Exponent®
Engineering & Scientific Consulting

Lamis El Didi

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Professional Profile

Ms. El Didi is a Principal with Exponent's Construction Consulting Practice where she applies her experience and expertise in all phases of construction projects to advise clients on a range of topics from organizational assessments, risk assessments, audits, compliance, and governance to project, program, and portfolio management and controls.

Ms. El Didi assembles and manages multidisciplinary teams to solve the complex engineering, science, regulatory, and business issues facing utility clients. She advises utility clients throughout the entire capital investment and execution process from asset strategy, planning, project development, and investment plan development to work plan development, project execution, and change control. She assists clients with developing their multi-year, multi-million-dollar Transmission and Distribution project portfolio investment plan in alignment with asset strategy and turn it into an executable work plan, including defining the Key Performance Indicators (KPIs) and developing the reporting framework to facilitate the evaluation of work progress, identification of execution risks, development of mitigation strategies, and improve forecasting and achieving the annual budgets. She leads project business case development, portfolio scenario planning, resource balancing sessions, and unit cost and schedule benchmarking. She also assists with the executing and managing large scale capital projects and programs, including managing scope, schedule, cost, and risk, developing processes and effective reporting, and providing stakeholder coordination, and contract management. Ms. El Didi also leads data improvement initiatives that identify, collect, improve, and incorporate critical data to better inform the risk algorithms and enable predictive risk intelligence. She also provides project risk analysis services such as probabilistic scheduling, Monte Carlo simulations, and schedule and cost risk assessments.

Additionally, Ms. El Didi is experienced in the analysis of various types of construction claims for mediation, arbitration, and litigation. Her experience includes the development, analysis, and defense of construction claims related to schedule and cost overruns.

Prior to Exponent, Ms. El Didi was a contract administration and proposals engineer at Dar Al Handasah in Cairo, Egypt, where she assisted in the coordination of all contractual matters on projects such as Ritz Carlton in Cairo and in the development of technical and financial proposals to clients overseas, including Al Haramein High Speed Railway Project in Saudi Arabia. Ms. El Didi was also a management consultant at Booz & Co (now Strategy&) in Cairo, Egypt and Dubai, UAE, working on transportation projects in the region.

Academic Credentials & Professional Honors

M.S., Engineering Project Management, University of California, Berkeley, 2012

B.S., Construction Engineering, American University in Cairo, Egypt, 2010

Prior Experience

Contract Adminstration & Proposals Engineer, Dar Al Handasah, 2010-2011

Analyst, Booz&Co, 2009-2010

Professional Affiliations

Western Energy Institute (WEI)

The Association for the Advancement of Cost Engineering International (AACEi)

American Society of Civil Engineers (ASCE)

Project Management Institute (PMI)

Languages

Arabic

Publications

El Didi L, Bomba S, Ayers A. Adapting data management structures to improve performance in post-disaster scenarios (TCMA-3462). AACE International Conference and Expo, Virtual, 2020.

El Didi L, Bomba S, Ayers A. Data analytics to drive reporting and insights for timely decisions and improved business performance (TCMA-3054). AACE International Conference and Expo, New Orleans, LA, 2019.

El Didi L, Bomba S. Benchmarking and predictive analytics to improve estimates, forecasts, and performance measurement (EST-2881). AACE International Conference and Expo, San Diego, CA, 2018.

Presentations

El Didi L, Hung W, Stefanaki A, Giggy D. Common construction project issues and project, program, and portfolio management. Guest Lecturer, Stanford Civil Engineering Master's Program, April 2022.

El Didi L, Glassman J. Data-Driven Business Transformations to Enable Enterprise-Level Insights, Utility Analytics Summit Webinar, May 2021.

El Didi L, Paulsen S. Litigation risk and exposure from extreme weather events, DRI Webinar, March 2021.

El Didi L, Griffith M, James B, Marquardt A, Andino B, Ly M. High Wind Warning: A Risk-Based Approach to Electric Infrastructure Safety, WEI Webinar, July 2020.

El Didi L, Bomba S, Athanasopoulou, K. Data analytics to drive reporting insights for timely decisions and improved business performance, AACE Western Winter Workshop, South Lake Tahoe, CA, 2019.

El Didi L, Hung W, Gabbard G, Butler C. Benchmarking and predictive analytics to improve estimates, forecasts, and performance evaluation, WEI Business Analytics, San Francisco, CA 2018.

El Didi L, Bomba S, Otieno L. Tackling change implementation with a collaborative approach. CMAA National Conference and Trade Show, Las Vegas, NV, 2018

El Didi L, Bomba S. Benchmarking and predictive analytics to improve estimates, forecasts, and performance measurement (EST-2881). AACE International National Conference and Expo, San Diego, CA, 2018.

El Didi L, Ritti J, Hung W. How to manage a troubled project, AACE Western Winter Workshop, South Lake Tahoe, CA, 2016.

El Didi L, Ritti J. Common construction project issues and project portfolio management. Guest Lecturer, UC Berkeley Engineering Master's Program, April 2015.

El Didi L, Ritti J, Hung W. Portfolio Management, AACE Western Winter Workshop, South Lake Tahoe, CA, 2015.

El Didi L, Ritti J, Nelson R. Portfolio Management, AACE Western Winter Workshop, South Lake Tahoe, CA, 2014.

Project Experience

Assisted utility client in managing and performing their Climate Adaptation Vulnerability Assessment (CAVA) project, including identifying Transmission and Distribution assets with greatest risk to climate hazards, developing mitigation options to address the vulnerabilities, and providing long-term goals for adapting to climate risks. The results of this study enabled the utility to incorporate climate change adaptation into its asset strategy, planning, and operations. Specific aspects of climate change that were addressed in this project include ambient temperature increase, sea-level rise, wildfire ignition, changes in average annual precipitation, increased extreme precipitation events, changes in snowpack, increased drought conditions, subsidence, and cascading impacts.

