

ALFATECH

INNOVATIVE IDEAS | INTEGRATED SOLUTIONS | SUSTAINABLE PARTNERS

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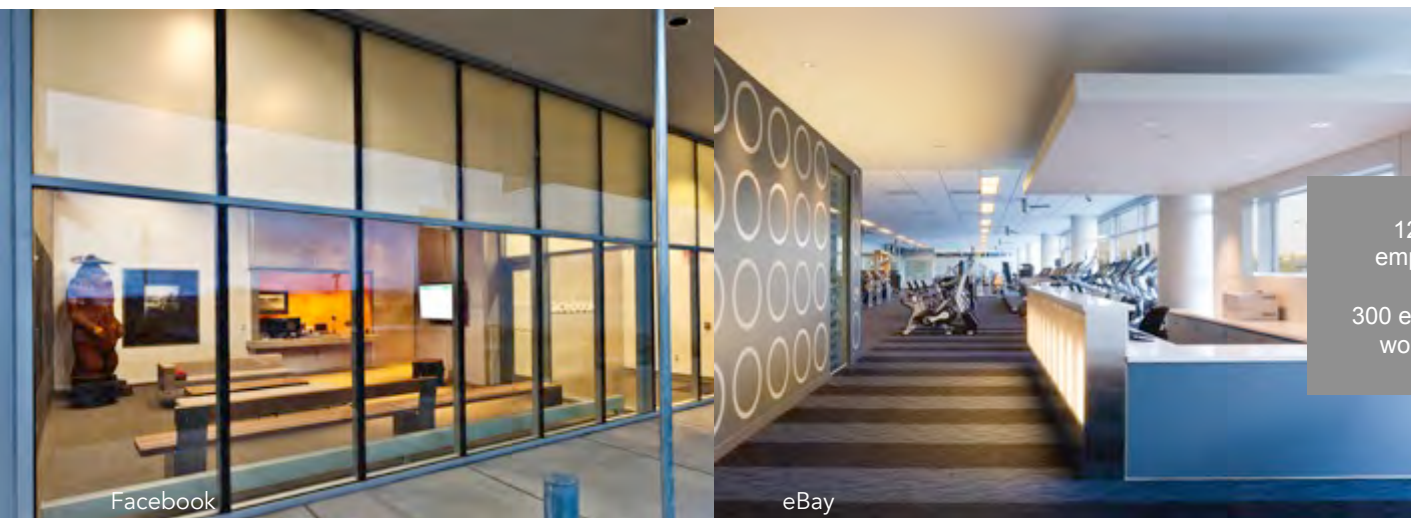


01

OVERVIEW

Profile

PROFILE



125 US employees
300 employees worldwide

AlfaTech has built its reputation on providing the most innovative and sustainable engineering solutions for data centers and mission critical projects. The firm has become a leader in the industry over the past decade and has completed project for numerous high profile clients.

Our presence is throughout California, and internationally. Our clients include numerous large multi-national firms, many ongoing clients we've been serving for years, many of which include data center projects.

We strive to provide intelligent and innovative strategies starting with project inception, in order to provide maximum benefit to our clients during the entire development process. Our team provides the most appropriate engineering design solutions—the most highly efficient and cost effective--and promotes the greatest possible return on investment for our clients.

Our goal is to build the most dynamic relationships, be attentive to the needs of our clients and partners, and be true team players. With this mindset, we've built a stellar list of clients.



- United States:*
 - San Francisco
 - San Jose
 - Los Angeles
 - Atlanta
- International:*
 - Dublin
 - Singapore
 - Sydney
 - Queensland
 - Hong Kong
 - Shanghai
 - Taipei
 - Abu Dhabi
 - Dubai

