

NATHASIT GERDSRI, PH.D.

Associate Professor

Research Areas

Strategy and Innovation · Strategic Technology Management · Technology Planning and Roadmapping · Project Management

nathasit.ger@mahidol.ac.th | ORCID: 0000-0002-3235-6533 | Scopus ID: 24476507700

Profile

Dr. Nathasit Gerdsri (□□ . □□□□□□□□ □□□□□□□) is Associate Professor of Technology and Innovation Management at College of Management, Mahidol University, Thailand. He used to serve as Deputy Dean for Academic Programs (2014-7) and Program Chairs of Management & Strategy (2007-12). He was also invited as a visiting professor at Europa Institute of MBA, Germany every Summer during 2007-2011. Prior to that Dr. Gerdsri held a Visiting Assistant Professor in Dept. of Engineering and Technology Management at Portland State University during 2004-5.

Dr. Gerdsri also has industrial experiences in technical consulting, contract research, management of mega construction projects and technology development as he used to work with Intel Enterprise R&D Lab in Hillsboro, Oregon USA.

Currently, Dr. Gerdsri conducts research in the area of technology planning and roadmapping, innovation management, R&D management, decision analysis, and project management.

The outputs of his research works have been published in many leading int'l journals including IEEE Transaction on Engineering Management, Journal of Technology Forecasting Social Change, Research Technology Management, Journal of Technology Analysis and Strategic Management, Int'l Journal of Technology, Policy and Management, Int'l Journal of Innovation and Technology Management, Asian Journal of Technology Innovation, Journal of Mathematical and Computer Modeling, Journal of Engineering and Technology Management, etc. Dr. Gerdsri is a co-author of the book on "Technology Assessment: Forecasting Future Adoption of Emerging Technologies" (ISBN: 978-3-503-12675-0) and several book chapters on the topics related to strategic management of technology. At Mahidol University, Dr. Nathasit's research works had been awarded for recognized for Mahidol University - Outstanding Research Award in 2017 and Mahidol University Top 1% Researchers in 2023.

In addition to the academic outputs, Dr. Gerdsri carried out his research works to business communities by providing academic training courses and project consultancies for several leading organizations like APEC Center of Technology Foresight, PTT Public Company, Siam Cement Group, Siam Makro, Tourism Authority of Thailand, EXIM Bank, Syntec Construction, Thailand National Science and Technology Development Agency, Thailand Automotive Institute, Thailand National Science Technology and Innovation Policy Office, etc. Dr. Gerdsri is also a founder/CEO of TheStrategence Co., Ltd. (a startup company) providing business consulting service platform funded by Thailand Ministry of Science and Technology in 2019.

Dr. Gerdsri received his Ph.D. in Systems Science/Engineering and Technology Management from Portland State University (USA) in 2004. His Ph.D. dissertation was on the development of technology development envelope (TDE) for roadmapping of emerging technologies. A part of his dissertation was selected for the PICMET'05-Best Student Paper Award. Dr. Gerdsri completed B. Eng in mechanical engineering from Chulalongkorn University (Thailand) and dual M.S. degrees in mechanical engineering and engineering management.

Currently, Dr. Gerdsri serves an Area Editor of the International Journal of Innovation and Technology Management (IJITM) as well as Editorial board member of IEEE Transactions on Engineering Management. He is a member of IEEE Society, the Honor Society of Phi Kappa Phi, Omega Rho International Honor Society - PSU Chapter which he is used to serve as the Chapter President. He is also listed in Marquis Who's Who in the World.

Publications

Journal Articles

Gerdsri, N., Jakapong Pongthanaisawan, & Nisit Manotungvorapun , (2026) . An integrated framework for developing a national industrial technology roadmap: Thailand perspectives. *Foresight* , 1–22 . https://doi.org/10.1108/fs-06-2025-0136

Jidapa Teerawongsathorn, **Gerdsri, N.**, & Wisuwat Wannamakok , (2026) . The intentionality-based view of users to adopt ChatGPT through the mediating role of attitude toward behavior: practical implication for business. *Global Knowledge, Memory and Communication* , 75 (7-8) , 2988–3007 . https://doi.org/10.1108/gkmc-01-2024-0017

Hirose Yua, Phall Robert, Farrukh Clare, **Gerdsri, N.**, & Lee Suugjoo , (2026) . Navigating Organization-wide Roadmapping through Maturity Assessment. *IEEE Engineering Management Review* , 54 (2) , 184–203 . https://doi.org/10.1109/EMR.2025.3605130

Pawat Tansurat & **Gerdsri, N.** , (2026) . Applying System Dynamics to Enhance Scenario-based Technology Roadmapping: Analysis Framework and Case Demonstration. *IEEE Transactions on Engineering Management* , 73 , 1872–1888 .

