

# **INVESTMENT CASTING INSTITUTE**

2018

Spring Management Meeting



April 15 – 18, 2018

Fairmont Sonoma Mission Inn & Spa  
Sonoma, CA



# INVESTMENT CASTING INSTITUTE

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## 2018 SPRING MANAGEMENT MEETING

**April 15 – April 18, 2018 – Sonoma, CA**

### Sunday, April 15, 2018

4:00 p.m. - 5:30 p.m. **Registration**

5:30 p.m. - 7:00 p.m. **Welcome Reception**

**WELCOME RECEPTION**

**Sunday  
5:30 p.m. - 7:00 p.m.**

### Monday, April 16, 2018

7:00 a.m. - 8:00 a.m. **Registration**

8:00 a.m. - 8:30 a.m. **Welcome**  
**ICI President – Frank Lysiak**  
*Kovatch Castings*

**Opening Remarks**  
**Annual General Meeting**

8:30 a.m. - 9:00 a.m. **Joseph E. Fritz**  
**Executive Director**  
*Investment Casting Institute*

**2017 Business Summary**

9:00 a.m. - 10:00 a.m. **Josef Martens**  
*Katalysor LLC*

**Keynote Address: Medieval Monks, the Pony Express and Innovation**

10:00 a.m. - 10:15 a.m. **Break**

10:15 a.m. - 11:15 p.m. **Joel Naroff**  
*Narof Economic Advisers, Inc.*

**The Post Tax-Cut Economy: Opportunities & Risks**

11:15 a.m. - 12:00 p.m. **Joseph E. Fritz**  
**Executive Director**  
*Investment Casting Institute*

**2018 Market Outlook**

1:30 p.m. - 5:30 p.m. **Golf Outing at Sonoma Country Club**  
1:15 p.m. – 5:00 p.m. **or Benziger Winery Tour With Tasting**

**Evening On Your Own**

**GOLF OUTING**  
**Sonoma Country Club**  
**1:30 p.m. – 5:30 p.m.**

**or**

**ALTERNATE EVENT**  
**Benziger Winery Tour**  
**with Tasting**  
**1:15 p.m. - 5:00 p.m.**

**Tuesday, April 17, 2018**

**GUEST EVENT  
Sonoma Plaza Wine and  
Food Pairing Promenade**

**10:30 a.m. – 1:30 p.m.**

8:00 a.m. - 8:10 a.m. **Morning Welcome**

8:10 a.m. - 9:10 a.m. **Rick Alaniz  
John Cruickshank**  
*Cruickshank and Alaniz, LLP*

**2018: Running Lean, New Decisions & Challenges**

9:10 a.m. - 10:10 a.m. **Harry Moser**  
*Reshoring Initiative*

**How to Compete More Effectively vs. Imported Castings**

10:10 a.m. - 10:30 a.m. **Break**

10:30 a.m. – 11:30 a.m. **Dagmara Makarski, M.A.Sc., P.Eng.**  
*DAGMA Inc.*

**Human Factors**

11:30 a.m. – 12:30 p.m. **John Molinelli**  
*Price, Meese, Shulman & D'Arminio*

**Looking “From The Top Down” to Change Your Business  
Culture & Train To Avoid Sexual Harassment – A Guide  
For Top Level Managers**

12:30 p.m. – 2:00 p.m. **Josef Martens**  
*Katalysor LLC*

**Individual Laser-Focused Coaching Sessions**  
(See Registration Desk for 10 Minute Appointment)

6:00 p.m. - 9:30 p.m. **Dinner Event - Sonoma Country Club**  
**Bus departs at 5:45 p.m.**

