

# Dwighd D. Delgado

Director of Manufacturing  
Candidate



JANOS



# Agenda

- ▶ **Who** is Dwighd?
- ▶ **What** can Dwighd do for you?
- ▶ **How** does Dwighd do this?
- ▶ **Why** does Dwighd do this?



# Who is Dwighd?

## ▶ Manufacturing Operations Executive

- Improve profitability, > US\$7 million, at *each* of two multi-national companies
- Develop management teams that enable manufacturing operations to become a strategic weapon
- Achieve organizational development and customer satisfaction, while continuously impacting delivery/quality/cost performance



# Experience

## ▶ Spectris/Fusion

- 14 yrs, 3 businesses (equipment, instruments)
- Director to Vice President of Operations
- Manufacturing and Custom Engineering functions
- Up to 120 direct & indirect personnel
- Global supply chain and account management
- Lean, Quality Function Deployment, ISO 9000, SPC
- Due diligence (US & UK), and turnarounds
- > US\$7.1 million in cost productivity
- Supported a 15.7% revenue AAGR between 1991 - 2001



# Experience

## ▶ General Electric

- 14 yrs, 2 businesses (lighting, ceramics)
- Specialist to Resident Engineering Manager
- Manufacturing and Engineering functions
- Up to 320 direct & indirect personnel
- Global technology transfer, project management (to US\$15M)
- NPD Tollgate process (concept to commercialization), SPC
- Startups (MX), outsourcing, and turnarounds
- > US\$7.7 million in cost productivity



# Credentials

## ▶ Professional

- Lean Manufacturing (2 businesses)
- Quality Function Deployment (QFD)
  - QFD Killed My Pet (Project) [Click Here to Open Web URL](#)
- FUSN instructor: Project Management and SPC
- Certified Quality Engineer (ASQC)
- Engineer-In-Training Certificate (GA)
- Other Accomplishments
  - Success Stories [Click Here to Open Web URL](#)
  - Manufacturing in Action [Click Here to Open Web URL](#)



# Credentials

## ▶ Educational

- Master of Engineering Management (GWU)
- GE Management Development Institute (Crotonville)
- Bachelor of Industrial Engineering (Georgia Tech)

## ▶ Entrepreneurial

- Strategic Operations Solutions, LLC

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# Credentials

## ▶ Personal

- Bilingual (Spanish), multi-cultural
- Private pilot, with instrument rating
  - AirLifeLine Community Service [Click Here to Open Web URL](#)
- Jang Bong (Tae Kwon Do)
  - Champion Martial Arts Academy [Click Here to Open Web URL](#)
- Chess (United States Chess Federation)
  - 7<sup>th</sup> Millenium Chess Festival [Click Here to Open Web URL](#)
- Myers-Briggs: INTJ (GE)
- DISC: high D/C (GE); high C/D (Spectris/FUV)



# What can Dwighd do for you?

## ▶ JANOS Business Needs

- Manufacturing Leadership
  - Meet or exceed customer delivery and quality needs
  - Drive improvements throughout organization
  - Integrated planning from supplier to customer
  - Maintain ISO 9000:2000 compliance

## ▶ Areas of Opportunity?

- Strategic/Tactical
  - Operational Excellence
  - Voice of the Customer
  - Organizational Development

## ▶ DDD Core Competencies

- Manufacturing operations
  - Delivery, quality, costs
- Technology transfer
  - High tech, labor intensive
- Project management
  - Concept to Commercialization
- New product introductions
  - "Go to the Gemba"
- Supply chain management
  - Domestic and international

## ▶ DDD Focus

- Balance strategic business needs with daily operational activities



# What can Dwighd do for you?

## ▶ **Situation: Manufacturing Operations Turnaround Example**

- Poor On Time Delivery (35% – 80%); untenable Lead Time at 9 weeks or greater
- Significant orders (>\$100K) being lost to competitors

## ▶ **Hindrance:**

- Sales Administration and Purchasing not integrated into the Planning process in Manufacturing
- Most support personnel did not fully understand how their actions influenced business performance
- Cross functional accountability was virtually non-existent due to poor goal setting and performance management