Nisit Manotungvorapun & **Gerdsri, N.** , (2025) . Roadmap Toward Sustainable Tourism Development: An Evidence- and Knowledge-based Approach from Thailand. *Sustainability* , 17 (13) , 6028 . https://doi.org/10.3390/su17136028

Gerdsri, N., Phoemsak Suksiri, Phoemsak Somjaitaweeporn, & Temsir Sapsaman , (2024) . Robotics and Automation Roadmap: Thailand Perspectives. *International Journal of Automation Technology* , 18 (6) , 754–763 .

Phichonsatcha, T., **Gerdsri, N.**, Pentrakoon, D., & Kanjana-Opas, A. , (2024) . Exploring the benefits of applying indigenous knowledge (IK) into foresight process. *Foresight* , 26 (1) , 181–202 .

Dilek Cetindamar, Babak Abedin, **Gerdsri, N.**, & Shirahada, K. , (2024) . Editorial Overview of Digital Literacy of Employees and Organizational Transformation and Innovation. *IEEE Transactions on Engineering Management* , 71 , 7832–7836 .

Hirose Y., Phaal R., Farrukh C., **Gerdsri, N.**, & Yamaoka H. , (2023) . Kick-Starting Roadmapping Implementation in Corporate Settings: Lessons Learned From IHI Corporation. *International Journal of Innovation and Technology Management* , 20 (1) , Article number 2250039 .

Gerdsri, N., Vayvay O., & Wongsawa Y. , (2023) . Guest Editorial: New Perspectives on Technology and Innovation Management to Strengthen the Development of Healthcare Organizations and Ecosystems. *IEEE Transactions on Engineering Management* , 70 (8) , 2631–2633 .

Phichonsatcha, T., Pentrakoon, D., **Gerdsri, N.**, & Kanjana-Opas, A. , (2022) . Extending indigenous knowledge to unveil the evolutionary journey of food preferences and socio-cultural phenomena. *Appetite* , 170 . https://doi.org/10.1016/j.appet.2022.105884

Gerdsri, N. & Manotungvorapun N. , (2022) . Systemizing the Management of University-Industry Collaboration: Assessment and Roadmapping. *IEEE Transactions on Engineering Management* , 69 (1) , 245–261 .

Pora U., **Gerdsri, N.**, Thawesaengskulthai, N., & Triukose S. , (2022) . Data-Driven Roadmapping (DDRM): Approach and Case Demonstration. *IEEE Transactions on Engineering Management* , 69 (1) , 209–227 .

Gerdsri, N., Sivara K., Chatunawarat, C., Jaroonjitsathian, S., & Tundulyasaree, K. , (2022) . Roadmap for Future Mobility Development Supporting Bangkok Urban Living in 2030. *Sustainability (Switzerland)* , 14 (15) , Article number 9296 . https://doi.org/10.3390/su14159296

Hirose Y., Phaal R., Farrukh C., **Gerdsri, N.**, & Lee S. , (2022) . Sustaining Organizational Roadmapping Implementation––Lessons Learned from Subsea 7: Subsea 7’s use of roadmapping shows how roadmapping can be an effective tool to change the innovation process from one that relies on past successes to one that integrates clients’ needs and employees’ insights.. *Research Technology Management* , 65 (3) , 50–57 .

Gerdsri, N. & Teekasap P. , (2022) . Identifying Potential Areas for Circular Economy Development from the Perspective of Developing Economies: Using Patent and Bibliometric Analyses. *International Journal of Automation Technology* , 16 (6) , 838–844 .

Manotungvorapun N. & **Gerdsri, N.** , (2021) . University-industry collaboration: Assessing the matching quality between companies and academic partners. *IEEE Transactions on Engineering Management* , 68 (5) , 1418–1435 .

Gerdsri, N., Iewwongcharoen B., Rajchamaha, K., Manotungvorapun N., Pongthanaisawan J., & Witthayaweerasak W. , (2021) . Capability assessment toward sustainable development of business incubators: Framework and experience sharing. *Sustainability (Switzerland)* , 13 (9) , Article Number 4617 . https://doi.org/10.3390/su13094617

Manotungvorapun N. & **Gerdsri, N.** , (2021) . Positioning academic partners to align with proper modes of university-industry collaboration. *International Journal of Business Innovation and Research* , 24 (2) , 261–296 .

