EDWARD TIERNEY

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HIGH-RELIABILITY ORGANIZATION EXECUTIVE

Driving Growth Through HRO Culture, Innovation, & Leadership

High Reliability executive with diverse corporate and entrepreneurial experience in Hi-Tech, manufacturing, and engineered product industries. Energetic, systems engineer with demonstrated ability to drive HRO principles to minimize risks and achieve strategic outcomes by bridging people, processes, and systems. Effective, change agent with a "lead-from-the-front" approach that connects long-term strategic vision to tactical execution across the whole organization, regardless of size.

High Reliability Organizations	Strategy & Culture	Manufacturing & Operations
HRO Culture Development	Strategy Planning & Execution	Contract Management/NPD
Systems, Innovation & Design Thinking	Leadership & Staff Development	Supply Chain Optimization
Quality, LEAN/Six Sigma, & Resiliency	High Growth Environments	Product & Project Mgmt.
Change Mgmt. & Cont. Improvement	Business Dev., Sales, & Go-to-Market	IT, Networks & Digital Systems
Risk Mgmt. & Business Continuity	Culture & Strategy Alignment	Negotiations & Contracts
Disaster Planning& Resilience	Servant Leadership & Just Culture	CapEx & Facilities Planning

"Growing a highly reliable company is ALL about growing people. By establishing a culture that truly reflects a firm's dedication to reliability you establish a commitment to success. You can have the best tools and processes available but still not succeed. When the team believes in itself, everything is possible"
Edward Tierney

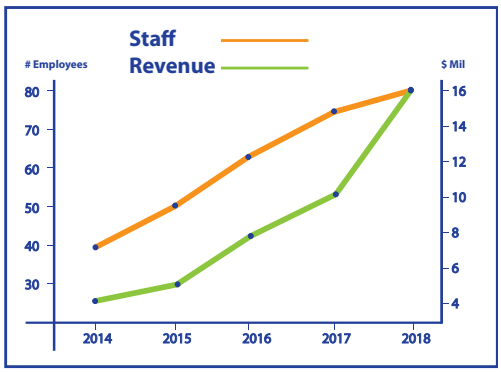
"I wouldn't follow many people into a burning building, but I would follow Edward!"
Justin Reynolds
Leadership Team

- 25+ years adopting, adapting, & implementing high reliability principles, processes, operations, products, applications, and certifications to attain stretch targets & BHAGs.
- Turned around stalled High Reliability manufacturer, quadrupling company revenue to $16M & doubling workforce in 3 years. Achieved AS9100 Rev D/ISO9001:2015 in 6 months. (K-TECH).
- 15+ years success applying and validating the power of high reliability principles to achieve operational excellence and brand credibility in non-traditional industries. (ATTO, Brand Mother).
- Founded, grew, & sold High Reliability engineered products company operating globally in power, oil&gas & industrial environments (ICV).

PROFESSIONAL EXPERIENCE

K-TECHnologies, Inc. — **Vice President & General Manager** — **2015 - 2018**

Senior HRO/Organizational Excellence executive brought in to organize, lead, and grow a 20-year-old Electronics & Electromechanical Contract Manufacturer. Company had plateaued at $4M & 40 employees for previous 8 years. Quadrupled revenue and doubled staff by implementing and living HRO principles. Used full P&L, brand, and operational authority to implement high reliability strategic vision, tactical management, and leadership team.



- **Revenue growth of 332% ($3.7M to $16M)** and 96% staff growth (42 to 80 employees) from 2015 through 2018. Established processes, procedures, and metrics in every department to support additional high-reliability product growth while reducing dependence on "black widow" customers from 75% to 50% of revenue.
- **Owned a High Reliability market niche** with routine back-to-back 100% OTD/100% quality monthly metrics. Created operational, organizational, and market facing development strategies (One Page Strategic Plan/Business Model Canvas) to uniquely position in growth niches such as commercial satellite & space industries.
- **Reduced staff turnover by 80%** through company-wide HRO culture change. Recruited and developed high performance multi-generational (Millennials to Boomers) leadership team through coaching, mentoring, skills development, and LEAN/Six Sigma continuous learning. Drove empowerment and ownership mentality through all staff levels using performance management practices.
- **Executed multiple strategic initiatives** to advance HRO principles across organization:
  - Established performance management-based leadership.
  - Achieved HRO AS9100/ISO9001 Quality Management System certification - 1st company in WNY & 7th in NYS to achieve Revision D status.
  - Drove creation of full-scale digital Contract Management System a.k.a. "K.I.R.A." for sales/customer service/supply chain/N.P.D. along with corresponding QMS processes. Improved risk management, transparency, efficiency, reduced errors, drove customer satisfaction.
  - Sourcing, implementation, and integration of ERP system including internal integration with Contract Management environment tools (i.e. K.I.R.A.). Significant efficiency and improvement gains across organization.

