

IAF SYMPOSIUM ON EMERGING SPACE ECOSYSTEMS (E11)  
Connecting Emerging Space ecoSystems (1)Author: Dr. Luis Zea  
Jaguar Space, LLC, United StatesDEVELOPING A ROADMAP FOR ORGANIZATIONS IN EMERGING SPACE COUNTRIES TO  
ENGAGE AND LEAD IN THE NEW SPACE ECONOMY**Abstract**

Historically, space activities had been mostly limited to large governments and the corporations contracting for them. However, this is rapidly changing throughout the world with the advent of the “new space economy”, emerging, non-governmental, commercial space ventures in diverse fields including space resources utilization, in-space manufacturing, on-orbit refueling, space debris removal, and drug discovery and development, to name a few. Nevertheless, akin to preceding industrial revolutions, this is mostly occurring in countries with economies already engaged in related activities, and with governmental support mechanisms that foster private sector growth. Hence, organizations in emerging space countries confront equivalent challenges to their counterparts in spacefaring nations, and additionally they must identify how to establish a competitive foothold in the global marketplace without the benefits of being part of a national economy already engaged in space activities, and without government support. To address these challenges, this article provides an organized and systematic approach to developing a strategic roadmap tailored for organizations in emerging space countries to engage and lead in the new space economy. This process starts by delineating the organization’s values, customers and stakeholders, and mission and vision, moving on to a process similar to how startups develop their initial business model canvas, including drafting their value proposition. This continues with developing their own “strategy theory”, which starts with identifying what will be this organization’s business and/or research development domain(s). This is answered considering multiple aspects, including alignment with the parent organization’s (should they have it, e.g. a national government for a space agency, or a university for a laboratory) mission, vision, and own strategic roadmap, the organization’s existing partnerships, available resources, potential for symbiosis with other local efforts, key activities, competitive landscape, customers, and their own long-term goals. A clear rationale is determined for “why” this/these domains(s) were chosen, and how (specific actions and needed resources) the organization will set itself up to be the best in the field. This process generates several assumptions about potential access to resources and the evolving state of the selected field’s ecosystem over time. These assumptions serve as “pivots”, specific aspects evaluated during recurrent reviews (e.g. annual) as new data becomes available. More specifically, these assessments gauge the organization’s performance and access to resources, and state of affairs in the ecosystem, facilitating informed updates to the strategic roadmap through time.