**TUESDAY EVENING  
ENTERTAINMENT &  
DINNER EVENT**

**Sonoma Country Club  
6:00 p.m. – 9:30 p.m.**  
(Bus departs at 5:45 p.m.)

## Wednesday, April 18, 2018

8:00 a.m. - 8:10 a.m. **Morning Welcome**

8:10 a.m. - 9:10 a.m. **Marcia Zidle**  
*Smart Moves Coach*

**Stay Interviews: A Powerful & Low-Cost Employee  
Engagement & Retention Tool**

9:10 a.m. - 10:10 a.m. **Doug Creeley**  
*Next Level*

**Cyber Security – A Pragmatic Approach**

10:10 a.m. - 10:30 a.m. **Break**

10:30 a.m. – 11:30 a.m. **Phil Murphy**  
*Murphy, Miller & Baglieri*

**Tax Cuts and Jobs Act of 2018**

11:30 a.m. - 11:45 a.m. **ICI President – Frank Lysiak**  
*Kovatch Castings*

**Closing Remarks**  
***Meeting Adjourned***

# **INVESTMENT CASTING INSTITUTE**

## **MISSION STATEMENT**

The Investment Casting Institute will market the investment casting industry and support its members by facilitating professional, academic, educational, and technical interests, and will provide a forum for advancement in technology and product quality for customers and manufacturers, while promoting free trade, fair competition, and adhering to U.S. laws and regulations regarding commerce and industrial trade.

## **ANTITRUST POLICY STATEMENT OF THE INVESTMENT CASTING INSTITUTE**

The Investment Casting Institute (ICI) is a trade and technical association of investment casting foundries (and their suppliers) where castings of metal are made.

The ICI is organized to promote the common interests of the investment casting industry. The ICI is not intended to become, and will not become, involved in the competitive business decisions of its members, nor will it take any action which would tend to restrain competition in the investment casting industry.

Nevertheless, it is recognized by the Board of Directors of ICI that the Institute itself, as well as its varied activities, could be regarded by some as a forum or opportunity to promote anti-competitive conduct. For this reason, the Board of Directors promulgates this statement of policy to make clear its unequivocal support for the policy of competition served by federal and state antitrust laws, as well as its uncompromising intent to comply strictly in all respects with those laws.

In addition to stating the ICI's firm commitment to the principle of competition served by antitrust laws, the ICI also wishes to advise that the penalties which may be imposed upon both ICI and its individual and corporate members involved in any violation of such laws are now so severe that prudent business judgment demands that every effort be made to avoid any such violation. In addition to injunctions and other equitable remedies, violations of the Sherman Act, such as price-fixing, are felony crimes for which individuals may now be imprisoned for up to ten (10) years and fined up to one million dollars (\$1,000,000.00), and corporations can be fined up to 100 million dollars (\$100,000,000.00) for each offense, or twenty percent (20%) of affected commerce. The Department of Justice has recently obtained fines of up to five hundred million dollars (\$500,000,000.00). Under the Sherman Act, state Anti Trust law, the Federal Trade Commission Act and Robinson-Patman Act, treble (triple) damage claims based on the amount of gain or loss by private parties (including class actions) for antitrust violations are extremely expensive to litigate and can result in judgments of a magnitude which could destroy the ICI and seriously affect the financial interests of its members. This includes attorney's fees and "joint and several liability" where one may be liable for an entire Judgment even though their role in the antitrust violation was rather small.

It is the responsibility of every member of the ICI to be guided by ICI's policy of strict compliance with antitrust laws in all ICI activities. It shall be the special responsibility of ICI officers, directors and committee chairmen to ensure that this policy is known and adhered to in the course of activities pursued under their leadership.

To assist the ICI staff and all its officers, directors and committee chairmen in recognizing situations which may raise the appearance of an antitrust problem, the Board will as a matter of policy furnish to each of such persons copies of ICI's General Rules of Antitrust Compliance. The ICI will also make available general legal advice when questions arise as to the manner in which the antitrust laws may apply to the activities of the ICI or to any committee thereof.

Antitrust compliance is the responsibility of every ICI member. If you have any questions or information concerning potentially anti-competitive conduct, please contact the Board's Executive Committee orally, in writing and even anonymously. Alleged violations of the ICI General Rules of Antitrust Compliance or of this policy statement will be vigorously investigated and reviewed with due process pursuant to the by-laws of the ICI; violations may result in revocation of membership in ICI and removal from any ICI office.

