1. Record Nr. UNINA9910585784403321

Autore	Otto Boris
Titolo	Designing Data Spaces : The Ecosystem Approach to Competitive Advantage / / edited by Boris Otto, Michael ten Hompel, Stefan Wrobel
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	9783030939755 3030939758
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (xv, 580 pages) : illustrations (chiefly color)
Collana	Computer Science Series
Classificazione	COM018000COM021000COM025000COM030000
Altri autori (Persone)	OttoBoris Ten HompelMichael WrobelStefan
Disciplina	005.3
Soggetti	Application software Big data Expert systems (Computer science) Information storage and retrieval systems Computer and Information Systems Applications Big Data Knowledge Based Systems Information Storage and Retrieval
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I: Foundations and Context -- 1. The Evolution of Data Spaces -- 2. How to Build, Run, and Govern Data Spaces -- 3. International Data Spaces in a Nutshell -- 4. Role of Gaia-X in the European Data Space Ecosystem -- 5. Legal Aspects of IDS: Data Sovereignty—What Does It Imply? -- 6. Tokenomics: Decentralized Incentivization in the Context of Data Spaces -- Part II: Data Space Technologies -- 7. The IDS Information Model: A Semantic Vocabulary for Sovereign Data Exchange -- 8. Data Usage Control -- 9. Building Trust in Data Spaces -- 10. Blockchain Technology and International Data Spaces -- 11. Federated Data Integration in Data Spaces -- 12. Semantic Integration and Interoperability -- 13. Data Ecosystems: A New Dimension of Value Creation Using AI and Machine Learning -- 14. IDS as a Foundation for

Open Data Ecosystems -- 15. Defining Platform Research Infrastructure as a Service (PRIaaS) for Future Scientific Data Infrastructure -- Part III: Use Cases and Data Ecosystems -- 16. Silicon Economy:Logistics as the Natural Data Ecosystem -- 17. Agricultural Data Space -- 18. Medical Data Spaces in Healthcare Data Ecosystems -- 19. Industrial Data Spaces -- 20. Energy Data Space -- 21. Mobility Data Space -- Part IV: Solutions and Applications -- 22. Data Sharing Spaces: The BDVA Perspective -- 23. Data Platform Solutions -- 24. FIWARE for Data Spaces -- 25. Sovereign Cloud Technologies for Scalable Data Spaces -- 26. Data Space Based on Mass Customization Model -- 27. Huawei and International Data Spaces -- International Collaboration Between Data Spaces and Carrier Networks -- 29. From Linear Supply Chains to Open Supply Ecosystems -- 30. Data Spaces: First Applications in Mobility and Industry -- 31. Competition, Security, and Transparency: Data in Connected Vehicles -- Data Space Functionality -- The Energy Data Space: The Path to a European Approach for Energy.

Sommario/riassunto

This open access book provides a comprehensive view on data ecosystems and platform economics from methodical and technological foundations up to reports from practical implementations and applications in various industries. To this end, the book is structured in four parts: Part I “Foundations and Contexts” provides a general overview about building, running, and governing data spaces and an introduction to the IDS and GAIA-X projects. Part II “Data Space Technologies” subsequently details various implementation aspects of IDS and GAIA-X, including eg data usage control, the usage of blockchain technologies, or semantic data integration and interoperability. Next, Part III describes various “Use Cases and Data Ecosystems” from various application areas such as agriculture, healthcare, industry, energy, and mobility. Part IV eventually offers an overview of several “Solutions and Applications”, eg including products and experiences from companies like Google, SAP, Huawei, T-Systems, Innopay and many more. Overall, the book provides professionals in industry with an encompassing overview of the technological and economic aspects of data spaces, based on the International Data Spaces and Gaia-X initiatives. It presents implementations and business cases and gives an outlook to future developments. In doing so, it aims at proliferating the vision of a social data market economy based on data spaces which embrace trust and data sovereignty.