## ▶ **Actions:**

- Introduced a new supplier problem-resolution methodology, aggressively streamlined the existing supply chain, and expanded new supplier qualification methodology
- Introduced statistical analysis of the bookings forecast, correlated the bookings forecast with lead times, and expanded the utility of our joint monthly Master Schedule meetings with performance metrics and detailed corrective actions
- Partnered with Human Resources in initiating and implementing a new simplified performance management process, incorporating cross-functional goal setting in addition to individual and department goals and objectives

## ▶ **Results:**

- On Time Delivery was improved to >90% within 6 months, and subsequently no customer complaints were ever received for late delivery over the next 10 years; Lead Time was reduced to 3 weeks within 12 months, and remained there consistently
- Significantly reduced lead times were routinely obtained for certain strategic systems (<2 weeks) and spare parts (24 hours – “Always In Stock”), creating a significant competitive advantage that Sales and Marketing exploited worldwide
- Earned a Customer Satisfaction Award from our Sales and Marketing department within 18 months (the only award ever given by Sales outside of their own department) for outstanding teamwork in support of Sales/Marketing objectives

## ▶ **Evaluation:**

- Addressing a complex business problem requires proven solutions (focused, integrated, and mutually agreed upon) that incorporates a systematic organizational development and performance management plan
- Sustained performance achieved, creating a Manufacturing Machine responsive to changes in demand, and facilitating a 15.7% average annual business growth, \$17M (1990) to \$84M (2001).



# What can Dwighd do for you?

## ▶ **Situation: Lean Implementation #1 Example**

- Continuing demand for our product far exceeded our capacity, and would traditionally require adding 24 direct labor on 2 shifts with our existing process; we did not wish to do so given our uncertainties about the market at that time
- Primary objective was to increase power supply assembly output immediately without adding a single person while maintaining both our delivery and quality performance

## ▶ **Hindrance:**

- Our main challenge was to continue production output at least at previous levels, but preferably higher, in order to satisfy our Customers without jeopardizing future business
- Great misgivings and serious doubts from the Sales force and parts of the management team were expressed as to whether this new approach and/or discipline would be accepted in order to be successful

## ▶ **Actions:**

- Engaged the services of a consulting company to teach and implement at the same time Lean "On The Run"
- First day was a training session on the principles of Lean Manufacturing
- Second day was on documenting and analyzing our existing processes
- Third day was used to develop and critique an alternate process
- Fourth day was used to rearrange the work area to have the new process implemented by the fifth day for piloting

## ▶ **Results:**

- Previous maximum output was attained the first day, and production output tripled by the end of the 2nd week; within 4 weeks our output had quadrupled on a sustained basis, meeting all of our original objectives
- In addition, we recovered ~20% of our floor space (created an employee break area adjacent to the Lean area), reduced our unit labor costs >50% (reflected in our new standard costs at our November rollup), and all shipments were on time

## ▶ **Evaluation:**

- This "Lean on the Run" success allowed for 3 additional blitzes to materialize, as the employees realized that they too could achieve significant gains that would make their jobs easier
- We also trained an in-house trainer that served as facilitator for the subsequent blitzes; hence, all 3 additional blitzes were quite successful in achieving similar results



# How does Dwighd do this?

- ▶ **Performance metric driven, analytical**
  - Delivery, quality, cost
- ▶ **Communications of expectations**
  - No surprises, priorities
  - Honesty, integrity
- ▶ **Alignment with business strategy**
  - Short vs. long term
  - Strategic Plan & Operating Plan
- ▶ **Performance management**
  - Areas agreed upon\*
  - Duties/responsibilities
  - Goals/objectives
  - Customer satisfaction
  - Development needs
- ▶ **Customer service theme**
  - Internal & external
- ▶ **Organizational development**
  - Focus on process 1st
  - Customized approach



