



Frederick Kolano, FSAVE, CVS-LIFE
Vice President

Qualifications

Fred Kolano is an industrial engineer with 25 years of experience in engineering, manufacturing, and value management. This base is a valuable source of hands-on experience that is very useful in leading Value Engineering studies. He has led value engineering studies and training for government and industrial clients, and has facilitated many Value Engineering improvement studies of technical facilities and processes. His broad financial background is essential to guiding individuals through cost savings calculations.

Mr. Kolano has been an expert facilitator of hundreds of team building sessions, issues and conflict resolution meetings and retreats. Team size has ranged from five to upwards of 40 individuals. He has demonstrated experience in facilitating groups through intense problem solving workshops with confidence and skill. He is highly skilled in verbal presentations, and numerous computer applications. Mr. Kolano's value engineering assignments have included facility upgrades and process improvements in the chemical and aerospace industries, environmental restoration and waste management project design, transportation facilities, and management processes.

Mr. Kolano also has considerable management experience. He has used this to effectively understand both the management and subject matter expert viewpoints to quickly build individual rapport and team synergy. He has served as manager, lead and supervisor in small and large organizations.

Education

MBA, Industrial Engineering, West Virginia University, 1977
B.S., Industrial Engineering, West Virginia University, 1970

Registration

Certified Value Specialist, Life – No. 900503 - SAVE International

Employment Record

Value Management Strategies, Inc. – (2001 – present) Sr. Value Engineer
WASTREN, Inc. – (1996-2001) Information Support Manager, Senior Compliance Specialist
Waste Management (RUST Geotech), Inc. – (1986-1996), Senior Value Engineer
CalTron Corp. – (1984-1985), Controller
Union Carbide Corporation – (1970-1983), Plant Controller, Business Analyst, Production Control Engineer, Department Lead, Industrial Engineer

Professional Affiliations

SAVE International:
♦ Standards and Resources, Director 2003 – Present
♦ Certification Board, CVS Director, 2000-2003
♦ National Director Honors and Awards, 1996-1999

Representative Experience

Fred Kolano has performed as a Value Engineering Team Leader (VETL) and Training Workshop Instructor in many fields, including manufacturing, industry, and construction. He has conducted over 250 studies in the last 20+ years for public agencies and industrial organizations such as:

- ◆ U.S. Naval Facilities Engineering Command, Pacific Division
- ◆ U.S. Army Engineer District, Alaska
- ◆ California Transportation Department (CALTRANS)
- ◆ Colorado Department of Transportation
- ◆ U.S. Department of Energy (Los Alamos, NM; Grand Junction, CO; Oak Ridge, TN; Idaho National Engineering and Environmental Laboratory, ID; Rocky Flats, CO and West Valley, NY)
- ◆ U.S. Army, Communications and Electronics Command (CECOM)
- ◆ Environmental Chemical Corporation
- ◆ BP Amoco Petroleum Corporation
- ◆ Texaco Corporation
- ◆ Pratt Whitney
- ◆ Allied Signal
- ◆ Condea Vista Chemical Company
- ◆ Delphi Automotive Systems
- ◆ Sikhorsky Aircraft Corporation