Performed a pre-fire season audit of a utility's Public Safety Power Shutoff (PSPS) processes to identify potential gaps and improvements.

Assisted a utility's Enterprise Risk Management group with developing risk strategies related to risk taxonomy, risk tools, and recommended use of risk tools, including fault tree, event tree, decision tree, bow-tie analysis, risk matrix, Failure Modes and Effects Analysis (FMEA), Quantitative Risk Assessment (QRA), Probabilistic Risk Assessment (PRA), Monte Carlo simulation, and sensitivity analysis.

Assisted a utility client in California with the program management and execution of their Wildfire Mitigation Plan (WMP) commitments, including the installation of additional automated devices to enable sectionalizing of the grid and reduce the impact of Public Safety Power Shut-off (PSPS) events; and the replacement of equipment in high fire threat areas that creates ignition risks.

Assisted utility client with the development of the data management, process workflow, reporting, and mapping process and tools to support their fire rebuild programs including the rebuild of hundreds of miles of the electric distribution system underground and replacing hundreds of miles of damaged natural gas lines.

Provided business case development support for a utility's System Hardening program, which includes overhead system hardening, undergrounding and removal of overhead lines in high fire threat or buffer zone areas.

Provided program management oversight of a utility's distribution operations Work Requested by Others (WRO) projects portfolio, which is triggered by customer requests. The projects' scope included relocating of existing electric facilities and/or undergrounding of existing overhead electric facilities. Program management activities included customer contact, and managing the design and engineering, job cost

estimation, contract preparation and administration, billing, construction, third-party inspection, and facility mapping tasks.

Conducted GIS asset data causal evaluations associated with Corrective Action Plans (CAPs), provided training to the client's team, and assisted with process development and improvements for a utility's GIS Electric Asset Data Management & Improvement team.

Performed an audit to review and validate a utility's System Hardening miles and spans, records, and as-builts and managed the resolution of closing the findings.

Provided program management support for a utility's Distribution Operations Capacity and Reliability programs including managing the scope, financials, schedule, work plan, and resources, driving stakeholder coordination and communication to facilitate work between the different dependency groups (permitting, land, environmental, joint pole, FAA, etc.), and providing reporting and visibility into the progress and potential risk areas of the programs.

Developed a user interactive tool for a utility's Distribution Operations projects portfolio that gathers data from multiple disparate sources, including offline trackers, Share Point lists, existing SQL databases, and systems of records (i.e. SAP and P6) to provide a central transparent source of truth for the team to collaborate and make timely data-driven decisions. The views/tables developed in the tool are key inputs to the project delivery organization's reporting providing the team and leadership with status and performance updates. Led the development of the workflows and change management efforts for this project.

Led a multi-year data improvement initiative for the Transmission Integrity Management Program within a utility's Gas Operations, that identified, collected, digitized, prepared and delivered critical historical documents and datasets for incorporation in GIS to better inform the utility's risk algorithm and enable predictive risk intelligence.

Led the Governance and Program Controls on a $3B portfolio of large load interconnection projects, including the Caltrain Electrification, California High Speed Rail, San Jose Redevelopment, and Bart Extension for a large utility and stood up a governance organization to ensure compliance with the customer agreements, including developing the organizational structure, roles & responsibilities, and processes and procedures. Also supported the federal and state audits of the projects.

Developed a unit cost benchmarking tool for electric transmission and substation projects by compiling an actual cost database capturing project scope, cost categories, and project specific factors and developing a unit price database to be used as an estimate benchmarking tool to provide estimates for future projects early on in the initiation phase for portfolio planning purposes, check estimates for inflight projects, cost forecast validation, and a benchmark for bid evaluations. The tool also provided insights into cost drivers and trends and identified opportunities for efficiencies.

Performed documentation and records reviews and validation of a utility's Cross Bore Inspections Program to ensure records are traceable, verifiable, and complete, assessed compliance with the Distribution Integrity Management Program's procedures, and evaluated the effectiveness of the procedures.

Provided risk analysis services such as probabilistic scheduling, Monte Carlo simulations, and schedule and cost risk assessments, on large projects including Silicon Valley Berryessa BART Extension, Transbay Terminal, and Embarcadero-Potrero Substation Projects in the Bay Area.

Established a repeatable process that produces and manages an executable, integrated multi-year project portfolio, including managing the project development phase for the new projects. Managed a large team of engineers and contractors to scope new electric transmission and substation projects, including developing schedules and forecasts that were used to support setting a multi-year budget.

Analyzed and reviewed project's schedules and forecasts, prepared presentations and dashboards for the client's senior leadership and organization meetings, reviewed resource utilization regularly and proposed recommendations, and assisted the client with setting the annual budget and forecast and resource balancing.

Developed and updated complex resource-loaded schedules for multi-million-dollar capital electric transmission and substation projects, performing analyses on schedule progress, evaluating and tracking monthly cash flow, and developed reporting on the project overall health.

Developed major electric transmission project's business cases by building resource-loaded schedule scenarios, analyzing schedule impact on the project cost, exploring opportunities for schedule and cost savings, and building a quantitative risk register.

Devised an Earned Value Management approach tailored to the client's needs and supported its implementation.

Developed a detailed analyses of project issues, delays, and costs, built daily as-built schedules and databases, and analyzed as-planned and as-built schedules to determine entitlement and allocate responsibilities for schedule delays and cost impacts for a contractor on multiple university projects in Hawaii.

Prepared time impact analyses to quantify construction delays on a large offshore oil development project.

Advisory Appointments

Stanford Construction Institute (SCI), Board Member, 2022

288 Pacific HOA, Board Member, 2022