Hirose Y., Phaal R., Farrukh C., **Gerdsri, N.**, Lee S., & O'Dell, M. , (2021) . Practical Roadmapping Implementation: What we learned from QinetiQ Group. *IEEE Engineering Management Review* , 49 (4) , 108–114 .

Gerdsri, N. & Manotungvorapun N. , (2021) . Readiness assessment for IDE startups: A pathway toward sustainable growth. *Sustainability (Switzerland)* , 13 (24) , 13687 . https://doi.org/10.3390/su132413687

Chutivongse N. & **Gerdsri, N.** , (2020) . Creating an innovative organization: Analytical approach to develop a strategic roadmap guiding organizational development. *Journal of Modelling in Management* , 15 (1) , 50–88 .

Hirose Y., Phaal R., Farrukh C., **Gerdsri, N.**, & Lee S. , (2020) . Characterizing Maturity Levels for Organization-wide Roadmapping Implementation. *IEEE Engineering Management Review* , 48 (4) , 133–143 .

Gerdsri, N., Puengrusme, S., Vatananan, R., & Tansurat P. , (2019) . Conceptual framework to assess the impacts of changes on the status of a roadmap. *Journal of Engineering and Technology Management* , 52 , 16–31 . https://doi.org/10.1016/j.jengtecman.2017.12.001

Chuawatcharin R. & **Gerdsri, N.** , (2019) . Factors influencing the attitudes and behavioural intentions to use just walk out technology among Bangkok consumers. *International Journal of Public Sector Performance Management* , 5 (2) , 146–163 . https://doi.org/10.1504/ijpspm.2019.099091

Gerdsri, N. & Kongthon A. , (2018) . Identify potential opportunity for research collaboration using bibliometrics. *International Journal of Business* , 23 (3) , 248–260 .

Gerdsri, N., Kongthon A., & Puengrusme, S. , (2017) . Profiling the Research Landscape in Emerging Areas Using Bibliometrics and Text Mining: A Case Study of Biomedical Engineering (BME) in Thailand. *International Journal of Innovation and Technology Management* , 14 (2) . https://doi.org/10.1142/s0219877017400119

Manotungvorapun N. & **Gerdsri, N.** , (2016) . Complementarity vs. Compatibility: What is really matter for OI partner selection?. *International Journal of Transitions and Innovation System* , 5 (2) , 122–139 .

Conference Papers

Gerdsri, N. & Navarerk Chalarrak , (2026) . Thailand National Technology Roadmap on Digital Industry. Conference Paper.

Tansurat P. & **Gerdsri, N.** , (2024) . Responsive Scenario-based Roadmapping: Applying System Dynamics to Enhance Scenario based Roadmapping. Conference Paper.

Gerdsri, N. & Chalarak N. , (2024) . Dissemination of Technology Roadmap Using AI Chatbots. Conference Paper.

Gerdsri, N., Suksiri P., Somjaitaweeporn, T., & Sapsaman T. , (2023) . Robotics and Automation Roadmap: Thailand Perspectives. Conference Paper.

Kongthon A. & **Gerdsri, N.** , (2023) . Bibliometric Analysis on Artificial Intelligence Research to Support National Artificial Intelligence Strategy in Thailand. Conference Paper.

Tansurat P. & **Gerdsri, N.** , (2022) . Applying System Dynamics to Enhance Scenario-Based Roadmapping. Conference Paper.

Tansurat P. & **Gerdsri, N.** , (2022) . Technology Acceptance of Digital Bag Tag for Airline Passengers. Conference Paper.

Manotungvorapun N. & **Gerdsri, N.** , (2022) . Systematic Approach Driving toward Effective University-Industry Collaboration (UIC). Conference Paper.

Gerdsri, N. & Teekasap P. , (2021) . Identifying the Potential for Circular Economy Development from the Perspectives of Developing Economies: Using Patent and Bibliometric. Conference Paper.

Phichonsatcha, T., **Gerdsri, N.**, Pentrakoon, D., & Kanjana-Opas, A. , (2019) . Introducing indigenous knowledge into foresight. Conference Paper.

Tansurat P. & **Gerdsri, N.** , (2019) . Extended techniques to enhance technology roadmapping: Research opportunities and challenges. Conference Paper.