CLIENTS

3M Company
 AARP
 Abbott Biotherapeutics
 Abbott Laboratories
 Abbott Vascular Inc
 Abgenix
 Abt Associates Inc
 ACCO Engineered Systems
 Adaptec Inc
 AOC
 Adobe Systems
 Advanced Micro Devices Inc
 Advantest America, Inc.
 Advent Software, Inc.
 Aetna Inc
 Affymetrix
 Agilent Technologies Inc
 Airgas
 Akamai Technologies
 Alcoa Inc
 Allen, Matkins et al
 Alliance Bernstein LLP
 Alta Bates Health System
 Altera Corporation
 Alum Rock School District
 Alza Corporation
 Amazon/Lab 126
 Ambiance Associates
 Ambiance Interiors Pvt Ltd.
 Amdocs
 American Express Company
 Amgen Inc
 Amprius
 Amstein + Walther
 Anixter
 Applied Dynamics Inc
 Applied Materials
 Atmel Corp
 Autodesk Inc
 Avaya
 Avid Technology Inc
 Avidex
 BAE Systems Inc
 Bank of America
 Banuazizi Architects
 Bayer
 Bechtel Corporation
 Bell, Rosenberg et al
 Berryessa USD
 Bingham McCutchen LLP
 Bio-Rad Laboratories
 BioGenex
 BioMed Realty Trust Inc
 Bloom Energy
 BMC Software
 Booz Allen Hamilton Inc
 Boston Properties
 Boston Scientific
 Bradford Schools Inc
 Brewer, Fraser & Holland
 Brian L. Cochran Associates
 Bristol-Myers Squibb
 Broadcom Corporation
 Broadreach Capital Partners
 Brocade
 Cadence Design Systems
 Cal Pacific Med Center
 California Pacific Orthopedic Sports & Medicine
 CarrAmerica Development
 Chabot Las Positas Community College District
 Charles Schwab
 Chevron
 Children's Hospital Oakland
 Chinese Hospital
 Chiron Corporation
 Cisco Systems Inc
 Citigroup Realty Services
 College of Contra Costa
 College of Marin
 Colliers International
 Computer Associates Int'l
 Compuware
 CoreSite
 Cornell University
 County of Monterey
 County of Sacramento
 County of San Mateo
 County of Santa Clara
 Credence
 CSAA
 CSU Northridge
 Daughters of Charity Health
 Dell
 Delta Products
 Deloitte Consulting LLP
 Desert Troon Companies
 Digital Realty Trust
 Dignity Health
 Dominican Hospital
 Dupont
 East Side Union HSD
 eBay
 Eli Lilly & Company
 El Camino Hospital
 Elsevier Inc
 Emirates National Oil
 Empire State Development
 Equinix
 Equis Corporation
 Ericsson
 Ernst & Young LLP
 Exelixis
 Facebook
 Ferrari Maserati of Silicon Valley
 Fidelity Investments
 Fireman's Fund Insurance
 First Franklin Financial Corp
 Flextronics
 Foundry Networks
 Franklin Templeton Investments
 Genentech
 General Dynamics
 General Electric Co
 General Services Administration
 Genzyme Corporation
 Gilead Sciences Inc
 Goldman Sachs & Co
 Good Samaritan Hospital
 Google
 GSA
 Hayward USD
 Hewlett Packard
 Highland Hospital
 Hitachi America Ltd
 IBM
 Impax Laboratories Inc
 Informatica Corporation
 Intel
 InterMune
 Intuit
 J&W Scientific
 JDS Uniphase Corporation
 John Muir Medical Center
 Johnson & Johnson
 Johnson Controls
 JP Morgan Chase
 Juniper Networks Inc
 Junipero Serra High School
 Kaiser Permanente
 Kasowitz, Benson et al
 Kimpton Hotels
 KLA-Tencor Corp
 Lam Research
 Laney College
 Lawrence Berkeley Lab
 Letterman Digital Arts
 Levi Strauss & Company
 Linear Technology
 LinkedIn
 Lockheed Martin Corp
 Logitech
 Longs Drug Stores
 Los Gatos Saratoga HSD
 Lucas Film LTD
 Marriott International
 Marvell Semiconductor Inc
 Maxim
 McKesson
 Medarex
 Menlo Park City School District
 Microsoft Corporation
 Molecular Devices Corporation
 Monterey Peninsula College
 Morgan Hill USD
 Morgan Stanley Corporation
 Morrison & Foerster LLP
 Motorola
 Mountain View School District
 MW Zander
 NAI Global
 NASA-Ames
 National Semiconductor
 Network Appliance
 Nokia
 Nortel Networks
 Northrop Grumman Corp.
 Novartis
 Novell Inc
 Novellus Systems Inc
 NVIDIA
 Ohlone Community College
 OptiSolar Inc
 Oracle Corporation
 Orchard Properties
 Pacific Bell
 Pacific Gas & Electric
 Panattoni Europe
 Pfizer Inc
 Philips Semiconductor
 Pitney Bowes Inc
 Polycom
 Port of San Francisco
 Presidio Trust
 Price Waterhouse Coopers
 Prudential C.R.E.S.
 Qualcomm
 Queens Medical Center
 RAMBUS
 Raytheon Company
 Rensselaer County IDA
 Riverbed Technologies
 Robert Half International
 Roche Bioscience
 Ross Stores Inc
 Sacramento Municipal Utility District
 Safeway Inc
 Saint Louise Regional Hospital
 Salesforce.com
 Samaritan Medical Center
 Samsung
 San Francisco Center For Economic
 Development
 San Francisco City Hall
 San Francisco Center For Economic
 Development
 San Francisco International Airport
 San Francisco USD
 San Jose Redevelopment Agency
 San Jose State University
 San Mateo Community College
 San Mateo County Office of Education
 Sandia Laboratories
 Santa Clara University
 SAP Labs LLC
 Saratoga USD
 Savvis
 Seagate Technology
 Sequoia Hospital CHW
 Sequoia Union HSD
 Siemens
 Skywalker (Lucas Film)
 SLAC National Accelerator Laboratory
 Solectron Corporation
 Sony America
 Spansion
 Sprint
 SRI International (Stanford Research)
 St. Agnes Medical Center
 St. Francis Memorial Hospital
 St. Joseph Hospital
 St. Mary's Hospital
 Stanford Healthcare & Clinics
 Stanford University
 Stanford University Medical Center
 Stion Corporation
 Stryker Endoscopy
 Stubhub
 Sun Microsystems Inc
 SunPower
 Sutter Health
 Sybase Inc
 Symantec
 Synopsys Inc
 Sysorex
 T-Mobile
 Tencent
 Tesla Motors
 The Gap
 Twitter
 UC Berkeley
 UC Davis
 UC San Francisco
 UC Santa Cruz
 UCLA
 Ultratech
 University of Colorado Hospital
 URS
 Verisign
 Verizon Communications
 Veteran's Administration
 Visa International
 VMware
 Wachovia Bank
 Yahoo