VALUE ANALYSIS/VALUE ENGINEERING PROJECT STUDIES

HIGHWAY AND TRANSIT PROJECTS

California Department of Transportation

- ◆ D-4 Highway 1/Calera Parkway
- ◆ I-5 Lane Reconstruction, Kern County, CA
- ◆ I-5 Pavement Rehabilitation Near Lake Hughes Parkway, Los Angeles County, CA
- ◆ SR 99 Capital Preventive Maintenance – Galt to Elk Grove, CA
- ◆ I-210 Slab Replacement and Grind, Los Angeles, CA
- ◆ I-5 South Redding Six-Lane Widening, Shasta County, CA
- ◆ Base Line Improvements Over City Creek, City of Highland, San Bernardino County, CA
- ◆ San Mateo County Smart Corridor – US 101 and SR 82, San Mateo County, CA
- ◆ I-15 Pavement Rehabilitation Near Rancho Cucamonga, San Bernardino County, CA I-10 Date Palm Drive Interchange
- ◆ I-10 Palm Drive/Gene Autry Trail Interchange
- ◆ I-15 Bailey Road to Yates Well Road Improvements
- ◆ I-15 Duncan Canyon Road Interchange
- ◆ SR 126 and Commerce Center Drive Interchange (For Newhall Land and Farming Co.)
- ◆ SR39 Improvements
- ◆ I-10 and Cedar Avenue Interchange Improvements
- ◆ SR 91 Eastbound Auxiliary Lane (For OCTA)
- ◆ I-15 Joint Point of Entry
- ◆ I-5 Lomas Santa Fe Interchange
- ◆ I-10 Bridge Rehabilitation
- ◆ I-405 Northbound Auxiliary Lanes
- ◆ LA-10 Pavement and Ramp Rehabilitation
- ◆ Freman Gulch Segments 1 and 2
- ◆ SR 99 Tulare to Goshen Six Lane
- ◆ Weedpatch Four Lane
- ◆ LA-710 Improvements
- ◆ I-580 Pavement Rehabilitation
- ◆ I-5 PCC with RSC Pavement Rehabilitation
- ◆ SR 99 Goshen to Kingsburg Six Lane
- ◆ US 395 High Point Curve Correction
- ◆ US 101 and Hampshire Road Interchange Improvements
- ◆ SR 91 Long-Life Pavement Rehabilitation
- ◆ US 101 Last Chance Grade Roadway Stabilization
- ◆ I-680 Contra Costa County Auxiliary Lanes Project
- ◆ I-5/Magic Mountain Parkway Interchange – Phase II (For Newhall Land and Farming Co.)
- ◆ I-5/Hasley Canyon Road Interchange (For Newhall Land and Farming Co.; Caltrans 2003 VA Study of the Year)
- ◆ US 101 Eureka to Arcata Corridor Improvements
- ◆ Madera County Route 99 Fairmead Interchange
- ◆ I-80 Capacity Improvements
- ◆ SR 138 Widening, District 7
- ◆ SR 138 Truck Climbing Lanes, District 8
- ◆ SR 134 Hollywood Way Intersection
- ◆ Sherwin Summit Rehabilitation
- ◆ SR 101 Auxiliary Lanes

- ◆ SR 50 Placerville Operations Improvement
- ◆ Big Lagoon Curve
- ◆ Brawley Bypass, Stage 2
- ◆ SR 84 at Pigeon Pass
- ◆ LA 71 Gap Closure
- ◆ Fairmead Interchange
- ◆ SR 60 Moreno Beach Drive Interchange, Riverside County, CA
- ◆ I-10 Jefferson Street Interchange Reconstruction, Riverside, CA
- ◆ I-10 Cypress Avenue Overcrossing, Fontana, CA
- ◆ 2 HOV Lanes from Redlands to I-10/60 Interchange, San Bernardino
- ◆ I-10 Portola Interchange, Palm Desert, CA
- ◆ LA Upgrade Median Barrier, Los Angeles, CA
- ◆ South Stockton 6-Lane, Stockton, CA
- ◆ SFOBB Maintenance Complex, Alameda, CA
- ◆ SR 99 West Merced Structure Rehabilitation, Merced, CA
- ◆ LA Upgrade Median Barrier I-5, Los Angeles, CA
- ◆ Klamath River Pavement Rehabilitation, Del Norte County, CA
- ◆ SR 4 Tracy Blvd Roadway Improvements, San Joaquin County, CA
- ◆ SR 120 Union Road Interchange
- ◆ Pease Road Interchange, Yuba City, CA
- ◆ Capital Preventive Maintenance, Santa Clara County, CA
- ◆ Install & Widen Existing Median & Shoulders, San Bernardino County
- ◆ Lake 29 Upgrade Expressway, Lake County, CA
- ◆ Fine Bridge Replacement, Del Norte County, CA
- ◆ I-10 Etiwanda Ave to Riverside Ave, San Bernardino County, CA
- ◆ HOV Lanes, Ventura County, CA
- ◆ Mt Vernon Ave Bridge Replacement, San Bernardino, CA
- ◆ Island Park 6 Lane, Fresno County, CA
- ◆ IC on I-15 between Foothill & 4th at Arrow Route, Rancho Cucamonga
- ◆ Vasco Road Realignment, Contra Costa County, CA
- ◆ I-215 & Barton Road Interchange, Grand Terrace, CA
- ◆ 94/125 IC Construct Missing Moves, San Diego County, CA
- ◆ I-10/McNaughton, Coachella, CA
- ◆ Bethel Island Road Bridge Replacement
- ◆ I-680 Pavement Rehabilitation (Alcosta Boulevard to Rudgear Road), Oakland, CA
- ◆ SR 91 Westbound Widening Between SR 56 and I-5, Orange County, CA
- ◆ I-5 Red Bluff Pavement Rehabilitation, Tehama County, CA
- ◆ SR 60 Cold Plane and Rubberized AC Overlay, Los Angeles County, CA
- ◆ SR 165 Wolfsen Road Pavement Rehabilitation, Merced County, CA
- ◆ I-5 Cottonwood Hills Truck Climbing Lane, Shasta County, CA
- ◆ SR 99 Island Park Six Lane, Fresno County, CA
- ◆ I-580 Westbound HOV Lane, Alameda County, CA
- ◆ US 101 Atascadero Rehabilitation
- ◆ I-80 Integrated Corridor Mobility Project, Alameda and Contra Costa Counties, CA
- ◆ Dr. Fine Bridge Replacement, Del Norte County, CA
- ◆ Riverside Avenue and UPRR Grade Separation, Riverside, CA
- ◆ Construct New Interchange Near Mecca at SR 195, Riverside County, CA
- ◆ Feather River Bridge Seismic Retrofit, Oroville, CA

