WSWA-UNOOSA ESSAY CONTEST 2017
UNISPACE+50: Space and Society

1. What is the role of space as a solution to global challenges on Earth?

The contributions of the space sector go beyond spin-offs and the benefits it brings to the few commercial players. It even goes beyond the larger sense of purpose and imperative for the future of our species. In fact, the space sector can have and does have a much more direct impact on people's lives, today, right now.

Today, the space sector is at the same stage as the internet in the early 90s. While the internet democratized information access, space, as a data source, can democratize information itself. In the not-too- far-off future, anyone would be able to launch their own nanosatellite into space, obtain and analyse data. Such a revolution would lead to a decentralized data authority and place data in the hands of individuals, thus opening it up for innovative solutions from everyone on the planet.

Space data is already being used by researchers, experts and individuals outside the sector. From economists to disease epidemiologists to humanitarian groups, satellites provide an unbiased view of the planet and its denizens. Such pioneers still need the right expertise to benefit from space data. The next step is to enable methods and platforms that would enable ordinary citizens to make use of such data for personal use.

Imagine the analyses, insights and even the science that could be performed when billions of people are empowered. 'Citizen Science' would take on a whole new meaning! We are always going to face global challenges. The answer does not lie in utopia but rather creating systems that encourage efficient, local solutions to these challenges.

The space sector is on the cusp of a radical transformation: in the access to space and utilization of data about our planet and our universe, which has the same, if not greater, potential as a tool for change as the internet.

2. What progress do you think humankind will have made in exploring new worlds in space by 2030?

Over the past fifty years, the exploration of our solar system by robotic spacecraft has revealed astonishing and fascinating worlds beyond our own. Although we have not met the goals and

expectations of the optimistic 70s and 80s, a great deal has been achieved. The crop of current (and emerging) space faring nations and the rising number of commercial players have even more ambitious goals for the next two decades. Steep cuts in government budgets have slowed down space exploration but have not ground it to a halt. Plans are afoot to colonize Mars as well to send messengers to the nearest star, all with the backing of wealthy individuals and corporations. Spurred on by individual as well government effort, it seems humanity is in its last century as a single planet species.

Although it looks improbable that humans will be exploring Mars by 2030, it could be the dawn of multi-decadal human spaceflight endeavours.

3. What are your proposals for getting people in your country and/or region more engaged in space activities?

Almost a half-century after the space race, advocates of space technology and exploration still have to defend investment in the sector. Although our modern lives wouldn't be possible without many of the products developed as a result of such investment, there is a perceived (and in some cases, actual) gap between space tech and its utility to the common man/woman. This disconnect is magnified in developing nations, where any involvement in space exploration is viewed by the public to be inappropriate and counter to the development of the country. The larger issue is the perception of space technology as a tool for the elite, an indulgence in scientific pursuits unrelated to Earthly issues that may or may not produce spin-offs.

Efforts need to be focused on creating a more inclusive atmosphere that integrates space technology and applications into the fabric of everyday life. A proficient way to do this is to better apply space tech in the development context. Showing off the effectiveness of satellite technology in providing disaster relief, for example, is a good way to temporarily highlight the importance of the space segment. But what could be even more useful is a longer-term, fruitful partnership with a social development organization. Space tech could be built into social and economic programmes right from the beginning rather than on an "as and when necessary" basis. Collaboration with experts in development would bring members of the space community closer to the big, social issues in the world. A clearer understanding would reflect in our thinking and the design of applications. Instead of constantly adapting space tech for human benefit, we would be creating space-based applications for human benefit.

Making the space sector more people-oriented and focused on solving global and regional challenges is a sure way of attracting further interest in space from the general public (more nations).

Ideally, space technology should be perceived as a tool to solve challenges for the people and by the people.

Ramasamy Venugopal
South Africa