## GENERAL RULES OF ANTITRUST COMPLIANCE

The following rules are applicable to all ICI activities and must be observed in all situations and under all circumstances, without exception or qualification other than as noted below:

1. Neither the ICI nor any committee, conference or activity of the ICI shall be used for the purpose of bringing about, or attempting to bring about, any understanding or agreement, whether written or oral, formal or informal, expressed or implied, among competitors with regard to prices, terms or conditions of sale, discounts, tying provision or purchase of a good or service with another, exclusive dealing arrangements, distribution, volume of production, allocation of territories or customers, restrictions on non-deceptive advertising, or credit of suppliers, customers or competitors or any understanding or agreement which could be perceived as restraining competition.
2. No ICI activity or communication shall (a) include discussion, survey, or action, for any purpose or in any fashion of costs, prices or pricing methods, rebates or other price discrimination, production quotas or other limitations on either the timing or volume of production or of sales; (b) take any action likely to raise prices or reduce quantity or quality of goods available, or (c) involve allocation of territories or markets or customers in any way. "Communication" includes but is not limited to electronic communications, such as emails, text messages, faxes, blog or web posts and/or social media posts.
3. No ICI committee shall undertake any activity, which involves exchange or collection and dissemination among competitors, of any information regarding prices, pricing methods, costs of production, or of sales or distribution or individual company statistics of any kind, without first obtaining the advice of legal counsel, provided by ICI, as to those proper and lawful methods by which these activities may be pursued.
4. No ICI activity or communication shall include any discussion or action which may tend to or may be construed as an attempt to prevent any person or business entity from gaining access to any market or to any customer for goods or services, or to prevent or boycott any supplier, competitor, customer, or other entity from obtaining, accessing, or selling a supply of goods or otherwise purchasing or distributing goods or services freely in the market.
5. No ICI activity or communication shall include any discussion or action which might be construed as an agreement or understanding to refrain from purchasing any raw materials, equipment, services or other supplies from any supplier.
6. Neither ICI nor any committee thereof, shall make any effort to bring about the standardization of any product or method of manufacture, credentialing, listing or certification of any product or program for the purpose of preventing the manufacture or sale of any product not conforming to a specified standard or which would tend to have the overall affect of either lessening competition or resulting in a degree of price stabilization.
7. No person or company shall be commercially disparaged nor shall any ICI Member make statements that are reasonably likely to have a negative reputational impact on another so as to exclude that person or company from ICI membership or participation in any ICI activity where such exclusion is designed to or may impair such person's or company's ability to compete effectively in the investment casting industry.
8. In conducting ICI committee meetings, the chairman thereof shall prepare and follow a formal agenda which shall be provided to all committee members prior to the meeting; else it shall not be considered. Agenda items listed as "Any Other Business" shall be prohibited. Minutes of each meeting shall be distributed to all persons who attended such meetings. Approval of the minutes shall be obtained from the membership of the committee at its next meeting. Copies of the minutes shall be transmitted to the headquarters staff.
9. ICI speakers and authors of conference papers shall be informed of the need to comply with ICI's antitrust policy in the preparation and presentation of their papers and addresses.
10. In informal or social discussions at the site of an ICI meeting (whether such meetings are conducted in-person or via telecommunications services), which are beyond the control of its officers and chairmen, all representatives are expected to observe the same standards of personal conduct required of ICI in its compliance with these antitrust guidelines. Members are reminded that even actions or discussions occurring outside of the U.S. may still be subject to federal antitrust laws. In addition, copies of the foregoing Antitrust Policy Statement and General Rules of Antitrust Compliance will be included in registration packets and will also be printed in the ICI Committee Directory. The Board may from time to time require all members to sign an acknowledgement that each member has read and understood these Rules of Antitrust Compliance.

# **PROGRAM**

## Speakers

### **2017 Business Summary & 2018 Market Outlook**

*Joseph E. Fritz*  
Executive Director  
Investment Casting Institute  
136 Summit Avenue, Suite 100  
Montvale, NJ 07645 USA  
Phone: 201-573-9770  
E-mail: [jfritz@investmentcasting.org](mailto:jfritz@investmentcasting.org)

### **How to Compete More Effectively vs. Imported Castings**

*Harry Moser*  
Founder & President  
Reshoring Initiative  
21110 Buffalo Run  
Kildeer, IL 60047 USA  
Phone: 847-726-2975  
E-mail: [harry.moser@reshorennow.org](mailto:harry.moser@reshorennow.org)

