1. Record Nr.   UNINA9910254224603321

   Titolo   Anticipating Future Innovation Pathways Through Large Data Analysis /
                               / edited by Tugrul U. Daim, Denise Chiavetta, Alan L. Porter, Ozcan
                               Saritas

   Pubbl/distr/stampa   Cham : , : Springer International Publishing : , : Imprint : Springer, ,
                               2016

   ISBN   3-319-39056-2

   Edizione   [1st ed. 2016.]

   Descrizione fisica   1 online resource (XVIII, 360 p. 141 illus., 108 illus. in color.)

   Collana   Innovation, Technology, and Knowledge Management, , 2197-5698

   Disciplina   006.312

   Soggetti   Management
                               Industrial management
                               Big data
                               Economic policy
                               Industrial organization
                               Innovation/Technology Management
                               Big Data/Analytics
                               R & D/Technology Policy
                               Industrial Organization

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di bibliografia   Includes bibliographical references.

   Nota di contenuto   Preface -- Part I: Data Science/Technology Review -- Chapter 1: FTA as
                               Due Diligence for an Era of Accelerated Interdiction by an Algorithm-
                               Big Data Duo -- Chapter 2: A Conceptual Framework of Tech Mining
                               Engineering to Enhance the Planning of Future Innovation Pathways --
                               Chapter 3: Profile and Trends of FTA and Foresight -- Chapter 4:
                               Recent Trends in Technology Mining Approaches -- Chapter 5:
                               Anticipating Future Pathways of Science, Technology, and Innovations
                               -- Part II: Text Analytic Methods -- Chapter 6: Towards Foresight 3.0--
                               The HCSS Metafore Approach -- Chapter 7: Using Enhanced Patent
                               Data for Future-Oriented Technology Analysis -- Chapter 8: Innovation
                               and Design Process Ontology -- Chapter 9: Generating Competitive
                               Technical Intelligence Using Topical Analysis, Patent Citation Analysis
                               and Term Clumping Analysis -- Chapter 10: Identifying Targets for

Technology Mergers and Acquisitions Using Patent Information and Semantic Analysis -- Chapter 11: Identifying Technological Topic Changes in Patent Claims Using Topic Modeling -- Chapter 12: Semi-Automatic Technology Roadmapping Composing Method for Multiple Science, Technology, and Innovation Data Incorporation -- Chapter 13: Generating Futures from Text -- Part III: Anticipating the Future-- Cases and Frameworks -- Chapter 14: Additive Manufacturing -- Chapter 15: The Application of Social Network Analysis -- Chapter 16: Building a View of the Future of Antibiotics Through the Analysis of Primary Patents -- Chapter 17: Combining Scientometics with Patent-Metrics for CTI Service in R&D Decision Making -- Chapter 18: Tech Mining for Emerging STI Trends through Dynamic Term Clustering and Semantic Analysis: The Case of Photonics. .

Sommario/riassunto	This book aims to identify promising future developmental opportunities and applications for Tech Mining. Specifically, the enclosed contributions will pursue three converging themes: The increasing availability of electronic text data resources relating to Science, Technology & Innovation (ST&I) The multiple methods that are able to treat this data effectively and incorporate means to tap into human expertise and interests Translating those analyses to provide useful intelligence on likely future developments of particular emerging S&T targets. Tech Mining can be defined as text analyses of ST&I information resources to generate Competitive Technical Intelligence (CTI). It combines bibliometrics and advanced text analytic, drawing on specialized knowledge pertaining to ST&I. Tech Mining may also be viewed as a special form of "Big Data" analytics because it searches on a target emerging technology (or key organization) of interest in global databases. One then downloads, typically, thousands of field-structured text records (usually abstracts), and analyses those for useful CTI. Forecasting Innovation Pathways (FIP) is a methodology drawing on Tech Mining plus additional steps to elicit stakeholder and expert knowledge to link recent ST&I activity to likely future development. A decade ago, we demeaned Management of Technology (MOT) as somewhat self-satisfied and ignorant. Most technology managers relied overwhelmingly on casual human judgment, largely oblivious of the potential of empirical analyses to inform R&D management and science policy. CTI, Tech Mining, and FIP are changing that. The accumulation of Tech Mining research over the past decade offers a rich resource of means to get at emerging technology developments and organizational networks to date. Efforts to bridge from those recent histories of development to project likely FIP, however, prove considerably harder. One focus of this volume is to extend the repertoire of information resources; that will enrich FIP. Featuring cases of novel approaches and applications of Tech Mining and FIP, this volume will present frontier advances in ST&I text analytics that will be of interest to students, researchers, practitioners, scholars and policy makers in the fields of R&D planning, technology management, science policy and innovation strategy.