K-TECHnologies, Inc. Cont'd — **Vice President & General Manager** — **2015 - 2018**

- **Positioned company for continued HRO growth** through tactical team and individual projects:
  - Implemented $1.5M in capital investment projects. Upgraded, built, and installed key high-reliability operational tools, systems, and software necessary for growth in all functional areas. Introduced and utilized technology to drive efficiency, communication, and transparency.
  - Implemented highly secure network system to meet DOD HRO security requirements (DFARS 7012/ NIST SP 800-171).
  - Drove evidenced-based decision making through empowerment, collaboration, and training.
  - Oversaw 54,000 sq. ft. facility handling routine preventative maintenance upto full scale construction projects.
  - Implemented state & local economic development funds ($700K) to support staff growth, increase training, and upgrade facilities and equipment.
- **Recognized in WNY region for results:**
  - 5th Fastest Growing Company in WNY (2017)
  - Manufacturing Award - Community Involvement (2017)
  - Best Places to Work recipient (2018)
  - INC 5000 ranked 2675 (2018)

HRO Aspect	Need
Principles	● ● ● ● ●
Processes	● ● ● ● ●
Operations	● ● ● ● ●
Products	● ● ● ● ●
Applications	● ● ● ● ●
Certifications	● ● ● ● ●

Applied HRO Processes & Concepts: HRO 5 Principles, ASQ9001, Continuous Improvement, Agile Development, Statistical Analysis, Systems Thinking, Go-To-Market, Resiliency, Design Thinking

Mini-Case Study (Product/Application): The F-35 Joint Strike Fighter operates in, and is produced in, an HRO environment. For example, the F-35 uses the airframe as an internal fuel tank. It utilizes submerged level sensors to control the aircraft's balance and flight worthiness. The physical environment (submerged in jet fuel), the electronics system (linearity to 10^{-5} in. precision), 5-nines quality and delivery metrics of these sensor systems are a multi-tiered high reliability situation. Due to extreme cost and need to protect human lives, all operations, from design ownership to component procurement to final packaging must operate in a documentable HRO system, including traceable metrics for supply chain, assembly, testing, and customer installation applications. Implemented vision, strategy, processes, and staffing to double throughput with zero loss in reliability.

Brand Mother — **Principal + Co-Owner** — **2008 - 2015**

Implemented High Reliability values and processes in both traditional and non-traditional HRO clients that could not risk failing. By leveraging HRO principles, led diverse organizations through an intensive process to diagnose, design, and implement scalable, workable, interdepartmental practices. Consistent outcomes validated the irrefutable power of high reliability practices to produce results. High reliability principles, practices, and processes were not treated as a siloed operational function of production, but, rather as an integrated approach to holistically lead, manage, and sustain high performance cultures of risk management and continuous improvement.

100% of clients achieved operational excellence that led to brand credibility. Partnered with visionary leaders willing to stretch their organizations to achieve exceptional standards of performance and distinction.

HRO Aspect	Need
Principles	● ● ● ● ●
Processes	● ● ● ● ●
Operations	● ● ● ● ○
Products	● ● ● ● ○
Applications	● ● ● ● ●
Certifications	● ● ● ● ●

Applied Processes & Concepts: HRO 5 Principles, Statistical Analysis, Systems Thinking, Go-To-Market, Resiliency, Design Thinking, Business Model Canvas, Brand Excavation

Mini-Case Study (Product/Application): Brand Mother's broad and deep interpretation of HRO principles uniquely qualified the consulting agency to work with corporate, not-for-profit, and entrepreneurial clients that could not afford to fail. Applying high reliability principles in traditional (healthcare, advanced manufacturing) and non-traditional (education, craft brewing) industries, across large (Beijing Olympics) and small (medical library service) ventures produced measurable results (regulatory standards, M&A buyouts, decreased sales cycle, industry designations, increased revenues, brand credibility, and Best Places to Work awards) that positioned the interests for long term growth and brand credibility.

ATTO Technology, Inc. — **Director – Product Management & Marketing** — **2001 - 2008**

Executive team member of high reliability engineered IT products ompany producing hardware for Motion Picture, music, and entertainment IT networks. Products designed for the most stringent audio & video editing suite environments, where loss of data or product failure would severely impact movie production schedules, quality of film, and cost. Applications included digital production workflows for large CGI movies, storing terabytes of data across networks providing users uninterrupted access to large pools of media, and technical development for leading edge film technologies.

Worked with HRO concepts such as Agile, rapid prototyping and minimum viable product to engineer PCB, software, and application solutions with customers and strategic partners in key global entertainment regions (California, India, Europe, Asia). $25M revenue, $2M budget, direct staff of 20. Responsible for Product Development, Marketing, Customer Service Engineering.