02

OVERVIEW

Services

SERVICES

SUSTAINABILITY

Sustainability Planning (Organizational and Infrastructural)
LEED / Green Building Consulting
Masterplanning
Life Cycle Cost Assessment
Occupant Wellness and Comfort

MECHANICAL ENGINEERING DESIGN

HVAC
Heating Systems Water and Gas
Cooling Systems / Chilled Water
Dehumidification Systems
Contamination Sensitive Areas
Industrial Hygiene Systems
Low Tolerance Temp Control
Title 24 Analysis and Design
Heat Recovery Systems
Central Utility Plants
Air Handlers HVAC System Controls
PLC Programming
Fire Protection and Plumbing

ADVANCED SIMULATIONS

Façade Engineering
CFD / Wind Studies
Wind Studies
Thermal Stratification Studies
Energy Concept Studies

ELECTRICAL ENGINEERING DESIGN

Power Systems
Emergency & Standby Power
Lighting and Lighting Controls
Security Systems
24 / 7 Power Systems (UPS)
Power Monitoring Systems
Toxic Gas Monitoring

ELECTRICAL ENGINEERING DESIGN (Continued)

Graphic Control and Alarm Panels
Grounding and Bonding
Energy Management
Energy Conservation
Fire Alarm Systems
Public Address Systems
Plug Loads Control

