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Online Resources on Technology Management

Compiled by Dr. Vaishali Dawar

HAPPY READING

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Technology management is about getting people and technologies working together to do what people are expecting, which is a collection of systematic methods for managing the process of applying knowledge to extend the human activities and produce defined products. The ever-evolving nature of technology can present both opportunities and challenges for businesses. In our modern world, nearly all businesses rely heavily on technology for even the most basic of daily operations. Due to the current dynamic changes in economy, technology and society the necessity of future skills increases significantly. Hence, the needed qualifications are on the one hand foresight research, development of strategies, innovation, business development and change management and on the other hand skills to control these changes like corporate responsibility, technology assessment and business ethics.

The Need for Technology Management Education for Undergraduate Programs: A Conceptual Framework by Murat Tas and H. Okan Yeloglu (https://files.eric.ed.gov/fulltext/EJ1170480.pdf) Technology Management education is becoming more important for solving problems within organizations. Therefore, institutions of higher education need to lead the way in developing programs, curriculums, departments, and institutes addressing and meeting the needs of industries and the organizations. This paper evaluated the need of technology management undergraduate programs and provide some insights about this need. We realize the importance of technology management in both industrial and academic contexts and how important it is to have an interaction and collaboration between

the industry organizations and universities. However, there is a lack of technology education on undergraduate level at today's universities curriculum. While there are many graduate programs on technology management in universities around the world, scholars and practitioners are paying less attention to undergraduate programs on technology management education.

What is the Significance of Technology Management When It Comes to Running a Business? By Tim Burke (https://questsys.com/ceo-blog/what-is-the-significance-of-technology-management-when-it-comes-to-running-a-business/#:~:text=Maintaining%20current%20technology%3A%20Monitoring%2C%20updating,many%20potential%20problems%20as%20possible.) Technology management encompasses the various policies and practices used to employ technologies to nurture, maintain, and elevate a business's competitive advantage. The article informs about what is the Role of Technology Management in Business, tasks included in technology management, Framework for Business Technology Management.

Technology Management: What Is It and Why Is It Important? By Cordenne Brewster (https://www.trio.dev/blog/technology-management) Because of technology's titular role in your day-to-day life and its even larger role in the workplace, there is an increased need for effective technology management in a competitive business model. The article includes what is technology management, what are the components of technology management, the benefits of technological management.

Technology Management an article by Technology Management Forum (https://www.referenceforbusiness.com/management/Str-Ti/Technology-Management.html) In the context of a business, technology has a wide range of potential effects on management. Since technology is such a vital force, the field of technology management has emerged to address the particular ways in which companies should approach the use of technology in business strategies and operations. Technology is inherently difficult to manage because it is constantly changing, often in ways that cannot be predicted. Technology management is the set of policies and practices that leverage technologies to build, maintain, and enhance the competitive advantage of the firm on the basis of proprietary knowledge and know-how. This enlightens on the theory behind why technology management education is required, technology and innovation, innovation management, internal forces affecting innovation, external forces affecting innovation, etc.

What is the Significance of Technology Management When It Comes to Running a Business? By Tim Burke (https://questsys.com/ceo-blog/what-is-the-significance-of-technology-management-when-it-comes-to-running-a-business/) in order to maintain a sustainable and competitive business model, it is crucial to take a proactive approach towards the effective use & protection of technology. Regardless the size of your organization, technology management is an essential component in both your short- and long-term success. Technology management is a multi-faceted discipline based on how businesses strategically leverage various technologies in order to foster growth and achieve key objectives. He had stated four key components of technology management - Technology strategy, Technology forecasting, Technology road mapping, Technology project portfolio.

John Spacey listed 107 examples of technology management functions and duties. (https://simplicable.com/en/technology-management). Technology management is planning and control of technology. This is a broad discipline that can include management of development team, programs, projects, operations, governance, processes, applications, systems, infrastructure and architecture.

The Centre for Technology Management researches processes and practices of University of Cambridge for identifying, selecting, acquiring, exploiting and protecting technology for business benefit. (https://www.ifm.eng.cam.ac.uk/research/ctm/) Technologies lie at the heart of any manufacturing company – whether used in making the products or forming an integral part of the products themselves. Successfully assimilating existing technologies into the business and anticipating the impact of emerging new technologies are critically important tasks for companies under pressure to bring new products to market as quickly as possible. CTM engages in research, teaching and practical application of new ideas based on an integrated understanding of science, engineering and business management. By working with organisations at all stages of technological development, we aim to provide comprehensive support from early stage exploration, through multi-business unit technology strategy to end-of-life issues.