**Colorado Department
of Transportation**

- ◆ US 160 East of Durango, CO
- ◆ Powers Boulevard Environmental Assessment, Colorado Springs
- ◆ I-25 Colorado Springs Cimarron and Bijou Interchanges
- ◆ I-25 Six Mile Segment North of State Hwy 52
- ◆ Snowmass Canyon Design Improvements
- ◆ I-25 Trinidad Interchanges
- ◆ I-25 and Broadway Interchanges Denver, CO

**ENVIRONMENTAL FACILITIES, WATER AND
WASTEWATER TREATMENT PLANTS**

City of New York

ECC, Inc.

- ◆ Brookfield Avenue Landfill Remediation
- ◆ Columbus Closure Project
- ◆ Massachusetts Military Reservation Proposal
- ◆ Pease and Loring Air Force Base Proposals
- ◆ US Air Force Environmental Center for Environmental Excellence HERC Sample Task
- ◆ New Orleans Debris Removal
- ◆ DOE Hanford Environmental Remediation Disposal Facility
- ◆ Replacement Water Treatment Plant Wyckoff/Eagle Harbor Superfund Site Proposal

**Department of Energy–
Grand Junction, CO**

- ◆ DuWald Steel Environmental Remediation Plan
- ◆ Monticello Environmental Remedial Action Plan
- ◆ Radiological Surface Decontamination Process
- ◆ American Auto Salvage Remediation Plan
- ◆ Grand Junction Projects Office Remediation Plan
- ◆ Mercury Mobile Treatment Unit Design

MILITARY FACILITIES

**U.S. Army Corps
of Engineers,
Alaska District**

- ◆ Hangar 15 and Shelter 17 Programming Charrette
- ◆ Truck Loading Complex Design Charrette, Ft Richardson, AK
- ◆ Mobility Test Complex, Donnelly Training Area, Ft. Wainwright, AK (Awarded Commander's Coin)
- ◆ Master Plan MILCON Programming Charrette, Fort Richardson, AK

**Pacific Division,
Naval Facilities
Engineering Command
Tetra Tech**

- ◆ Fena Water Treatment Plant Upgrade, Guam
- ◆ PRSOC Options Study, Oahu, HI
- ◆ P192 Multi-Product Refinery Interface, Pearl Harbor, HI
- ◆ Theater Vehicle Maintenance Facility at Kandahar, Afghanistan

