many physicists are “hidden” – deep in the industrial world or holding positions not named “physicist.” In parallel with this phenomenon is the recognition that many new and innovative product ideas are, in fact, generated by physicists. There are many more ideas that could be brought to market to the benefit of both society and the inventor, but physicists don’t often see themselves as the innovators and inventors that they actually are. A number of education programs have arisen to try to address this issue and to engender a greater entrepreneurial spirit in the scientific community. The *ScienceWorks* program at Carthage College was one of the first to do so, and has for nearly twenty years prepared undergraduate science majors to understand and practice innovation and value creation. Other programs, such as professional masters degrees, also serve to bridge the technical and business universes. As it is no doubt easier to teach a scientist the world of business than it is to teach a businessperson the world of physics, providing educational experiences in innovation and commercialization to physics students can have tremendous economic impact, and will also better prepare them for whatever career direction they may ultimately pursue, even if it is the traditional tenure-track university position. This talk will discuss education programs that have been effective at preparing physics students for the professional work environment, and some of the positive outcomes that have resulted. Also discussed will be the variety of opportunities and resources that exist for faculty and students to develop the skills, knowledge and abilities to recognize and successfully commercialize innovations.