MS-94 Technology Management - eGyanKosh IGNOU Self Learning Material (SLM) (https://egyankosh.ac.in/handle/123456789/16711) is providing reading material on technology management in pdf files in 6 blocks. Block-1 Technology: Issues and Implications, Block-2 Technology Development and Acquisition, Block-3 Technology Absorption and Diffusion, Block-4 Technology Environment, Block-5 Technology Support Systems, Block-6 Case Studies.

National Science & Technology Management Information System (NSTMIS) a division of Department of Science and Technology (DST) has been entrusted with the task of building the information base on a continuous basis on resources devoted to scientific and technological activities for policy planning in the country. (https://dst.gov.in/scientific-programmes/scientific-engineering-research/national-science-technology-management-information-system-nstmis) NSTMIS division maintains a close liaison with UNESCO, NSF, OECD, etc. for matters relating to S&T statistics and indicators. NSTMIS officers are taken as resource persons by UNESCO for the various workshops conducted by them on standardization of concepts and terminologies used in S&T statistics. NSTMIS expertise has also been shared with other developing nations like China and Trinidad and Tobago. Apart from this, NSTMIS continually interacts with various national organisations like Planning Commission, Institute of Applied Manpower Research, University Grants Commission, Confederation of Indian Industries and other scientific organisations for exchange of information and expertise related to Science Statistics and Indicators.

What Is Business Technology Management? by Richard Andrew (https://www.thestrategywatch.com/business-technology-management/) BTM is the process of managing and organizing a company's technology resources. It encompasses everything from procuring new technologies to integrating them into the company's workflows to monitoring their performance. Business technology management also includes tasks such as maintaining IT infrastructure, ensuring data security, and training employees on how to use new technologies. Essentially, it is about making sure that technology supports the company's overall goals and strategies. In a nutshell, BTM is all about making sure your company uses the right technologies in the right way.

8 Best Practices In Business Technology Management by Magdalena Polka (https://www.projectcubicle.com/8-best-practices-in-business-technology-management/) discusses on assessing your business needs via business technology management, conducting technology audits, embracing cloud computing with business technology management, implementing cybersecurity measures, investing in high-quality hardware and software, utilizing project management tools via business technology management, building a culture of innovation, integrating automation.

Significance of technology management and project management aligned with portfolio management is vital for any project based organisation by George, Joseph (https://www.pmi.org/learning/library/technology-project-management-aligned-7144) Technology

was and is emerging as the centre of business because the world situates a premium on its information and how it was processed. This paper tries to elucidate relevance of constant synchronization between project management and technology management aligned with Portfolio Management as a crucial factor for any project based organisation to built and sustain a strong customer base. Hence the significance of the paper titled "Significance of Technology Management and Project Management aligned with Portfolio Management is vital for any project based organisation's sustainability and to build a strong customer base" is illustrated through a conceptual model.

What is technology management and why it is important by Iryna Kurkina (https://academysmart.com/what-is-technology-management-and-why-it-is-important/) Modern business uses various technologies to operate more efficiently, respond quickly to changing market demands, and stay competitive. It's well-known how technology can automate routine tasks, streamline processes, and provide quality services. Undoubtedly, businesses that do not embrace technology risk falling behind their competitors and missing out on growth opportunities. That's why technology management is so crucial in today's fast-paced technological landscape. However, it can present numerous challenges for organizations, such as staying up-to-date with emerging technologies, managing budgets, and integrating new systems and processes. Weak technology management may lead to inefficiencies, higher costs, slower innovation, increased security risks, and unalignment between investments and business goals. So, this article looks at what good technology management is and gives tips on how to improve it for you.

The Right Mind-set for Managing Information Technology by M. Bensaou and Michael J. Earl (https://hbr.org/1998/09/the-right-mind-set-for-managing-information-technology) Technology should be managed—controlled, even—like any other competitive weapon in a manager's arsenal. We revamped our own thinking in the course of a research project designed to compare Western and Japanese IT management. We were startled to discover that Japanese companies rarely experience the IT problems so common in the United States and Europe. When we dug deeper into 20 leading companies that the Japanese themselves consider exemplary IT users, we found that the Japanese see IT as just one competitive lever among many. Its purpose, very simply, is to help the organization achieve its operational goals.

