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INSURTECH MARKET OPPORTUNITIES FOR BUSINESS APPLICATIONS POWERED BY  
ARTIFICIAL INTELLIGENCE APPLIED ON SATELLITE DATA: NEEDS, OPPORTUNITIES AND  
USE CASES

**Abstract**

As a resource for innovative industries, space provides very-high quality data that when processed with Artificial Intelligence (AI) algorithms enable process automation and the creation of powerful decision support tools. In the New Space Economy, satellite data are the core to create disruptive business applications, enabling new business models based on technologies offering advantages that are difficult to replicate alternatively. In this context, E. Amaldi Foundation (FEA) examines the most promising markets that can benefit the most from space technologies, with the goal of supporting start-ups, SMEs and large companies to generate new innovative ideas, connect with entrepreneurs and stakeholders and access alternative finance instruments focused on space technologies. This paper aims to showcase the impact of applying AI on satellite data to create innovative business models and use cases for one of the markets identified by FEA as one of the most eager for innovation from space technologies, namely Insurtech. AI employed for analysing satellite data has proven to be valuable for insurers, offering precise and recurrent information on weather conditions, floods, fires, land cover and land use, and natural disasters. Technologies based on such data allow actuaries and insurers to perform fast and accurate risk assessments, automate and optimise verification processes by reducing expert intervention. The potential of AI employed on satellite data is further enhanced by new models, such as on-demand or parametric policies. On-demand insurances can use such data in synergy with navigation and telecommunication data to monitor individuals' risk profile and offer coverage that suits their needs. These data allow to insure previously uninsurable risks and offer cover at competitive prices due to better accuracy in loss estimation. Parametric policies, on the other hand, can exploit AI applied on Earth Observation, weather data and other satellite data to activate automatic and certified payments when a loss threshold is met, while lowering the premium for the insured by underwriting a policy that fits their needs. This study will present the outcomes of discussions and ongoing interactions with several stakeholders in the insurance sector, including Reale Group and Italian Insurtech Association and will examine the effects that AI can have on the InsurTech market, assessing its ability to enhance the efficiency and growth of the industry, and its impact on the value chain and insurability of risks. The needs identified in collaboration with the stakeholders will be presented along with innovative solutions enabled by space technologies.