# Why does Dwighd do this?

- ▶ **Strong interest** in man-machine systems, and how they interact with each other, to enable manufacturing operations to become a strategic weapon
- ▶ **Keen student** of many cultures (being multi-cultural), with a strong desire for learning; have enjoyed employing my talents in multiple international opportunities
- ▶ **Greatest satisfaction** comes from achieving organizational development and customer satisfaction for the long term, while continuously impacting performance (Delivery/Quality/Cost) in the short term
- ▶ **I like to win!**



# Questions?

- ▶ What Differentiates Dwighd Delgado
- ▶ Success Stories
- ▶ Initial Approach
- ▶ Performance Management
- ▶ Endorsements
- ▶ Manufacturing in Action
- ▶ QFD Killed My Pet (Project)
- ▶ Community Service
- ▶ Strategic Operations Solutions





# DDD Differentiator

- ▶ Vision and “know how” to enable manufacturing operations to become a strategic weapon
- ▶ Unique combination of skills sets and global accomplishments in:
  - Sustained revenue growth
  - Significant cost reductions
  - Complex project management & technology transfer
  - Supply chain and account management
  - Quality systems implementation
  - Organizational development

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# Dwighd Delgado

Summary

Key Qualifications

Success Stories

Work History

Education

Contact

PRINT RESUME

Word Resume



PDF Resume



## **Success Stories**

Click on the links below to learn more about each success story.

- **Project Turnaround Ensures Successful Relaunch**
- **Turnaround Salvages Major Technology Transfer**
- **Thorough Project Planning Reaps Lucrative Follow-on Business**
- **Supply Chain Revamp Turns Around Crisis Situation**
- **Strategic Partnership Offsets Costly Supplier Monopoly**
- **Supplier Development & Collaboration Build Key Long-term Partnership**
- **Managing Culture Change to Boost Performance & Profitability**
- **Lean Manufacturing Revamp Slashes Labor Costs**
- **Successful Lean Initiatives Answer Increased Market Demands**
- **Customer Relationship Management Ensures Lucrative Partnership**
- **Root Cause Analysis Salvages Customer Relationship**
- **Successful Culture Change Transforms Labor Relations**
- **Mentoring & Strategic Oversight Build Highly Capable Team**



# Initial Approach

Source: "The First 90 Days" by Michael Watkins  
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- ▶ Review detailed operating plans, performance data, and personnel data
- ▶ Meet one-on-one with direct reports, peers, and internal customers, and ask them certain initial questions
- ▶ Assess how things are going at key interfaces from the **inside** (functional departments, project teams, etc.)
- ▶ Test strategic alignment from the top down, especially what is the company's vision and strategy
- ▶ Test awareness of the challenge and opportunities from the bottom up, including pulse
- ▶ Update my questions and hypotheses
- ▶ Meet with my boss to discuss my hypotheses and findings



# Initial Approach

Source: "The First 90 Days" by Michael Watkins  
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## ▶ Sample of initial questions:

- What are the biggest challenges the organization is facing (or will face) in the near future?
- Why is the organization facing (or going to face) these challenges?
- What are the most promising unexploited opportunities for growth?
- What would need to happen for the organization to exploit the potential of these opportunities?
- If you were me, what would you focus attention on?



# Initial Approach

Source: "The First 90 Days" by Michael Watkins  
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- ▶ Gather my team to feed back my preliminary findings to elicit confirmations and challenges of my assessments
- ▶ Analyze key interfaces from the **outside** in (customers, suppliers, manufacturers reps, distributors, and others)
- ▶ Analyze a couple of key processes and learn about productivity, quality, and reliability
- ▶ Meet with key integrators, especially at interfaces among functional areas of the company
- ▶ Update my questions and hypotheses
- ▶ Meet with my boss again to discuss my observations



# Performance Management

## ▶ Performance Appraisal\*

- Duties/responsibilities
- Goals/objectives
- Customer satisfaction
- Development needs

## ▶ Annual Goals and Development Plans

- Professional
- Personal

## ▶ Self Appraisal

- Agreed upon metrics:
  - Performance indicators
  - Productivity projects
  - Operations measurements
  - Business development
  - New product introductions
- Agreed upon development plans:
  - Professional and personal
- Agreed upon customers:
  - Internal and external