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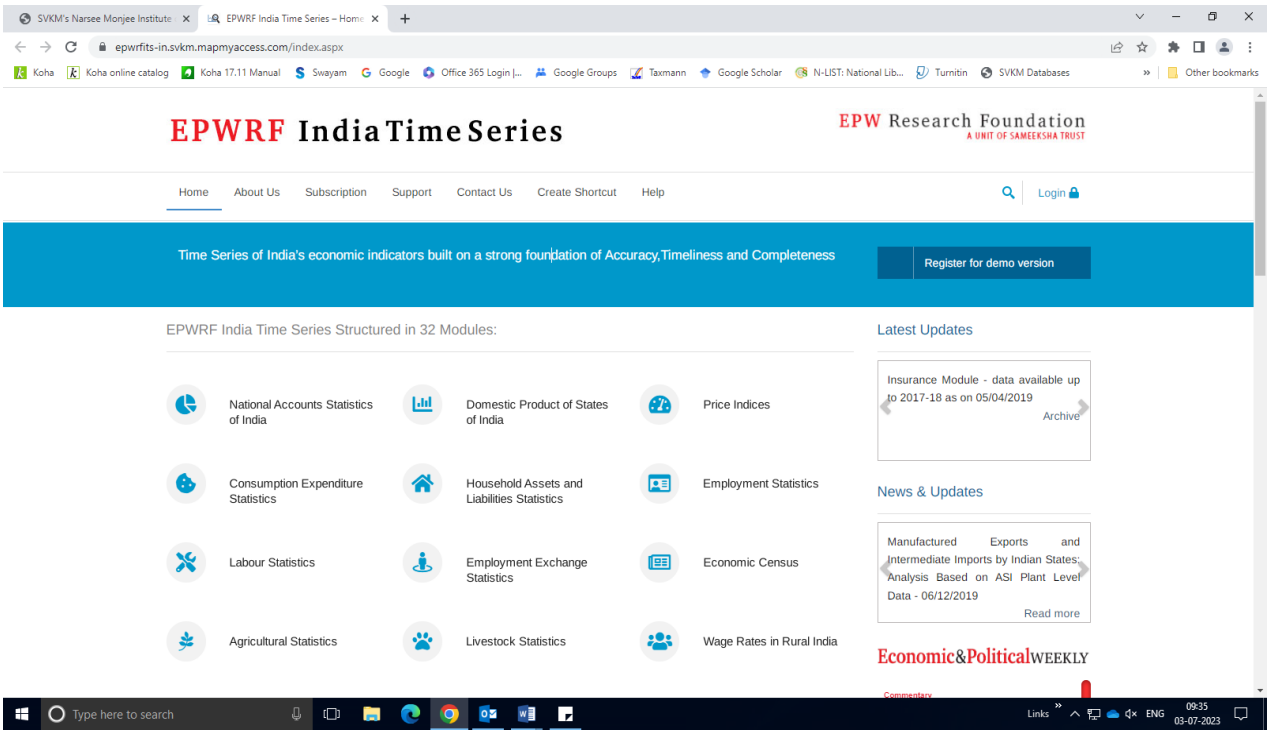
(in https://svkm.mapmyaccess.com/resources)



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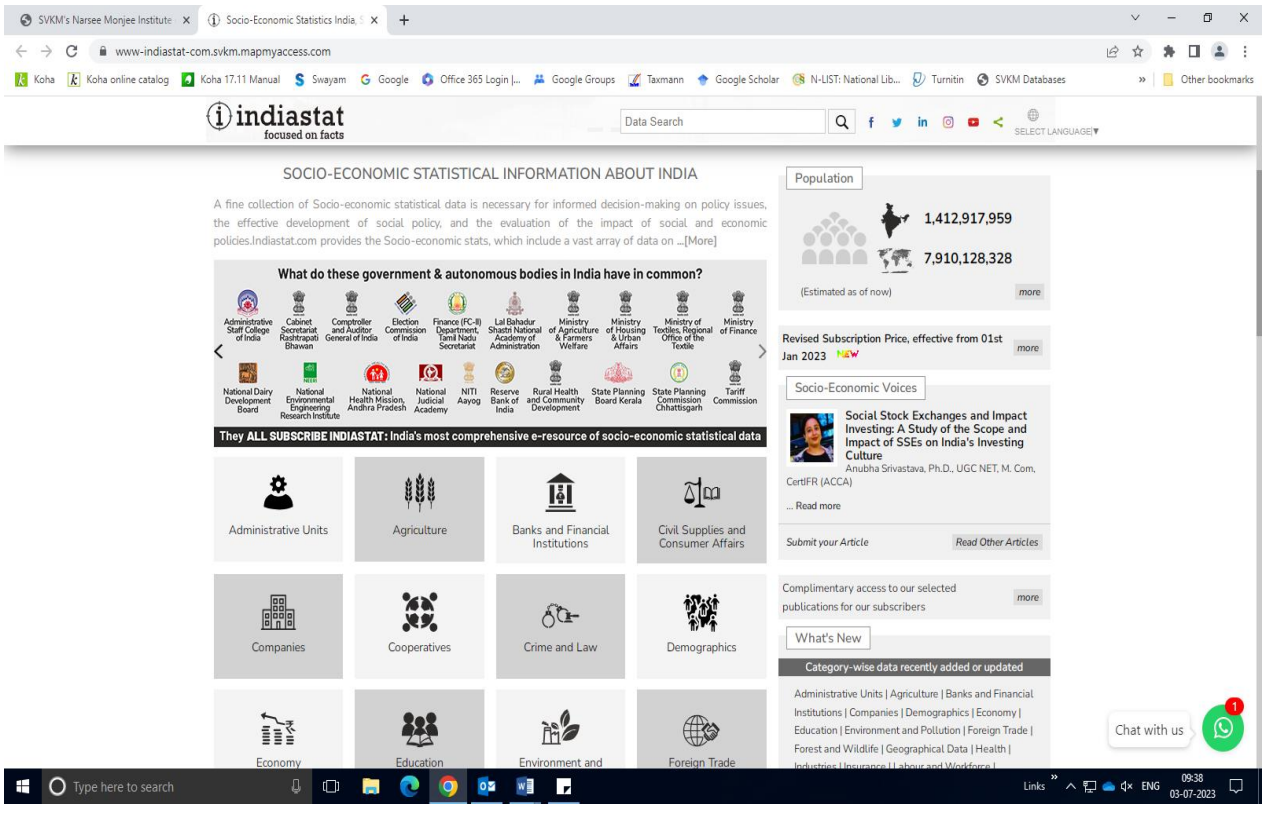