DESIGNER LIGHTING

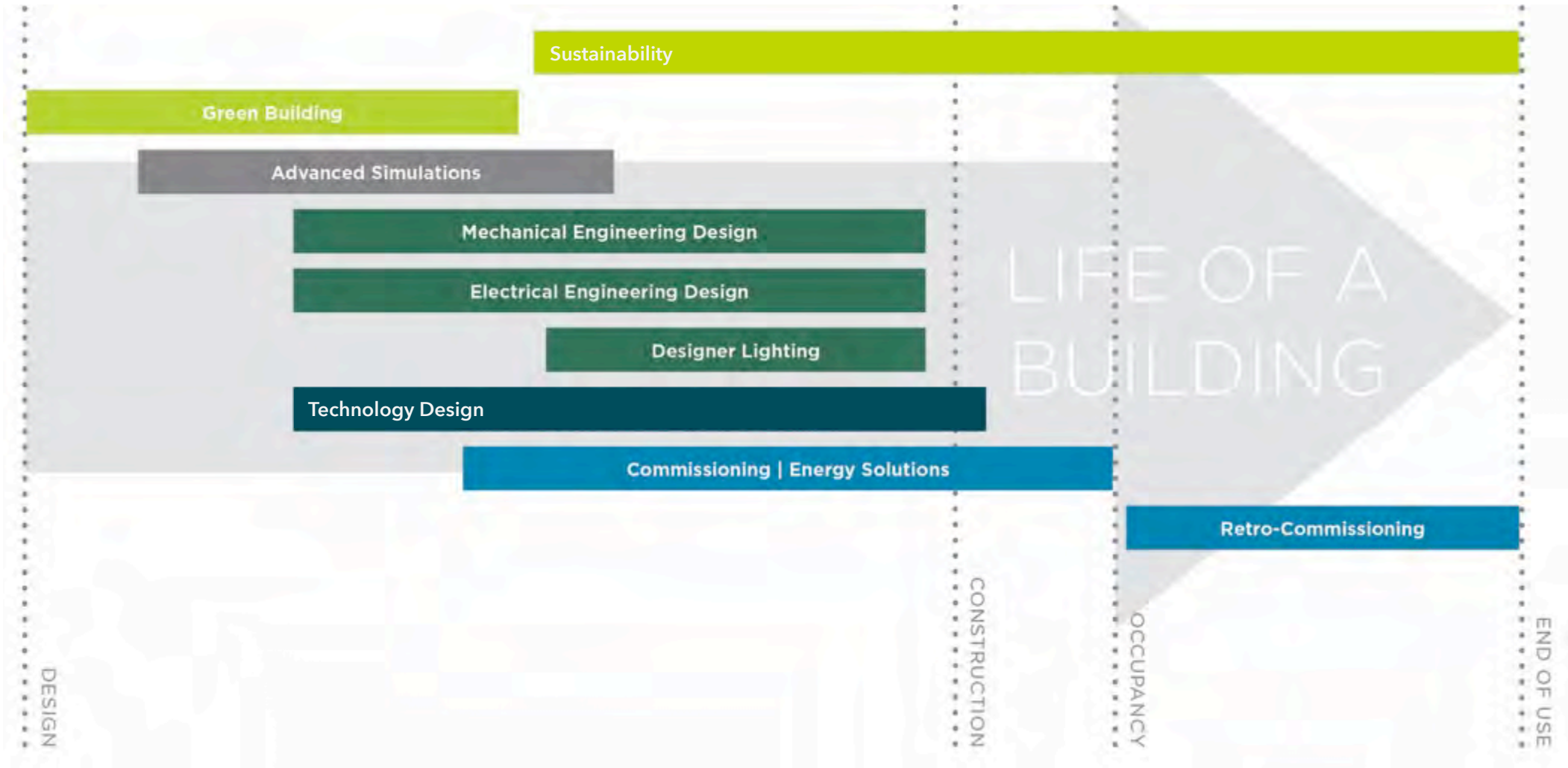
Lighting and Lighting Controls
Lighting Calculations
Customized ROI Calculations
Sustainable Lighting Design
Energy Savings Analysis
Custom Lighting Fixtures
Design for finishes, fabrics and light sources

TECHNOLOGY DESIGN

Low Voltage Design
Security Design
Audio Visual Design
Wireless Design & Modeling
Strategic Consulting
Project Management
Relocation & Migration

COMMISSIONING | ENERGY SOLUTIONS

Early Quantifiable Energy Study
Incentives
Energy Star® Assessments
Retro-commissioning (RCx)
Monitoring Brand Continuous Commissioning (MBCCx)
ASHRAE Level 1, 2 and 3 Energy Audits
Measurement and Verification (M&V) of installed projects
Energy Modeling
Net Zero Energy Budgeting
HVAC/Chilled Water Plant Optimization





03

MISSION
CRITICAL

CONFIDENTIAL CLIENT

Norway, Europe

Type: Data Center

Size: 380,000 SF

AlfaTech is presently engaged in engineering design for 380,000 SF of five data centers (total 140MW) in Norway for two major US corporations and two European companies. Project scope includes state-of-the-art MEP design and is projected to comply with 1.14 PUE.