# Endorsements

- ▶ "... highly regarded ... as a coherent strategic planner and effective tactician ..."
  - ▬ *WLJ (President EYE Lighting International - retired)*
- ▶ "... bringing in Dwigd was one of the best management decisions I have ever made ..."
  - ▬ *KK (Vice President Xenon Corporation)*
- ▶ "... an expert in manufacturing and supply chain management ..."
  - ▬ *KHP (Vice President Brüel & Kjær Vibro)*
- ▶ "... turned an average manufacturing operation into a strategic force for the company ..."
  - ▬ *JRE (Vice President Fusion UV Systems)*
- ▶ "... knows how to create a manufacturing machine in support of Sales ..."
  - ▬ *BW (President Pro-Tek Systems)*
- ▶ "... tireless and ingenious ... in achieving highest profit and performance goals ..."
  - ▬ *BH (President ThroughPut Solutions)*
- ▶ "... on more than one occasion ... instrumental in developing customer confidence ..."
  - ▬ *RWC (President InPro Technologies)*
- ▶ "... team player ... a logical and practical approach to operations management ..."
  - ▬ *WPD (Vice President Fusion UV Systems)*
- ▶ "... best supervisor I ever had the privilege to work for during my almost 40 year career ..."
  - ▬ *PM (Manager Fusion UV Systems – retired)*

**It is three decades since five Phd students founded Fusion UV Systems with the invention of microwave lamp technology, pioneering its use for UV curing. Kate Morley spoke to Dwigth Delgado, vice president of operations, about the company's leading role in the industry**

It might be a bit of an old cliché, but right time, right place really does play an important part in why some great ideas get to grow and grow while others disappear into oblivion. For the five founders of Fusion UV Systems, the time was certainly right. "I think you could say they were blessed with the right product at the perfect time," explains Dwigth Delgado, vice president of operations at Fusion. "The UV chemistry they were working on offered exciting solutions to a wide variety of applications that were there to be developed."

Impressive technical accomplishments, a commitment to product development, and a dedication to working in partnership with customers have ensured the growth of Fusion over more than thirty years in business. Just as UV curing revolutionized the drying process, the Fusion UV system has revolutionized UV curing with electrodeless lamp systems which are more efficient than conventional arc lamps and offer a whole range of benefits.

Fusion offers a variety of spectral outputs in several lamp system designs, enabling customers to match the lamp output to the ink or coating being used. An added advantage is that there are no limitations on cure widths either. Modules can be placed end to end for uniform wide cure or turned on independently to save energy costs for narrow width runs on wide systems.

There are three key elements to Fusion's systems—an electrodeless bulb for consistency and long life, the irradiator for efficient cooling and output, and a user-friendly power supply for maximum convenience. And the applications are wide ranging, as Delgado explains: "Walk down the aisle of any grocery store and take a look at the range of packaging, like the bricks of juice where the inks on the packaging have often been cured by Fusion systems. Or the CDs and DVDs where UV curing has provided enabling technology for sandwiching the layers of poly carbonate together. Fiberoptic cable is an important market too, and a new growth area for us is the automotive industry where we are currently working on a project to clear coat vehicles to improve scratch and mar resistance designed to keep them looking newer for longer."

It's an exciting development which Fusion has been working on in partnership with an automotive consortium, and the primary results are looking good. "We're testing the process at the moment, driving a treated Audi around Europe, and already feedback from people like Mercedes suggests they're delighted with the results."

It's another feather in the cap for Fusion. Today the company has main offices (each one featuring sales, service, and application lab) in the UK, Germany, and France, three in China and another in Japan, as well as the headquarters in Maryland and an office in California. The recent growth into China has provided the company with a unique challenge.

So many of our customers were moving parts of their operation to China, we needed to have a presence there to support and service them on site," says Delgado. "Our three offices give us pretty good coverage over the main industrial centers, and on a percentage growth basis, our China operation is pretty fast growing. In Japan too, where the economy is showing signs of re-bounding, we've made important gains in market share."