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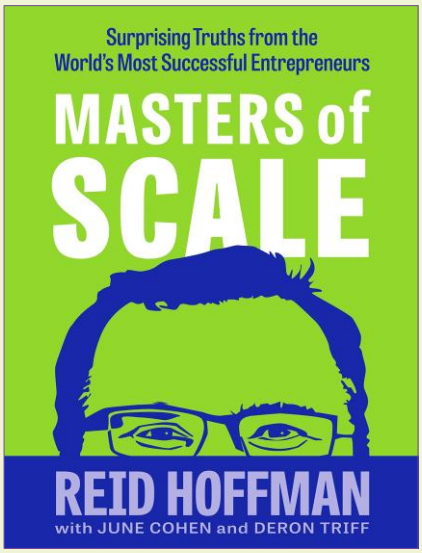
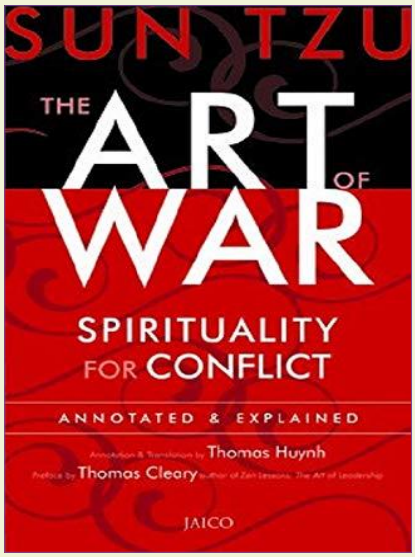
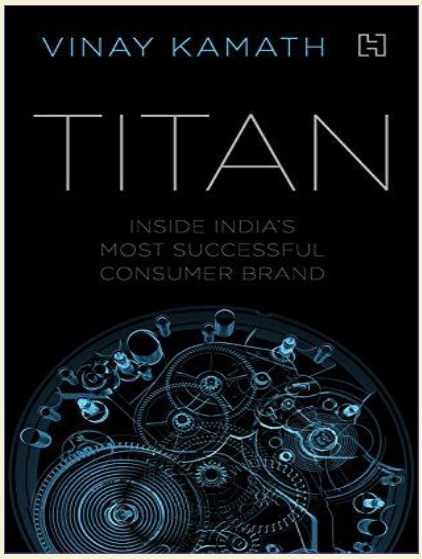
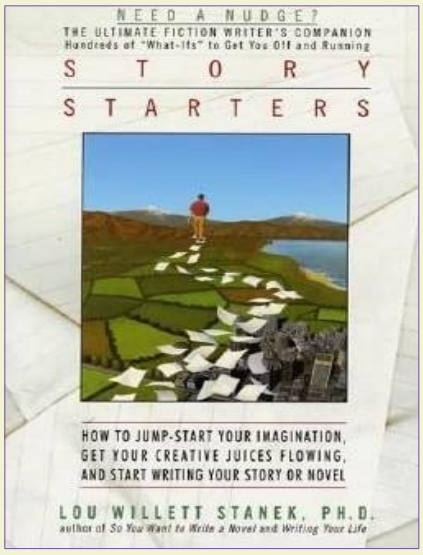
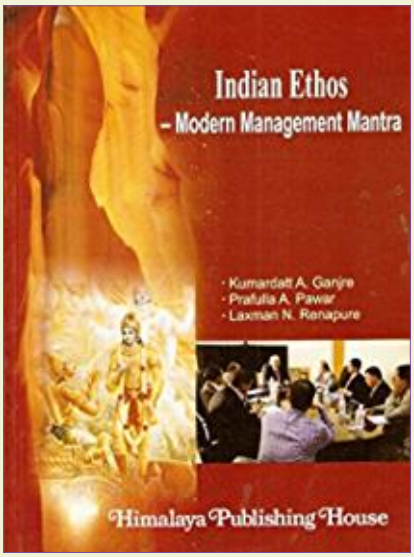
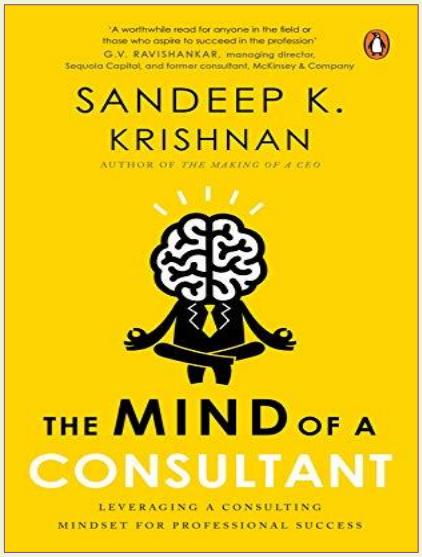