CORPORATE/PUBLIC FACILITIES

City of New York

- ◆ HHC/Elmhurst Hospital Center Revenue Enhancement
- ◆ Water Demand Flow Model

**Department of the
Interior National Park
Services**

- ◆ Olmsted Point Rehabilitation, Yosemite National Park, CA



U. S. DEPARTMENT OF ENERGY

- Idaho National Energy Laboratory**
 - ◆ Electrical Distribution System
 - ◆ Pit 9 - Stage II Design Validation
 - ◆ Plant Compressed Air Capacity Design

- Oak Ridge National Laboratory**
 - ◆ Oak Ridge Y-12 Alpha 4 Decommissioning Plan
 - ◆ Oak Ridge Integrated Mercury Remediation Plan

- Los Alamos National Laboratory**
 - ◆ Los Alamos Nuclear Materials Storage Facility Design
 - ◆ Mixed Waste Receiving and Storage Facility
 - ◆ Los Alamos Radiologic Liquid Waste Treatment Facility
 - ◆ MST Maintenance Operations Process Improvements

- Grand Junction Office**
 - ◆ Monticello Remedial Action Plan Design Alternatives
 - ◆ Mixed Waste Receiving and Storage Facility
 - ◆ Detox Process Design
 - ◆ Packed Bed Reactor Design
 - ◆ Hydro Thermal Process Design
 - ◆ Reactive Metals Treatment Unit
 - ◆ Explosive Materials Remediation Process Design
 - ◆ Streamlining the Monticello VP Remediation Process

- Rocky Flats, CO**
 - ◆ Property Tracking System Improvements

- Various Clients & Projects**
 - ◆ West Valley Demonstration Project, NY
 - ◆ Liquid Glass Level Detection Process
 - ◆ Radioactive Waste Canister Rotation Design
 - ◆ Scaled Vitrification System Design

MANAGEMENT PROCESSES/PROCEDURES

**Grand Junction Office,
U. S. Department
of Energy**

- ◆ ECClean Thermal Desorption Process
- ◆ RDC Completion Report Process
- ◆ Post-UMTRA Program Environmental Management Plan
- ◆ Program Planning Organization Scheduling and Estimating Process Improvements
- ◆ Scheduling Support System Improvements
- ◆ RUST Geotech Site Drawing Management System
- ◆ Streamlining the UMTRA Process
- ◆ Company Manual Revision Process
- ◆ Company Site Access System
- ◆ Hazard Identification and Health and Safety Plan Process
- ◆ Micro Computer Accountability Tracking System
- ◆ DOE Headquarters Progress Tracking System
- ◆ Unit Price and Material Quantity Tracking System
- ◆ Office Moves and Space Allocation Process
- ◆ Health and Safety Records Management System
- ◆ Field Sample Collection and Data Handling Process
- ◆ Management Compliance System
- ◆ Computer Resources Acquisition Process
- ◆ Field Bore Hole Location Process
- ◆ Commingled Waste Investigation Process
- ◆ Health and Safety Support for the Construction Process
- ◆ Acquiring External Engineering Support Services
- ◆ Reducing Indirect Overhead Costs
- ◆ Improving Budgeting and Planning Accuracy
- ◆ Micro Computer Support Process
- ◆ Cost Estimating Process
- ◆ Acquisition of External Contract Services Process
- ◆ Radiological Assessment Procedures Process
- ◆ Micro Computer Acquisition Process
- ◆ Completion Report Process
- ◆ Monticello Vicinity Property Construction Process
- ◆ Monticello Vicinity Property Hot Spot Remediation Process
- ◆ Chemical Inventory System
- ◆ Improving the Procurement Purchasing Process
- ◆ Idaho Office Baseline Risk Assessment Process

Baker Hughes Solutions

- ◆ World Wide Business Development Process Improvements

ECC, Inc.