"We have about 35,000 installations around the world, a reflection of our steady growth which has seen only a couple of hiccups in the last decade, most notably the nosedive of the telecoms industry. Our double digit compound annual growth rate is looking good, and with so many diverse markets to operate in, we foresee a continuation of this growth."

Developing new applications in new markets, and new technology in core requirements are the key to Fusion's growth strategy. A significant percentage of sales is invested into R&D. "We don't mortgage our future by not investing in R&D," says Delgado. "And our parent company, Spectris plc, has been very supportive in furthering that."

Identifying new applications and growth areas requires serious investment of time and money. The automotive market already looks set to develop with Fusion's new clear coat project and Delgado refers discreetly to two more strong applications for new markets currently being developed.

Fusion's strong position in UV technology has facilitated some of the most advanced products on the market. Like the high selling video game which wouldn't be possible without Fusion equipment, or the coatings on new monitors or cutting edge optical applications. But although much of the company's work is focused on the high end of the market, no job is turned away. When a pet food manufacturer was looking for a way to improve the graphics on their 50-kg packs of dry dog food, they turned to Fusion to facilitate developing a higher gloss on the graphics while maintaining a non-slip resistance to allow them to be piled high in the stores.

"It's all about providing solutions to our customers, and problem solving, and that's what we do best," says Delgado. "Research into customer requirements to understand the cost drivers and the value proposition on every project is given top priority. We use a whole range of techniques like QFD (Quality, Function, Deployment) in that process to understand the spoken and unspoken needs of the customer. Lean manufacturing has been an important tool for us too. We started working on it back in spring 2001 and it has allowed us to improve output with the same staff and without expansion of the site. In fact, we've seen a dramatic improvement in output, and avoided having to hire the equivalent of around 20 manufacturing employees. Combine this with our strong supplier relationships, and our internal cross-functional problem solving teams with a focus on customer satisfaction, we're maintaining standard lead times of around 2 to 3 weeks and maintaining on-time delivery at about 94 percent, and that's world wide. The end result benefits not only us of course, but down the line our hard work means we can help our customers reduce their operating costs and increase their competitive edge and that's got to be a good thing for all of us."

Fusion UV Systems, Inc.

## QFD Killed My (Project)

*By improving our product development process, QFD helped us hear our customers warn us to "kill the project"*

Dwight D. Delgado  
Vice President - Manufacturing, Fusion UV Systems

Jeffrey Okamitsu, Ph.D.  
Vice President - Technology, Fusion UV Systems

Glenn H. Mazur  
Japan Business Consultants, Ltd.

## QFD Killed My Pet (Project)

*By improving our product development process, QFD helped us hear our customers warn us to "kill the project."*

### Abstract

Quality Function Deployment (QFD) is a recognized method of assuring the quality of new products and services during their design and development. Unbeknownst to even experienced practitioners, QFD is comprised of two systems – one to assure the quality of the product, the other to assure the quality of the process by which products are designed and developed. By including both in our study, we were able to learn early in the project that what we were sure would be a technological leap, giving indications that it was a leap where customers did not want to go with us.

### Key Words

QFD, Quality Function Deployment, Product Development Process

### Introduction

Fusion UV Systems is the leading worldwide supplier of ultraviolet curing systems and UV-based process solutions. Our UV curing systems are used in manufacturing, printing, and numerous other applications in a broad cross-section of industries with over 35,000 installations worldwide.

A Gaithersburg, Maryland based division of Spectris plc, Fusion UV Systems developed the microwave technology and produces the equipment used to cure various substances using ultraviolet light instead of heat. UV curing has particular advantages where heat-related deformation of the product to be cured is unacceptable, and its lower power requirements and reduced volatile organic compounds make it more environmentally friendly than other curing methods. Our customer portfolio includes the decorative faceplates for Nokia mobile tele-

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## Delgado gives friendly skies new meaning

Stacey M. Duck, Staff Writer The Gazette

December 4, 2002

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Montgomery Village resident Dwignd Delgado always wanted to fly. As a child growing up in the U.S. Virgin Islands, he watched planes flying in and out of the island port and dreamed of one day joining them.