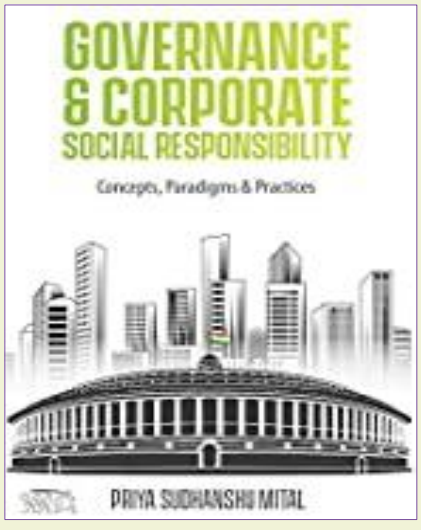


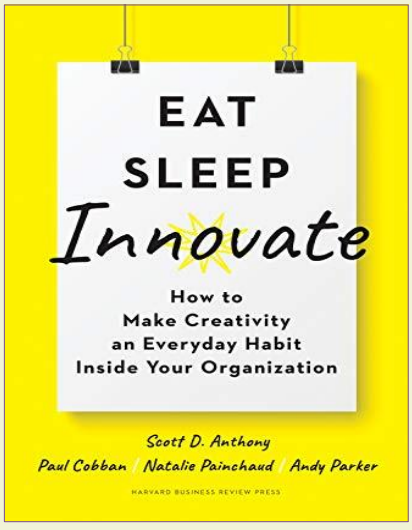


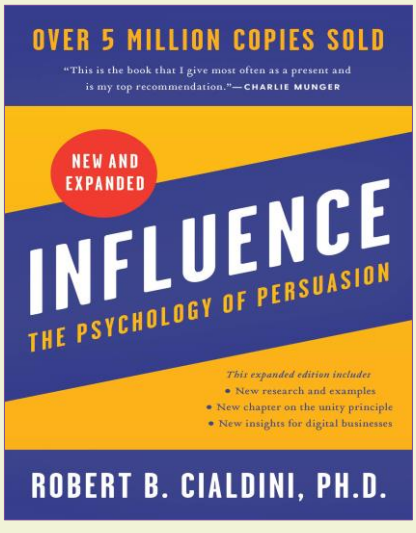




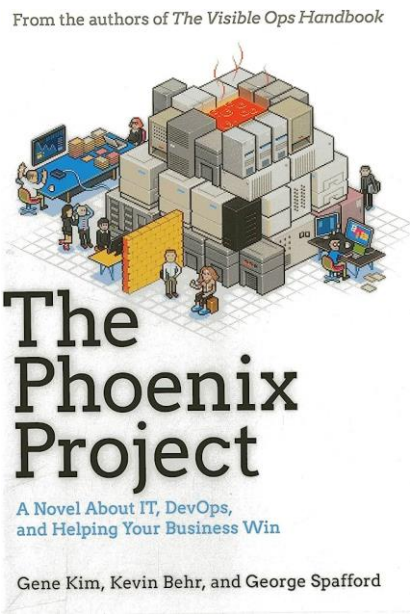








The Must Read Books on Technology Management



The Phoenix Project: A Novel about IT, DevOps, and Helping Your Business Win by Gene Kim, Kevin Behr, and George Spafford

