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BIBLIOGRAPHY

A guide to the project management body of knowledge, 2017. . Project Management Institute, Inc.

Abdel Aziz, A., 2026. Practical Construction Planning and Control Using Microsoft Project.

Afrida, W.D., Renjani, M.S., Rahmawati, D., Radinal, R., 2025. Comparative Analysis of Time and Cost Efficiency in Project Acceleration Strategies: A Case Study of the Construction of a Police Service Building. Global Education Journal 3, 211–217. https://doi.org/10.59525/gej.v3i1.288

Ahmad Raga, A., Agus Yudha Prawira Adistana, G., 2023. OPTIMALISASI WAKTU DAN BIAYA PROYEK KONSTRUKSI DENGAN PENAMBAHAN JAM KERJA DAN TENAGA KERJA MENGGUNAKAN METODE TIME COST TRADE OFF.

Ajayi, T.O., Titi, O., Olasunmbo, D.&, Adhuze, O., 2024. Cost Management Evolution in Building Projects: A Review of Innovations and Challenges. https://doi.org/10.51584/IJRIAS

Ammar, M.A., 2011. Optimization of Project Time-Cost Trade-Off Problem with Discounted Cash Flows. https://doi.org/10.1061/ASCECO.1943-7862.0000256

Anas, L., Si, Z.S., Pd, M., t.t. STRATEGI OPTIMASI WAKTU DAN BIAYA MENGGUNAKAN TIME COST TRADE OFF (TCTO) PADA PEMBANGUNAN GEDUNG RUANG KELAS SMPN 1 BESUKI (TIME AND COST OPTIMIZATION USING THE TIME COST TRADE OFF (TCTO) STRATEGY IN THE CONSTRUCTION CLASSROOM BUILDING OF JUNIOR HIGH SCHOOL ONE BESUKI).

Anggraini, A., Dwiantoro, E., Sazuatmo, 2025. Analisa Optimasi Biaya dan Waktu Pelaksanaan Proyek Kontruksi Dengan Penambahan Jam Kerja dan Penambahan Tenaga Kerja Berdasarkan Metode Time Cost Trade Off (Studi Kasus: Penanganan Jalan Muara Sahung – Naga Rantai Kabupaten Kaur Provinsi Bengkulu). RIGGS: Journal of Artificial Intelligence and Digital Business 4, 4456–4462. https://doi.org/10.31004/riggs.v4i4.4276

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Azim Eirgash, M., 2020. Resource Allocation and Leveling in Construction Management Projects with Resource Histogram. American Journal of Engineering and Technology Management 5, 91. https://doi.org/10.11648/j.ajetm.20200506.11

Bagshaw, K.B., 2021. NEW PERT and CPM in Project Management with Practical Examples. American Journal of Operations Research 11, 215–226. https://doi.org/10.4236/ajor.2021.114013

Bharadwaj, M., Trivedi, M.K., Shinde, V., 2020. Schedule Compression of Construction Project: A Review. hlm. 292–299. https://doi.org/10.1007/978-3-030-44758-8_26

Borowicz, J.J., Psp, C., Brown, R.B., Donaldson, D.C., Dysert, L.R., Cep, Ccc, Garcia Da Roza, R., Hollman, J.M., Hollmann, J.K., Cep, Cce, Kutilek, F., Mccuen, T.L., Parker, D.E., Todd, C., Pickett, W., Sinnathamby, K., Stephenson, C.H.L., Uppal, K.B., Whiteside, J.D., 2022. COST ESTIMATE CLASSIFICATION SYSTEM-AS APPLIED IN ENGINEERING, PROCUREMENT, AND CONSTRUCTION FOR THE BUILDING AND GENERAL CONSTRUCTION INDUSTRIES.

Chen, G.X., Shan, M., Chan, A.P.C., Liu, X., Zhao, Y.Q., 2019. Investigating the causes of delay in grain bin construction projects: the case of China. International Journal of Construction Management 19, 1–14. https://doi.org/10.1080/15623599.2017.1354514

Dewi, R., Wardani, D., Komara, C., 2023. ANALISIS PENGARUH JAM LEMBUR DAN PENAMBAHAN TENAGA KERJA TERHADAP OPTIMASI BIAYA DAN WAKTU PADA PEMBANGUNAN GEDUNG (Studi Kasus: Proyek Pembangunan Gedung Mall Di Cibinong), Jurnal Teknik Sipil.