- ◆ Direct Fired Thermal Desorption System
- ◆ Management of Captured Enemy Ammunition
- ◆ Iraq Construction Quality, Amman, Jordan
- ◆ FT Drum Schedule Enhancement, Ft. Drum, NY
- ◆ Afganistan Program Enhancement, San Antonio, TX
- ◆ Kadina Military Housing, Burlingame, CA
- ◆ DHS Tactical Infrastructure, San Antonio, TX
- ◆ Electrical Hardening Project, Guam Naval Base
- ◆ Construction Submittal Process
- ◆ Baghdad Program Office Enhancement
- ◆ Cornell-Dubilier Electronics Superfund
- ◆ Kadena AAFES Shopping Complex
- ◆ Lackland AFB New Headquarters (Building 171 Rehabilitation)
- ◆ Renovate Hickam AFB Building 1102 for Headquarters Use, Phase 1
- ◆ Mead Former NOP Project Optimization
- ◆ Rocket Disposal Process Criteria Selection
- ◆ CSTC-A Kandak Construction Enhancement

MANUFACTURING AND INDUSTRIAL

BP Amoco Corporation

- ◆ Polyethylene Plant Design Improvements (France)
- ◆ PTA R&D Project Selection
- ◆ LAO R&D Project Selection
- ◆ Cooper River PTA Debottleneck
- ◆ PIA Technology Selection
- ◆ Geel PTA Debottleneck (Belgium)

Pratt Whitney Corporation

- ◆ Axiam Jet Engine Assembly Cycle Time Reduction
- ◆ F-16 Hub Assembly Improvements
- ◆ JT6000 Rotor-Hub Assembly
- ◆ Titanium Product Paperwork Flow Improvements
- ◆ Nickel Product Paper Work Flow Improvements
- ◆ Supplier Management System Redesign
- ◆ Chemical Division Data Processing System Improvements

Delphi Automotive Corporation

- ◆ Alternator Cost Reduction
- ◆ Electric Power Steering Design
- ◆ Hydraulic Power Steering Redesign

Sikhorsky Aircraft Corporation

- ◆ Helicopter Emergency Flotation Design

UNIQUE VALUE MANAGEMENT APPLICATIONS

Fred Kolano has facilitated numerous studies applying the value management techniques to focus on management systems and issues. These projects include:

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| U. S. Department of Energy | ♦ Mr. Kolano has facilitated over 30 Value Engineering efforts for the Department of Energy. These projects were initiated to improve environmental restoration and waste management designs and related construction activities. The main purpose was to improve value, identify process or design changes, and implement proposals that result in cost savings for the government. These studies involved representatives from numerous organizations such as the Environmental Protection Agency, state environmental regulators, the DOE, and technical consultants. |
| Pratt Whitney Corporation | ♦ Mr. Kolano facilitated several VE studies that each evaluated one major jet engine part to find ways to improve the reliability and manufacturing processes. Major improvements in streamlining a cumbersome paperwork flow in the supplier chain resulted in a new tri-party agreement. A highly accurate vertical assembly machine was evaluated to reduce the jet engine assembly time by approximately 30 percent. |
| Delphi Automotive | ♦ Mr. Kolano facilitated three studies for Delphi that involved improvements to power steering assemblies. One team came up with a recommendation that was thought to be worthy of a patent. These studies were conducted with specific discipline teams (e.g.; assembly, mechanical design, electrical design, etc.) on each study that would evaluate a major product. The teams would review each other's proposals using a selection menu to confirm the best proposals for value improvement. |
| BP Amoco | ♦ Mr. Kolano co-facilitated several technology selection VE studies. These were conducted to ensure that the business units would be the leaders in their respective markets. The recommendations were classed into short, mid, and long term projects. Debottlenecking studies would find ways to increase capacity of existing facilities to meet unprecedented market demand for products. Recommendations to enlarge vessels, upgrade equipment, and repipe major processing facilities resulted in millions in savings and improved sales. Several team building studies using Value Engineering as a basis were conducted that significantly improved interpersonal relations. In addition, several construction process changes were identified by the newly appointed contractors. |
| ECC, Inc. | ♦ The facilitation of proposal enhancement by using Value Methodology (VM) has been pioneered by Mr. Kolano. VM is used to enhance environmental restoration proposals that ECC and partner organizations are pursuing. The study VM teams are able to identify the key strengths of the organization that should be included in the proposals. Also, key strengths that set ECC aside from the competition are also identified and included in the proposals. Examples are: <ul style="list-style-type: none">◊ Fairchild Air Force Base Runway Proposal Enhancement◊ Massachusetts Military Reservation (MMR) Wind Turbine Proposal Enhancement◊ AFCEE Afghanistan Kandak Construction Proposal Enhancement |