The Phoenix Project is a fictional tale that delves into the world of information technology. The book discusses IT operations drawbacks, from vulnerabilities to server crashes to application freezes. The authors then provide tactics professionals can use to protect themselves, consumers, and data. With a straightforward narrative, The Phoenix Project is an excellent publication for individuals beginning their information management careers. Notable quote: "Being able to take needless work out of the system is more important than being able to put more work into the system."

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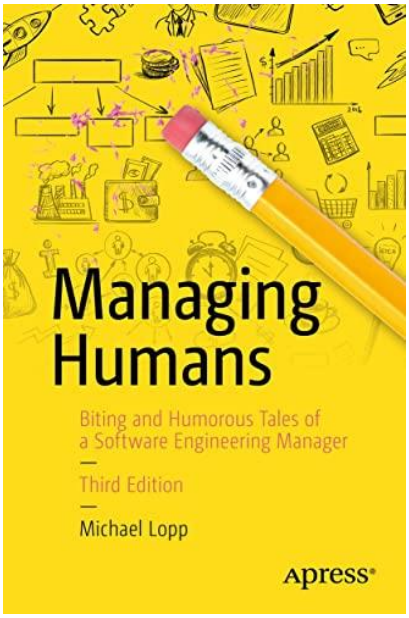

Managing Humans: Biting and Humorous Tales of a Software Engineering Manager by Michael Lopp

The author, Michael Lopp, who occupied leadership positions at companies like Apple, and Netscape, shares his Silicon Valley stories, showcasing how people relations occur in the real world, where people feel immense pressure to succeed. The book has 3 parts, which focus on the skills managers need to make it, how engineers and managers create and use organizational processes, as well as developing talent, recruiting and offering a good career path to people. Information is organized into entertaining stories, which are insightful and which offer examples of how people behave in certain situations, expanding readers' visions of interpersonal relations, meetings, feedback, and daily activities.

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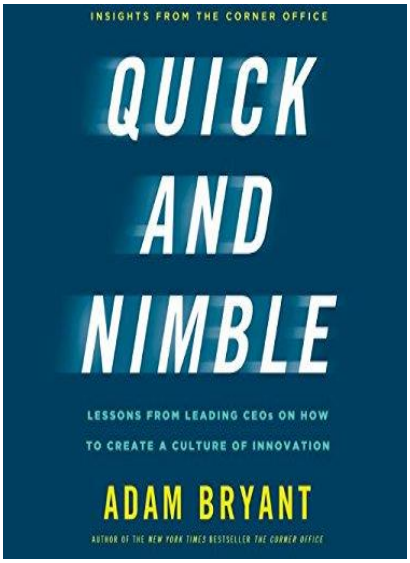

Quick and Nimble by Adam Bryant

The full title is "Quick and Nimble: Lessons From the Leading CEOs on How To Create a Culture of Innovation" but it wouldn't fit in the subtitle. This book is all about quotes, experiences, and stories , and is put together by New York Times columnist Adam Bryant. This is a great point for people to start reading if they want to learn how other people made it big since using over 200 interviews with CEOs from companies like LinkedIn, A&E, and Siemens. A short but intense read that could help inspire anyone starting to work or who wants to imitate the best.

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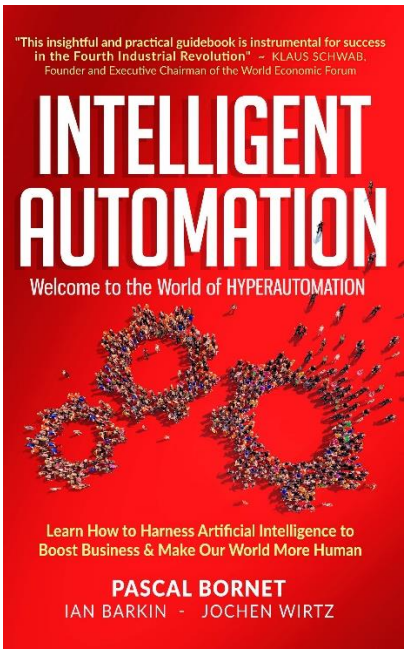

Intelligent Automation: Learn how to harness Artificial Intelligence to boost business & make our world more human by Pascal Bornet, Ian Barkin, and Jochen Wirtz

The authors dive into the changing landscape in the artificial intelligence sector based on a managerial perspective. Intelligent Automation includes ways that AI enables the creation of a better world and how businesses can leverage the changes. The authors also state how each component contributes to value, from vision to execution and learning. In addition, the publication provides tips for implementing AI in entities and challenges that businesses could face in the implementation stages.