### **Medieval Monks, the Pony Express & Innovation**

*Josef Martens, Ph.D. CSP*  
Katalysor, LLC.  
10421 Motor City Drive  
Bethesda, MD 20827 USA  
Phone: 240-938-1274  
E-mail: [jm@josefmartens.com](mailto:jm@josefmartens.com)

### **Human Factors**

*Dagmara Makarski, M.A.Sc., P. Eng.*  
DAGMA, Inc.  
3 Damascus Drive  
Ontario, Canada L7C 0A4  
Phone: 416-986-0165  
E-mail: [dmakarski@dagma.ca](mailto:dmakarski@dagma.ca)

### **The Post Tax-Cut Economy: Opportunities & Risks**

*Joel Naroff*  
President  
Naroff Economic Advisors, Inc.  
29 Ponderosa Drive.  
Holland, PA 18966 USA  
Phone: 215-497-9050  
E-mail: [joel@naroffeconomics.com](mailto:joel@naroffeconomics.com)

### **Looking “From The Top Down” to Change Your Business Culture & Train to Avoid Sexual Harassment**

*John L. Molinelli, Esq.*  
Bergen County Prosecutor  
Price, Meese, Shulman & D'Arminio, P.C.  
50 Tice Boulevard  
Woodcliff Lake, NJ 07677 USA  
Phone: 201-391-3737  
E-mail: [jmolinelli@pricemeese.com](mailto:jmolinelli@pricemeese.com)

### **2018: Running Lean, New Decisions & Challenges**

*Rick Alaniz*  
Partner  
Cruickshank and Alaniz, LLP.  
20333 State Highway 249, Suite 272  
Houston, TX 77070 USA  
Phone: 281-833-2200  
E-mail: [ralaniz@a-c-law.com](mailto:ralaniz@a-c-law.com)

### **Stay Interviews: A Powerful & Low-Cost Employee Engagement & Retention Tool**

*Marcia Zidle*  
Executive Coach  
Smart Moves Coach  
6026 Averill Way #C  
Dallas, TX 75225 USA  
Phone: 972-380-9181  
E-mail: [marcia@smartmovescoach.com](mailto:marcia@smartmovescoach.com)

### **2018: Running Lean, New Decisions & Challenges**

*John Cruickshank*  
Partner  
Cruickshank and Alaniz, LLP.  
20333 State Highway 249, Suite 272  
Houston, TX 77070 USA  
Phone: 281-833-2200  
E-mail: [jcruickshank@a-c-law.com](mailto:jcruickshank@a-c-law.com)

### **Two Men and a Bear: Yesterday's Cybersecurity Isn't Enough**

*Doug Creeley*  
Partner  
NextLevel  
1913 NE Leichner Road  
Vancouver, WA 98686 USA  
Phone: 512-731-4725  
E-mail: [doug.creeley@nlbev.com](mailto:doug.creeley@nlbev.com)

**Tax Reform**

*Philip Murphy*

Partner, CPA

Murphy, Miller & Baglieri, LLP

65 Harristown Road, Suite 102

Glen Rock, NJ 07452 USA

Phone: 201-612-0015

E-mail: pmurphy@mmbllp.biz

## SPEAKER BIOGRAPHIES

**Joseph E. Fritz**.....Paper No: 1  
**Investment Casting Institute**

Since joining the Investment Casting Institute in 2013, Joseph Fritz has placed a strong focus on Enhancing Member services, promoting the growth of the industry and developing its human resource pool. He is a proven motivator who continually strives to better the organization. As the Institute's chief executive, he has leadership authority over the Investment Casting Institute and its subsidiary INCAST Magazine. With over 30 years' experience in the Aerospace and Power Generation industries, Mr. Fritz has worked in a variety of capacities with a number of Fortune 100 companies as well as with privately held companies. Over his career, he has contributed to a number of programs, including the Trident II Fire Control System, the Joint Strike Fighter and the Boeing 787. Mr. Fritz is an advocate of inter-association cooperation, collaborating on projects and ideas with the American Foundry Society, European Investment Casters Federation, the Japanese Foundry Society and the Foundry Educational Foundation. Mr. Fritz holds degrees in Engineering and Computer Science from the University of Connecticut and an MBA from Union College.