Pora U., Thawesaengskulthai, N., **Gerdsri, N.**, & Triukose S. , (2018) . Data-driven Roadmapping Turning Challenges into Opportunities. Conference Paper.

Tannirandon A. & **Gerdsri, N.** , (2018) . Integration of community preference in energy planning: A way for sustainability. Conference Paper.

Chutivongse N. & **Gerdsri, N.** , (2017) . Bridging the gaps for being an innovative organization / An analytical approach to develop a strategic roadmap guiding a firm to become an innovative organization. Conference Paper.

Apinantasap W. & Gerdsri, N. , (2017) . Technology Acceptance of Digital Bag Tags for Airline Passengers. Conference Paper.

Weeraphong S., Sevetpanuvong P., & Gerdsri, N. , (2017) . Factors Hindering Financial Institutes When Reforming IT Units to Become Innovative Organization: A Case Study. Conference Paper.

Tannirandon A. & Gerdsri, N. , (2016) . Energy planning for sustainable development - challenge and experience sharing from Thailand. Conference Paper.

Puengrusme S. & Gerdsri, N. , (2016) . Conceptual Framework to Assess the Impacts of Changes on the Current Status of a Technology Roadmap. Conference Paper.

Manotungvorapun N. & Gerdsri, N. , (2016) . From Literature to Practice: Selection Criteria for Industry-University Partners. Conference Paper.

Somboon S. & Gerdsri, N. , (2015) . Factors Influencing the Adoption of Soil Test Kit Technology. Conference Paper.

Manotungvorapun N. & Gerdsri, N. , (2015) . Matching partners for Open Innovation practice. Conference Paper.

Lersmethasakul T. & Gerdsri, N. , (2015) . Web-based Design for the Status of a Technology Roadmap. Conference Paper.

Chutivongse N. & Gerdsri, N. , (2015) . Proposed steps to analyze organizational characteristics and develop a roadmap for being an innovative organization. Conference Paper.

Chumintarachak T. & Gerdsri, N. , (2015) . Implementing Crowd Funding Platform for Thai Society. Conference Paper.

Chanwong C. & Gerdsri, N. , (2015) . Influencing Factors Toward Buying and Selling in C2C E-Marketplace of Thai Consumers. Conference Paper.

Books

Gerdsri, N. , (2018) . การจัดทำแผนที่นำทางการพัฒนาเทคโนโลยี : Technology Roadmapping. Book.

Book Chapters
Gerdsri, N., Ummaraporn Pora, Sudatip Puengrusme, & Ronald Vatananan , (2025) . Technology Roadmapping: Monitoring the Status of a Technology Roadmap with Data-driven Roadmapping Approach. Book Chapter.

Daim T.U., Gerdsri, N., Kockan I., & Kocaoglu D.F. , (2018) . Technology development envelope approach for the adoption of future powertrain technologies: A case study on Ford Otosan Roadmapping model. Book Chapter.

Vatananan R.S. & Gerdsri, N. , (2018) . The current state of technology roadmapping (TRM) research and practice. Book Chapter.

Manotungvorapun N. & Gerdsri, N. , (2018) . An Analytical Approach to Assess the Matching Quality of Academic Partners for Open Innovation in the Form of University-Industry Collaboration. Book Chapter.

Gerdsri, N. & Kongthon A. , (2018) . Bibliometrics and social network analysis supporting the research development of emerging areas: Case studies from Thailand. Book Chapter.

Gerdsri, N. , (2018) . An analytical approach to building a Technology Development Envelope (TDE) for roadmapping of emerging technologies. Book Chapter.

Updated November 2026 Page 5

Gerdsri, N. , (2016) . Chapter 6: Strategic Planning: An Analytical Approach to Building a Technology Development Envelope (TDE) for Roadmapping of Emerging Technologies. Book Chapter.

Gerdsri, N. , (2016) . Chapter 5: Strategic Planning: A Quantitative Model for the Strategic Evaluation of Emerging Technologies. Book Chapter.

Academic & Professional Service

Peer Review & Editorial Service

Technovation *, Scopus indexed (Q1 , 2025)* , H-index: 180 , SJR: 3.491 , Publisher: Elsevier Ltd , Reviewer Year: 2026 .

ORCID: 0000-0002-3235-6533 · Scopus Author ID: 24476507700

Email: nathasit.ger@mahidol.ac.th