Notable quote: "All businesses are going digital: the winners will be those who do so the quickest and to the greatest extent. It may be informed speculation to say the landscape of companies will change dramatically over the next few decades. Still, one thing is sure: the winners—even the survivors—will be highly automated, with the bare minimum of human involvement."

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The AI Advantage: How to Put the Artificial Intelligence Revolution to Work by Thomas H. Davenport

Thomas H. Davenport describes ways businesses can leverage available technologies and gain a competitive advantage. The book explains how AI can improve products and processes. The author argues that companies will get better results by pairing smart machines with smart humans instead of drastically reducing human resources. Readers will also get insights into major AI technologies that large companies like Google and Amazon use.

Notable quote: "The businesses and organizations that succeed with AI will be those that invest steadily, rise above the hype, make a good match between their business problems and the capabilities of AI, and take the long view."

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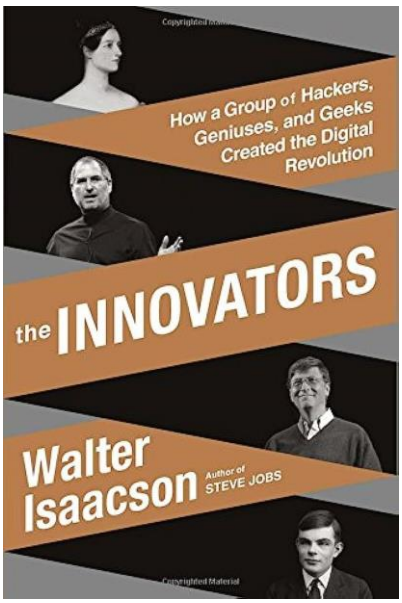

The Innovators: How a Group of Hackers, Geniuses and Geeks Created the Digital Revolution by Walter Isaacson

If you want to learn about the history of the internet and its contribution toward information management in this day and age, then The Innovators is an excellent pick. The author discusses the digital revolution and the talents guiding this stage. In addition, readers will also learn practical lessons from these individuals' successes and failures. Some of the personalities Walter Isaacson explores include Bill Gates, Steve Jobs, Larry Page, and Doug Engelbart.

Notable quote: "But the main lesson to draw from the birth of computers is that innovation is usually a group effort, involving collaboration between visionaries and engineers and that creativity comes from drawing on many sources."

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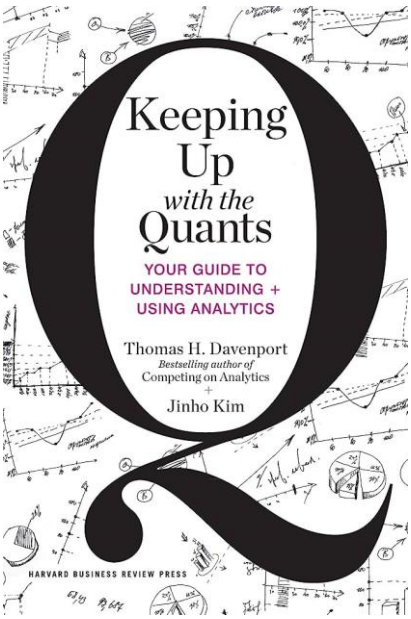

Keeping Up with the Quants: Your Guide to Understanding and Using Analytics by Thomas H. Davenport and Jinho Kim

Keeping Up with the Quants is an excellent guide on information management. The authors argue that every individual needs data analytical skills, no matter the interests, industry, or type of corporation. Keeping Up with the Quants reinstates that individuals must be conversant with analytical methods and terminologies to work with quantitative information. Some of the lessons the authors provide include gathering data, analyzing information, and developing quantitative thinking. In addition, readers will get insights into interpreting and communicating analytical results.

Notable quote: "Consumer marketing, with myriad customer touchpoints and clickstreams, is already a big data problem. Google has even described its self-driving car as a big-data project."