**Josef Martens**.....Paper No: 2  
**Katalysor, LLC.**

A scientist turned businessman, Josef applies cutting-edge (and relatable!) insights from sciences to spark innovation and creativity, key advantages in a changing global economy. Top technology companies such as DaimlerChrysler, Merck and Siemens have sought Josef's expertise and also Government agencies such as NASA, the Department of Defense and various intelligence agencies. Josef's credibility on innovation is unrivaled — he himself is an innovator. During his doctoral studies in physics at Cambridge and his post-doctoral research at the world-renown Cavendish Laboratory, his groundbreaking work led to multiple U.S., European and International patents. Commercial applications of the technology resulted in products that have grown into a multi-billion-dollar market (OLED displays.).

**Joel L. Naroff**.....Paper No: 3  
**Naroff Economic Advisors, Inc.**

Joel L. Naroff is the President and founder of Naroff Economic Advisors, a strategic economic consulting firm. He advises companies across the country on the risks and opportunities that economic developments may have on the organization's operating environment. Joel is the author, with veteran reporter Ron Scherer, of "Big Picture Economics: How to Navigate the New Global Economy". The book has been recently reprinted in Chinese. He is an economic advisor to Emerald Advisors, TDn2k, Investors Bank, Berkshire Hathaway Home Services Fox & Roach, Realtors, Indigo Capital Advisors and Trefoil Properties. He is a Senior Advisor to Econsult Solutions. From 1999 to 2009, Joel served on a consulting basis as Chief Economist for Commerce Bank/TD Bank. Before that he was Chief Bank Economist at First Union Bank and First Fidelity Bancorp. Prior to moving into banking, Joel was a tenured professor in the Isenberg School of Management at the University of Massachusetts at Amherst. A nationally recognized economic forecasting expert, Joel has received numerous honors. In 2013, 2015 and 2016 he was a Crystal Ball Award winner of the Zillow Home Price Expectations Survey. He received the National Association for Business Economics Outlook Award as the top economic forecaster in both 2007 and 2011. NABE is the premier professional association for business economists. In 2008 he was awarded the Lawrence Klein Award for Blue Chip forecasting excellence. This is one of the oldest and most prestigious forecasting honors. Joel was the Bloomberg Business News top economic forecaster in 2008 and in 2006 he was MSNBC's the top forecaster. He is a member of the Blue Chip, Wall Street Journal, Bloomberg, Survey of Professional Forecasters, Reuters and Market Watch economic forecasting panels. He is an economic and financial advisor to state and local governments. He has testified in front of Congress on economic and fiscal policy matters. Joel is often quoted in the national press, including Newsweek, The Wall Street Journal, The New York Times, USA Today and Business Week. He has appeared on CNBC, Fox Business News and Bloomberg Television. Joel writes a semimonthly Sunday business column and a periodic blog called "Random Economics" for the Philadelphia Inquirer, does business commentary for KYW News radio in Philadelphia and can be heard often on the national news radio networks. His materials are quoted by news agencies around the world. Joel received bachelors' degrees in economics and chemistry from the Stony Brook University and his Ph.D. in economics from Brown University. He is a member of the Board of Directors of the Economy League of Greater Philadelphia and teaches at the Pennsylvania Bankers' Advanced School of Banking.

**Rick Alaniz**.....Paper No: 4  
**Cruickshank and Alaniz, LLP.**

Rick Alaniz has been at the forefront of labor and employment law for over thirty-five years. He began his legal career as a trial attorney with the U.S. Department of Labor, served on the President's Cost of Living Council during the Nixon Administration and also held prominent posts within the National Labor Relations Board, first in Washington D.C. and later in Minneapolis where he coordinated the NLRB's enforcement actions in the five-state Midwestern region. A Partner in private practice since 1985, his experience has only deepened Rick's enthusiasm for labor and employment law and his drive for continued excellence in the field. He is Board Certified in Labor and Employment Law by the Texas Board of Legal Specialization. Rick contributes dozens of articles per year on labor and employment law to trade journals and conducts numerous seminars each month to client companies and trade associations across the country.