Decades later, Delgado has realized his dream, and he is using his skill to help people in need of medical care reach their treatment destinations. Delgado, 52, volunteers with AirLifeLine, America's oldest and largest nonprofit patient transportation organization. The program is available for patients who can demonstrate financial need or are unable to travel on commercial aircraft because of health concerns, such as an impaired immune system. Pilots who sign up for the program must provide a plane, either by owning or renting one, and cover the cost of travel for the patient, family member or support person who is travelling to or from the treatment center.

"This is all out of pocket," Delgado said. "We are prohibited from accepting anything from them."

Delgado received his pilot's license in 1998, and first heard of AirLifeLine about two years ago, when he picked up a flyer at the Frederick Municipal Airport where he often rents a plane to fly on weekends. The cost of each flight varies depending on the distance. Delgado said he spent close to \$1,000 to take a woman from Baltimore to North Carolina, but only spent about \$600 to take a woman to Pittsburgh.

Delgado is the vice president of manufacturing at Fusion UV Systems, Inc., a company that builds equipment to instantly dry the ink or protective coatings on products, such as beer cans, cell phone covers or golf balls. He said flying for AirLifeLine gives him a way to reach out to others while enjoying his hobby.

"There's a host of reasons why I like flying," Delgado said. "I'm doing something I like to do, it's a totally different skill set ... I gave [AirLifeLine] a call because I've always wanted to do something like that. It is something I can give back."

Although he's been with the group for two years, Delgado has only flown two solo missions - one taking a woman to Pittsburgh for an organ transplant, and another flying a woman on the first leg of her journey home from Baltimore to Georgia. Delgado said he has flown "a handful" of other trips as a copilot. Every week, AirLifeLine publishes a nationwide list of patients who need flights. Pilots then look on the list to see if they can transport anyone traveling in their

area. When Delgado signs up for a mission, he receives a mission request form with the patient's details, such as weight, a brief description of the illness and specific information on where the patient needs to go. He then contacts the patient to arrange the transportation schedule and where they will meet. He also makes sure that any special needs are met, such as having a friend or family member along to help the patient in and out of the airplane, or coordinating schedules with another pilot if he is only flying part of the way.



*Dwignd Delgado of Montgomery Village volunteers his time and talents as a pilot to transport people in need of medical attention to their destinations.*

Delgado usually flies a Cessna 182, a small plane that will seat four people comfortably and has room for a companion for the patient, he said. After talking with the patient about special needs they will have during the flight, Delgado spends about two hours studying weather patterns and maps and preparing a flight plan, which he has to file with the Federal Aviation Administration. When Delgado flew a woman to North Carolina on her first leg of a journey home to Georgia, the round trip flight took almost eight hours. Because of poor weather conditions, he had to fly for more than two hours through thick fog, relying on his instruments because he could not see the ground or the horizon. Preparations helped make sure the trip went smoothly.

"I want to make sure that at least this is as uneventful as possible," Delgado said. "It took a lot of intense concentration, but it couldn't have been that bad, because she fell asleep in the back." But Delgado said it was his first patient who helped him see the importance of his volunteer work. He was transporting a woman with cancer, and was surprised by her positive outlook and will to survive, despite her many surgeries. "This time last year, I took a woman who was a cancer patient," Delgado said. "It was only halfway into the trip I realized what it meant to her. Turns out she'd had five organ transplants already ... I don't see how somebody who had gone through all that could be doing so well. It kind of drove it home for me."

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## Analysis of FUV Bulb Explosions from VALEO Blois

Dwight D. Delgado  
Strategic Operations Solutions, LLC®  
February 2007

24 February 2007

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European Trip Report  
Thursday 22 February through Wednesday 28 February

On Site Assessment of Reported Bulb Explosions in FUV Equipment  
Dwight D. Delgado

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