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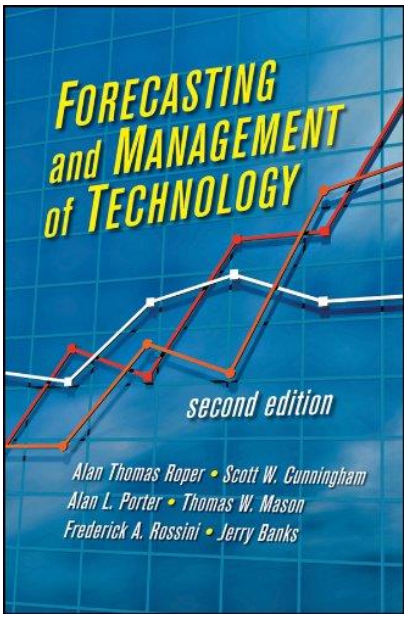

Forecasting and Management of Technology, 2nd Edition

Alan L. Porter, Scott W. Cunningham, Jerry Banks, A. Thomas Roper, Thomas W. Mason, Frederick A. Rossini

One of the leading handful of books to deal with the topic of forecasting of technology and technology management as this discipline was emerging. This book is build on knowledge in the context of business organizations that now place a greater emphasis on technology to stay on the cutting edge of development. The scope of this edition has broadened to include management of technology content that is relevant to now to executives in organizations while updating and strengthening the technology forecasting and analysis content that the first edition is reputed for. The authors see as the innovations to technology management in the last 17 years: the Internet; the greater focus on group decision-making including process management and mechanism design; and desktop software that has transformed the analytical capabilities of technology managers. Included in this book will be 5 case studies from various industries that show how technology management is applied in the real world.

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Read Me Too

Case Studies on Technology Management

- Technology Management - Case Studies. Lucas TVS. http://nraomtr.blogspot.com/2021/01/technology-management-case-studies.html

- Business Technology Management: A Case Study by Stephen J. Andriole, Robert Nydick, https://pubsonline.informs.org/doi/pdf/10.1287/ited.6.1.13

- Technology in Business. 5 Successful Cases When Companies Succeeded in Digital by Anzhelika Danielkievich https://forbytes.com/blog/top-most-impressive-cases-when-technology-helped-businesses/

- Data Science Use Case on Customer Churn Prediction and Prevention https://aeriestechnology.com/customer-churn-prediction-and-prevention-using-data-science/

- How Model Technology Solutions Helped a Fast-Growing Health Management Company With Their Infrastructure https://model-technology.com/blog/case-study-how-model-technology-solutions-helped-a-fast-growing-health-management-company-with-their-infrastructure/

- Real-world case studies with real-world consequences https://www.humology.com/case-studies

- Discover the innovative world of TechnologyOne https://technologyonecorp.com/resources/case-studies

- Using Data and Technology to Transform: Case Studies https://www.advisingsuccessnetwork.org/technology-management/using-data-and-technology-to-transform-case-studies/

- Proactive Technology Management https://www.ag5.com/case-studies/proactive-technology-management/

STUDENTS FLAIRS

Bali & Prahalad Dialogue on Anger and Forgiveness

King Bali once asked his grandfather if between Teja or Aggressiveness and Kshama or forgiveness, which is better?

Prahlada answers – None of them is better than the other. A wise man must use them as required.

If you forgive too easily, people will start taking you for granted. The dangers of forgiving too easily include not being respected by your own people, by your enemies, and by general people.

People are not polite to the one who is always forgiving. So, a wise person should not always be forgiving.

Your employees will do as they wish, for they know, you will forgive easily. They may commit crimes or end up using your personal things for their own benefit. They may not respect you.

Disrespect by your servants is considered worse than death.

Your own people will try to take your wealth. Your employees, sons, people dependent on you, and even unrelated people may end up criticizing you with strong words. And may be your family will get out of hand.

On the other hand, if you handle everything with anger, there is a danger of punishing people without applying thought.

An angry person makes enemies easily. His own people as well as ordinary people grudge against him.

He ends up insulting people and, in the process, loses wealth, and earns disrespect.

Too much anger and punishing people distances you from prosperity, family as well as health.

So, a balanced behavior is recommended – you should neither be always angry nor be always forgiving. You should choose your reaction to the situation, time, and place demand. One who can modulate his behavior as per the need from extremely soft to dangerous rules the world.

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We cannot accomplish what we have initiated without your contributions.
We would like to publish your inputs in the form of:

- Articles
- Photographs
- Artwork
- Puzzles

Any other suggestions.

You can also, join our team and help in making this monthly newsletter better. Send your contributions at vaishali.dawar@nmcce.ac.in. Do come ahead and make yourself visible**.**

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