Sustainable Development Through Open Service Innovation

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This paper studies how to apply the principles of open service innovation in the context of space downstream services, specifically exploring the European Galileo and Copernicus programs, in order to foster the creation of services for developing countries, that contribute towards the Sustainable Development Goals (SDGs) defined by the United Nations.

Downstream space services, such as earth observation data, are paramount in planning, monitoring and evaluating the impact of development projects around the world. Examples include monitoring of air, marine and land pollution levels, urban densities, natural disasters and migration. Moreover, satellite services enable new sources of connectivity and communication, as well as education, positioning and transportation, all essential elements of a new sustainable development for our planet. This paper examines how open service innovation principles can be harnessed to design services that will contribute to sustainable development goals.

Open innovation takes place when stakeholders collaborate with external parties during their R&D phase, in order to gain new insights and find new commercial avenues for their innovation. Within the open innovation framework, open services innovation indicates a roadmap in order to re-think services to efficiently serve customers' needs. This roadmap includes a thorough review of business models with a service-based mindset, meaning they should be based on customer and stakeholder utility. To this end, co-creation with potential and current customers could help direct services towards specific needs, while providing real-time feedback on their effective implementation in the field. Key stakeholders such as suppliers, competitors, local authorities and civil society representatives should also be involved, each according to their own expertise and areas of influence, in order to streamline implementation processes, sharing assets and knowledge. These actors should be connected through platforms where information can be exchanged and progress can be monitored for each program. This should enable to develop novel approaches to development issues, taking into account both economic development and sustainability.
In this paper we will discuss this model in depth, providing recommendations for stakeholders involved in implementing services to support communities in their sustainable development.