Dlamini, M., Cumberlege, R., 2021. The impact of cost overruns and delays in the construction business, dalam: IOP Conference Series: Earth and Environmental Science. IOP Publishing Ltd. https://doi.org/10.1088/1755-1315/654/1/012029

Elsahly, O.M., Ahmed, S., Abdelfatah, A., 2023. Systematic Review of the Time-Cost Optimization Models in Construction Management. Sustainability (Switzerland). https://doi.org/10.3390/su15065578

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Elserougy, M., Khodeir, L.M., Fathy, F., 2024. Practices and techniques for construction projects cost control- a critical review. HBRC Journal 20, 525–552. https://doi.org/10.1080/16874048.2024.2337060

Fahmi, M., Saidin Misnan, M., Hendra Mahmud, S., 2025. Cost Structure of Direct and Indirect Cost During Pre-Construction Stage in Construction EPC Project of Built Environment in Indonesia. https://doi.org/10.47772/IJRISS

Fathu Rahman, Ninik Paryati, Rika Sylviana, Anita Mardiyana Agussalim, 2025. RENCANA ANGGARAN BIAYA STRUKTUR PEMBANGUNAN MASJID POLITEKNIK DI TANGERANG MENGGUNAKAN METODE AHSP PUPR 2023. Jurnal Riset Teknik Komputer 2, 122–128. https://doi.org/10.69714/ggsfga73

Fauzananda, 2025. Cost and Time Optimization With the Time Cost Trade-Off Method In The Dharmais Cancer Hospital Project.

Girsang, H., Wahyudi, M.A., 2021. Analysis of The Acceleration of Time and Cost of Construction Projects by Adding Labor and Working Hours (Overtime) using The Time Cost Trade Off Method (Case study: Construction of The Conexio Apartment Project) 3.

Glodon, 2023. gldon-brochure.

Hasyyati, S.N., Puspita, I.A., Tripiawan, W., 2020. Project acceleration of outside plant-fiber optic (OSP-FO) project in pt. XYZ using time cost trade off (TCTO) method by adding overtime hours, dalam: IOP Conference Series: Materials Science and Engineering. Institute of Physics Publishing. https://doi.org/10.1088/1757-899X/852/1/012103

Hendrickson, Chris., Au, Tung., 20081998. Project management for construction : fundamental concepts for owners, engineers, architects, and builders. Carnegie Mellon University.

Hidayat, A.S., Gunarta, I.K., 2025. Risk Analysis in the Construction Industry Using Project Management Life Cycle and House of Risk. Rekayasa 18, 277–296. https://doi.org/10.21107/rekayasa.v18i2.30820

Jamal, M., Sari, D.P., Hutajulu, D.M.A., 2025. Time Cost Trade-Off Analysis for Time and Cost Optimization on The Water Treatment Plant (WTP) Construction Project. hlm. 228–235. https://doi.org/10.2991/978-94-6463-732-8_21

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Jasonn, T., Sree Lakshmi, V., Ealias, A.M., t.t. Compressing Construction Project Schedules: A Fast-Tracking Technique in the Administration of Construction Projects with Case Studies, International Journal of Environmental Sciences.

Kaming, P.F., Olomolaiye, P.O., Holt, G.D., Harris, F.C., 1997. Factors influencing construction time and cost overruns on high-rise projects in Indonesia. Construction Management and Economics 15, 83–94. https://doi.org/10.1080/014461997373132

Mulyatno, P., Niswa Humaida, H., Amiruddin, W., Adietya, A., Yudo, H., 2024. Application of Time Cost Trade Off Method in Optimizing Time and Cost on Ship Refurbishment Projects KMP Dharma Rucitra 1 and MT Triaksa 17, International Journal of Marine Engineering Innovation and Research.

Oetomo, W., Negeri Sipil Balai Besar Pelaksanaan Jalan Nasional VII Direktorat Jenderal Bina Marga Kementerian Pekerjaan Umum dan Perumahan Rakyat, P., 2017. Uhad Media Ilmiah Teknik Sipil.