FACEBOOK – LEED GOLD

Lulea, Sweden

Type: Data Center

Size: Confidential

AlfaTech is providing overall project construction management including on site observation and project tracking and reporting services. In addition to providing overall management of the design build team and on site project tracking services, AT is providing the project basis of design and peer review of the design build team construction documentation to ensure a complete, and consistent design. This peer review effort includes MEP, Telecom and Communications, Architectural, Structural, Civil, Fire Protection, Controls, LEED Consulting, and Life Safety services for this extremely energy efficient Data Center project.

This project represents the third Facebook data center site (in addition to the Prineville site in Oregon, and Forest City site in North Carolina, which is also under AlfaTech project management and design). Facebook desires to achieve LEED GOLD Certification for this building.



MISSION CRITICAL

SAVVIS DATA CENTER

Singapore, Asia

Type: Data Center

Size: 50,000 SF

AlfaTech provided Savvis with architectural space planning and mechanical, electrical, and plumbing engineering and technology services for a data center interior fit out project located in Singapore. IT capacity was anticipated at approximately 3.6MW in a roughly 50,000 SF floor plate. Also included in the project were ancillary office fit-outs for approximately 2,500 SF, including interior design works.



FACEBOOK - LEED GOLD

Prineville, OR

Type: Data Center

Size: 250,000 SF

AlfaTech provided overall design team project management as well as Site Master Planning, Architectural, Structural, Civil, Telecom and Communications, Paging systems, MEP, Fire Protection, Controls, Wind Study, Substation design, LEED Consulting, and Life Safety services for this data center project.

This project involved the site master plan as well as design and construction of two main data center facilities on the site that include a single story (with penthouse air handling equipment and outdoor standby diesel generators). The site also includes a "cold storage" data center facility managed and designed by AlfaTech to provide data storage services to meet the project goals of archive storage at reduced capital costs. These projects achieved LEED Gold certification.



MISSION CRITICAL

FACEBOOK

Altoona, IA

Type: Data Center

Size: Confidential

AlfaTech provided site selection support including multiple designs for alternate sites in the Midwest, followed by overall design team project management as well as site master planning, MEP, Telecom and Communications, Architectural, Structural, Civil, Fire Protection, Controls, Wind Study, LEED Consulting, and Life Safety services for this extremely energy efficient Data Center project. This project represents the fourth Facebook data center site. Facebook targets achieving LEED Gold Certification for the three buildings on this site. The site included design for the on-site substation as well as innovation design adaptations to support critical core IT spaces, addressing the ongoing changes in Facebook requirements.



FACEBOOK

Forest City, NC

Type: Data Center

Size: 270,000 SF

AlfaTech provided site selection support followed by overall design team project management as well as site master planning, MEP, Telecom and Communications, Architectural, Structural, Civil, Fire Protection, Controls, Wind Study, LEED Consulting, and Life Safety services for this extremely energy efficient Data Center project. This project represents the second Facebook data center site (in addition to the Prineville site in Oregon, which was also under AlfaTech project management and design). Facebook achieved LEED Gold Certification for the three buildings on this site.



FACEBOOK

Fort Worth, TX

Type: Data Center

Size: Confidential

AlfaTech provided site selection support services and continues to provide overall design team project management as well as MEP, Architectural, Structural, Civil, Fire Protection, Controls, Wind Study, LEED Consulting, and Life Safety services for this extremely energy efficient Data Center project.

Key design changes to this data center include a redesign of the building arrangement from single data center facilities with support office to a single facility with an office space bridging the equivalent of 2 data center facilities in past projects. In addition to the layout revisions, another major revision to the Core IT spaces was made to address current needs as well as future proofing the space for anticipated technology changes. The MEP system design includes a highly energy efficient design concept divergent from past data center cooling techniques at other Facebook sites.

This project represents the fifth Facebook data center site (in addition to the Prineville site in Oregon, Forest City site in North Carolina, Lulea site in Sweden, and the Altoona site in Iowa) which were also under AlfaTech project management and design services). Facebook achieved LEED Gold Certification for this building.



EQUINIX SV5 – LEED CERTIFIED

San Jose, CA

Type: Data Center

Size: 100,000 SF data center with 40,000 SF support space.

AlfaTech has provided full project management and MEPT design services for this greenfield data center project. The project includes 18MW of total power 14MW of critical power as well as parallel path designs for 5,000 ton chilled water plant utilizing pre-packaged modular chiller plant and full air side economizer air handling solution and an alternate, proprietary, refrigerant based cooling system. This project achieved LEED Certified status.



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