

## Save from Future Japan Social Crises! 'Mothership' Project

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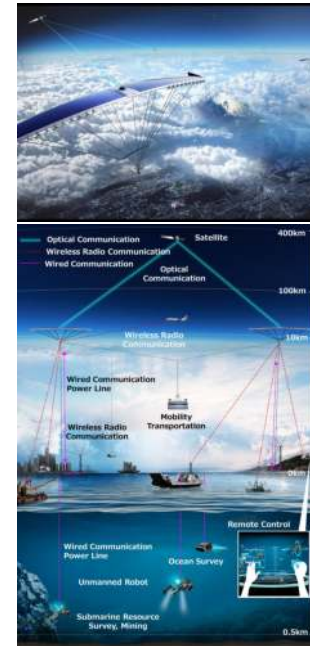
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In the near future, many of the developed countries are likely to face energy & environment challenges, accompanied by migration of people from rural areas to the smart cities and increase in the social debt. Japan is likely to be 'top runner' in facing them. We are considering a novel solution to address these challenges using the westerly jet stream above Japan. The westerly jet stream is a high-density, seemingly endless renewable energy source, 10km above the ground, generated by the heat transfer from tropical to pole, that induces air convection (physics) with the specific earth shape, size and rotation (occasional lucks for Japan) 'Mothership' is a visionary futuristic novel project, in which we are proposing to use a large tethered kite, that utilizes the westerly jet stream to fly at high altitude and offer many social benefits, i.e. 'harvest energy', to move heavy payload in remote areas as a 'sky crane', to help global optical wireless satellite communication network as a 'relay station' even in heavy clouds. We believe that the 'Mothership' project shows a large potential to stimulate many industries and ventures by offering innovative solutions and help to save from future social crises.

This project vision has been approved as a challenging venture and is considered as one of the most important innovative projects in Toyota. Our global team consists of members from Japan, United States and Europe, who are working on actual engineering development. We will share our vision, the current progress and remaining challenges.



*Final Goal Image Sketches of 'Mothership'*