Omakwu, S.O., Chen, L., 2023. Integrating Sample Iterative Communication Model into Project Management Life Cycle Phases, dalam: Proceedings - 2023 Congress in Computer Science, Computer Engineering, and Applied Computing, CSCE 2023. Institute of Electrical and Electronics Engineers Inc., hlm. 2678–2682. https://doi.org/10.1109/CSCE60160.2023.00427

Pangemanan, D.D.G., Aprianti, E., Larwuy, F.A., 2025a. Time and Cost Optimization of the Coordinating Ministry 4 Office Building Construction in Nusantara Using the Time-Cost Trade-Off Method. Engineering, Technology and Applied Science Research 15, 28622–28628. https://doi.org/10.48084/etasr.11842

Pangemanan, D.D.G., Aprianti, E., Larwuy, F.A., 2025b. Time and Cost Optimization of the Coordinating Ministry 4 Office Building Construction in Nusantara Using the Time-Cost Trade-Off Method. Engineering, Technology and Applied Science Research 15, 28622–28628. https://doi.org/10.48084/etasr.11842

Perrucci, D. V., Wilson, J., Brown, R., Mireles Camey, J., Doktycz, C., Perry, M., Buitrago, G.C., 2025. Using the critical path method (CPM) for evaluating allocation potential of temporary housing units. Journal of Housing and the Built Environment 40, 1113–1125. https://doi.org/10.1007/s10901-025-10196-z

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Pham, V.H.S., Nguyen Dang, N.T., Nguyen, V.N., 2024. Achieving improved performance in construction projects: advanced time and cost optimization framework. Evol. Intell. 17, 2885–2897. https://doi.org/10.1007/s12065-024-00918-7

Planning and Scheduling of Project using Microsoft Project (Case Study of a Multistory Building in India), 2015.

Practice standard for scheduling, 2011. . Project Management Institute.

Ramadhani Putra, H., Oetomo, W., 2024. TIME AND COST ACCELERATION ANALYSIS USING CRASHING METHOD (CASE STUDY: TANJUNG UNCANG JETTY CONSTRUCTION PROJECT BATAM CITY). INTERNATIONAL JOURNAL ON ADVANCED TECHNOLOGY 3.

Raranta, M.E., Manoppo, F.J., Malingkas, G.Y., 2025. Implementation of the Critical Path Method (CPM) in Web Applications for Project Scheduling with Python Programming.

Rivera, A., Le, N., Kapsikar, K., Kashiwagi, J., Alhammadi, Y., 2017. 53 rd ASC Annual International Conference Proceedings Identifying the Global Performance of the Construction Industry.

Sari Dewi, S., Permata Sari, T., Agustiarini, E., Lily, E., 2025. ANALYSIS OF TIME COST TRADE-OFF APPROACH ON CRITICAL PATH METHOD TO ACCELERATE CONSTRUCTION PROJECT COMPLETION, Journal of Mathematical Sciences.

Susanti, R., 2020. Cost overrun and time delay of construction project in Indonesia, dalam: Journal of Physics: Conference Series. Institute of Physics Publishing. https://doi.org/10.1088/1742-6596/1444/1/012050

Tayefeh Hashemi, S., Ebadati, O.M., Kaur, H., 2020. Cost estimation and prediction in construction projects: a systematic review on machine learning techniques. SN Appl. Sci. https://doi.org/10.1007/s42452-020-03497-1

Titarenko, R., Titarenko, B., 2024. Challenges Based on Process Approach Exploration of Project Cost Management Challenges Based on Process Approach 1, Exploration of Project Cost Management.

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Trauner, T.J., Manginelli, W.A., Lowe, J.S., Nagata, M.F., Furniss, B.J., 2009. Project Scheduling. Construction Delays 1–23. https://doi.org/10.1016/B978-1-85617-677-4.00001-5

Vanhoucke, M., 2016. Integrated Project Management Sourcebook A Technical Guide to Project Scheduling, Risk and Control.

Vivaldy, 2018. ANALISIS PERCEPATAN PROYEK DENGAN METODE TIME COST TRADE OFF PADA PEKERJAAN PONDASI TIANG PANCANG PROYEK MAKASSAR NEW PORT - PAKET D.