HRO Aspect	Need
Principles	● ● ● ○ ○
Processes	● ● ● ● ○
Operations	● ● ● ○ ○
Products	● ● ● ● ●
Applications	● ● ● ● ●
Certifications	● ● ● ● ○

Applied Processes & Concepts: Agile Development, Continuous Improvement, Go-To-Market

Mini-Case Study (Product/Application): Motion picture budgets require a high reliability approach to computer storage systems. In 2001 the movie "Shrek" used more that 50TB of data stored on editing systems. Today it isn't unusual to create 250TB of data that must flow without interruption, i.e. highly reliably, or the editing hours are wasted. Designed and manufactured the specialized hardware & software to create high reliability environments for editing movies, music and digital graphics. Modern digital movies use a variety of computer-based formats such as CGI, Animation, and Anime. These formats require editors to have high speed, high quality access to huge data storage facilities. If these systems fail or operate poorly due to the interconnect between the editors and the storage, the cost in time and resources can run into millions of dollars.

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DiRAD Technologies, Inc. **General Manager** **2000 -2001**

G.M. and technology officer for a voice activated, unattended communication systems manufacturer. Developed customer requirements, operational schedules, and Go-to-Market strategies for high reliability hardware/software. Products used for local, state and national government offices. Systems designed and manufactured to function 24/7/365 in critical systems like 911, CDC health crises, and first responder access. Full P&L, brand, staff, and operational authority.

Applied Processes & Concepts: Agile Development, Systems Thinking, Go-To-Market, Resiliency, Design Thinking

Mini-Case Study (Product/Application): Automated interactive Voice Response (IVR) systems provide constituents with any-time-of-day access to and by government agencies. This allows the agency to distribute/collect information without human resources working around the clock. When a city has an active health safety issue, there is a need to disseminate information (i.e. SARS, Bird Flu) or collect information from residents (i.e. West Nile disease) on a constant and ongoing basis. The IT hardware must be built to function without failure and the software system must be designed to be utilized without confusion by a wide range of users.

HRO Aspect	Need
Principles	● ● ● ○ ○
Processes	● ● ● ○ ○
Operations	● ● ● ○ ○
Products	● ● ● ● ○
Applications	● ● ● ● ●
Certifications	● ● ● ○ ○

ICV, LLC. **Founder, Partner** **1993 - 2000**

Founder/Co-owner of high reliability engineered control products manufacturer for Oil/Gas, Power, Industrial facilities. Products designed for the most stringent physical environments, where repair or access is limited and product failure would be catastrophic to personnel, operations and cost. Applications included emergency systems for large scale power turbines, offshore and subsea oil production, high value pipelines, and high-dollar petrochemical production.

Engineered 1-off solutions with customers and manufacturing partners around the globe (UK, Italy, India, Germany, Japan). Grew to 3 partners, $10M revenue, staff of 20 in 4 years. Sold to global manufacturer.

Applied Processes & Concepts: Systems Thinking, Risk Management, Continuous Improvement, Go-To-Market, Resiliency

Mini-Case Study (Product/Application): Modern offshore oil wells operate in extreme environments, as far down as 1 mile below the ocean surface. At this depth, equipment can only be accessed by remotely operated submersibles. Additionally, the high-pressure oil is often full of contaminants like sand or gas that can damage equipment in a matter of minutes. We used high reliability concepts to engineer, manufacture, install, and maintain offshore oil field control valves that reduced risk by hundreds of millions of dollars.

HRO Aspect	Need
Principles	● ● ● ● ●
Processes	● ● ● ● ●
Operations	● ● ● ● ●
Products	● ● ● ● ●
Applications	● ● ● ● ●
Certifications	● ● ● ● ●

COMMUNITY LEADERSHIP

Start Up Class **Creator & Facilitator** 2015 - Present

Created curriculum and facilitate annual class for 35 startup companies based on Business Model Canvas, Disciplined Entrepreneurship, Lean Startups, brand development, and experience. Have taught more than 150 business owners how to organize their startup to succeed.

University at Buffalo **Entrepreneurial Leadership Award** 2013

Annual award presented to local business leader for contributions to entrepreneurs and the WNY region at large.

Buffalo TEDx **Speaker** 2013

A localized TED event that brings the spirit of TED's mission of ideas worth spreading to local communities around the globe. The presentation "*Confessions of an Unlikely Feminist*" introduced local leaders to the idea of a "wicked problem" and that the only way to solve them is to tap equally the brain power of both genders.

Center for Entrepreneurial Leadership **Chairman, Member, Mentor** 2008 – Present

Chairman/Member of 20-person Advisory Board for University of Buffalo's School of Management Entrepreneurial Center. Established strategic plan for growth and sustainability of program. Mentored and coached more than a dozen entrepreneurs. Worked with wide range of business types (private, family, partnerships), sizes (5 - 100+ employees), industries (manufacturing, hi-tech, marketing, B2B, B2C) and situations (at-risk, stalled, growing).

EDUCATION

Clarkson University
Master of Science 1990
Concentration: Systems Engineering

Bachelor of Science 1984
Engineering & Management

University at Buffalo
Center for Entrepreneurial Leadership 2008