## SPEAKER BIOGRAPHIES

**John Cruickshank**.....**Paper No: 4**

**Cruickshank and Alaniz, LLP.**

*John is a Board Certified attorney in Labor & Employment Law by the Texas Board of Legal Specialization. His legal philosophy is that a lawsuit avoided is better than a lawsuit won. His practice focuses on developing strategies to help companies frustrate union organizing campaigns before they begin. To do that, he emphasizes the importance of “house calls” on his clients’ place of business. He is much more comfortable in a hard hat and steel-toed boots than a suit and tie.*

**Harry Moser** .....**Paper No: 5**

**Reshoring Initiative**

*Harry founded the Reshoring Initiative to bring manufacturing jobs back to the U.S. after working for high end machine tool supplier GF Agie Charmilles, starting as President in 1985 and retiring 12/31/10 as Chairman Emeritus. He earlier worked 6 years for DISAMATIC U.S. His father ran the green-sand and investment casting foundries at Singer Sewing Machine’s main plant in Elizabeth, NJ. Largely due to the success of the Reshoring Initiative, Harry was inducted into the Industry Week Manufacturing Hall of Fame 2010 and was named Quality Magazine’s 2012 Quality Professional of the year. Harry participated actively in President Obama’s 1/11/12 Insourcing Forum at the White House, won The Economist debate on outsourcing and offshoring, and received the Manufacturing Leadership Council’s Industry Advocacy Award in 2014. Harry is frequently quoted in the Wall Street Journal, Forbes, New Yorker and USA Today and seen on Fox Business, Market Watch, PBS and other national TV and radio programs. He received a BS in Mechanical Engineering and an MS in Engineering at MIT in 1967 and an MBA from U. of Chicago in 1981.*

**Dagmara Makarski**.....**Paper No: 6**

**DAGMA, Inc.**

*Dagmara graduated with a Bachelor and Master of Applied Science and Engineering (Aerospace Option) from the University of Toronto. Her background includes work in automotive manufacturing and aerospace industries. While working for Pratt & Whitney Canada, Honeywell (Aerospace) and Designed Precision Castings, Dagmara has acquired valuable experience in Engineering, Aerospace Quality and Supply Chain Management. Dagmara is passionate about flight safety, providing training as a certified, active Quality and Aerospace Auditor for the industry. She is also an experienced consultant, specializing in improving processes and aligning them with the requirements of technical and international standards. She is a professional Engineer, a proud member of PEO (Professional Engineers of Ontario) and SAE (Society of Aerospace/Automotive Engineers), previously holding a NATO Secret Clearance. Her strengths include leadership, project management, communication skills and attention to detail. She is fluent in English and Polish, and a citizen of both countries.*

**John L. Molinelli, Esq.**.....**Paper No: 7**

**Price, Meese, Shulman & D’Arminio, P.C.**

*John L. Molinelli, Bergen County Prosecutor (ret) is a Principal with the firm Price, Meese, Shulman & D’Arminio, P.C. of Woodcliff Lake, New Jersey. He provides counsel to businesses, developers and redevelopers on all facets of real estate development, including acquisition and finance, private placement financing, construction, and development approvals at the local, regional, state and federal levels. He provides counsel to corporate clients on labor and logistical issues, internal investigations and management controls; private sector corporate compliance, digital investigations, E-Discovery, complex commercial and employment related litigation. With his background as former Bergen County Prosecutor, Mr. Molinelli advises all government on matters of law enforcement and public safety, including labor negotiations, harassment claim prevention and Cybersecurity. From 2002 to 2016, he served as the Bergen County Prosecutor, being appointed by former Governors James E. McGreevy and Jon S. Corzine. Prior to that, he spent 20 years in the private practice and was a member of the Hackensack law firm of Herten, Burstein, Sheridan, Cevasco, Bottinelli & Litt, P.C., which has since merged with Archer & Greiner. He graduated from Rutgers University in 1979 with a B.A. degree, and received his law degree, cum laude, from New York Law School, in 1982. In 1991, he received his Diplomate in Municipal Law from Rutgers University, Bureau of Government Research. He is the former President of the Bergen County Bar Association, and former division Chairman of the District IIB Attorney Fee Arbitration Ethics Committee. In 2001, he was named as a Member of the New Jersey State Bar Association Standing Committee on Election Law. Mr. Molinelli was a member of the New Jersey Supreme Court Committee on Electronic Discovery in the Criminal Courts, and is a former member of the New Jersey Supreme Court Committee on the Rules of Evidence, and the New Jersey Supreme Court Municipal Court Practice Committee. He is a member of the Bars of the State of New Jersey and New York, United States District Courts for the Districts of New Jersey and the Southern and Eastern Districts of New York, as well as the United States Supreme Court and is a member of the Association of E-Discovery Specialists [ACEDS].*

