Developing the Moon isn't pie-in-the-sky

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I just returned from a meeting in Houston of the Lunar Exploration Analysis Group. The purpose of this conference was to bring together scientists, engineers and business people to help mold the lunar exploration and settlement program into a coherent, integrated, exciting and productive venture. It was to be an opportunity for experts from diverse fields to share ideas and form collaborations. While there were visionary speeches about lunar settlements, the majority of the talks focused on how to make the next step a reality. What business opportunities exist by virtue of being on the Moon? How does the first step to the Moon get written in a business plan that has a chance of being funded by an investor group?

Such hard-nosed questions were being posed by business leaders from large aerospace companies such as Boeing to small start-ups that come from other sectors of the economy. Space tourism drew much attention, as did the use of lunar resources — these resources are valuable both for the needs of the future lunar settlement and for export to Earth.

NASA's role is to prepare the infrastructure — the transportation and facilities. Then NASA needs to get out of the way (continue on to Mars) and let businesses and investors do what they know best: create wealth by meeting the needs of people on Earth and on the Moon. NASA and governments will be part of the customer base and will not be competitors to lunar business enterprises. This is much the way the way many technologically-based businesses evolved, including communication satellites.

The number of small space industries and companies grows every year, and their profitability increases every year. This is because many of the technologies that must be developed for space initiatives can be "dual used" for Earth-based markets. Examples include robotics, optical instruments, communications technologies, and also medical equipment, and long-term storage techniques for things such as food, blood plasma and life-preserving material.

So what does this mean and imply for the citizens of New Jersey? How important is this for your day-to-day lives? The reality is that scientific and engineering research affects lives later on in time. What affects your lives today is based on the decisions of
whether the automobile manufacturers invested in the research to develop these 20 to 30 years ago. And it is even longer term than that. The pharmaceutical and automotive companies might have decided to place such investments because they had as employees scientists, engineers and business leaders who were knowledgeable and visionary enough to make those decisions. That seed was planted in their education at places like Rutgers University.

Now, as we begin to plan for the return to the Moon, to permanently settle that body we visited for the first time more than 30 years ago, we need to remember that the technologies imagined and created now and over the next decade or two will not only get us to the Moon, they will form the basis for the medicines that cure us, the energy that will power our economies and our lives, and all the technologies that will define life as it will be in the United States and the world in 2050, for us and our children and their children. We only have to look back 20 years (no iPods, hybrid cars, flat-panel TVs, cell phones, World Wide Web or disposable contact lenses), 30 years (no personal computers, artificial hearts or bar codes), 40 years (no cable TV, electronic devices, video games, Valium or internal heart pacemakers) or 50 years (no color TV, radial tires, integrated circuits, solar cells, microwave ovens or credit cards) to understand how much our world has changed in that amount of time. Many of these technologies have their roots in the Apollo era.

This is a very long-term venture, one worthy of Americans.

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