## IAF EARTH OBSERVATION SYMPOSIUM (B1) Interactive Presentations - IAF EARTH OBSERVATION SYMPOSIUM (IPB)

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## OVERCOMING IMPLEMENTATION CHALLENGES: MANAGEMENT PRACTICES FOR THE SUCCESSFUL INTEGRATION OF SATELLITE EARTH OBSERVATION DATA IN AGRICULTURAL CROP COMPANIES

## Abstract

The integration of satellite earth observation data (SEOD) in agricultural crop companies shows great potential for enhancing agriculture's efficiency and sustainability, particularly with the increasing availability of freely accessible data from programs such as Copernicus. However, the implementation process can cause challenges and barriers for companies of different sizes and experience levels in earth observation technologies. This research explores the implementation process of SEOD in agricultural crop companies with a focus on the management practices that are necessary for success. The study is conducted in a qualitative way by interviewing European and international agricultural crop companies, satellite earth observation data application providers, and industry experts. The results demonstrate key implementation principles in several fields. In terms of actors' management, it requires active management involvement and educated consultants hiring. With regard to project maintenance, the overall workflow of the implementation of SEOD technology can be seen as a data science project rather than a software development project. Hence, Agile practices may be limited in their application, therefore providing more space for data science activities such as experimentation with data sets and analysis options that meet business requirements. Moreover, the study results showcase that companies with lower previous experience with earth observation technologies face SEOD as a disruptive innovation of their business processes and products, that requires relevant changes in whole working processes. In conclusion, the study provides valuable and practical insides into the implementation process of SEOD technology in the agricultural field. These findings can be used by businesses and organizations in future projects, investigations, and government strategic planning. The results of the study will assist scientific researchers interested in innovation management practices in the agricultural industry, and the business community seeking to improve the efficiency of resources spending for future implementation projects or support government strategic planning Furthermore, this study contributes to the knowledge of UN Sustainable Development Goals related to 'Zero Hunger' and 'Industry, Innovation and Infrastructure', which makes it valuable for further decision-making in these domains.