## SPEAKER BIOGRAPHIES

**Marcia Zidle.....Paper No: 8**

### **Smart Moves Coach**

Marcia Zidle, as the Smart Moves Coach with 25 years of management, consulting and international experience, guides LEADERS who want to effectively manage the ambitious growth and change in their organizations; and HIGH-ACHIEVERS who want to shape • brand • advance their careers. Selected by LinkedIn's ProFinder as one of the best coaches of 2016! As an expert in leadership and talent development, she presents seminars on the topics of employee engagement and retention; strategy and innovation; social and emotional intelligence; personal and organization change management. She has worked with a variety of companies and industries including health care, financial services, oil and gas, manufacturing, insurance, hospitality, pharmaceuticals, government and nonprofits. She's a National Radio Host of the Business Edge and is known for her engaging style in interviewing business leaders about their companies, their lessons learned and their advice for those who want to grow their business with less stress and more success. In fact, she will be coming out soon with her new book which will bring together all the great insights from The Business Edge Show.

**Doug Creeley.....Paper No: 9**

### **NextLevel**

Doug Creeley has 25 years experience serving in executive and strategic technology leadership roles for organizations in the financial services, Internet services, e-commerce, travel and education industries in Fortune 50 multi-division, turn-around and fast growth companies. Doug is a high energy leader who excels in consensus-based leadership, alignment of people, business process and technology strategies, financial management and driving operational excellence. Doug has held information risk management, compliance and security leadership responsibilities in organizations valued from \$150 million to \$50 billion, always seeking to drive innovation through cost-effective solutions designed to target increased revenues and market share. Doug initiated a start-up company and grew it from \$0 to \$10 million in four years, and participated in first and second stage start-ups to \$400 million. Doug holds a Master of Business Administration from WGU – Washington, and a Bachelor of Science in Information Technology from Excelsior College.

**Philip Murphy.....Paper No: 10**

### **Murphy, Miller & Baglieri LLP**

Phil Murphy, CPA, is the managing partner of Murphy, Miller & Baglieri LLP. He devotes substantial time to the distribution and manufacturing industries, providing services to companies with various needs including financial statement audit and analysis, due diligence, succession planning, tax and financial structuring and negotiation. Phil's current audit clients include one of the most prestigious toy and hobby importer/distribution companies. He has worked in various areas of manufacturing, distribution, retail, construction, leasing and service companies over his 26 year career including significant due diligence experience for private equity firms. Phil is a member of the New Jersey Society of Certified Public Accountants and has served as president of the Bergen Chapter, which consists of over 2,000 CPAs. He is a member of the American Institute of Certified Public Accountants and APICS (The Educational Society for Resource Management). Consistent with Phil's focus on education, he has been featured in various speaking engagements including New Jersey Society of Certified Public Accountants, The Commercial Finance Association, The Bergen Record, many bank and financial institutions and ICLE, at the second annual Business Law Symposium, which is New Jersey's Institute for Continuing Legal Education. He was a frequent participant in the United Artists Tax Mailbag Series. He also participated in a cooperative effort with the Bergen Record, Northern New Jersey's largest newspaper, to produce the Tax Mailbag column, and has been featured on The Ron Thomas Small Business Forum on WNYE Radio, 91.5 fm. He recently authored an article for the Secured Lender (Financing Communities Trade Magazine) "Recent Accounting Pronouncements Affecting the Lending Community". Phil has also taught selective topics at Seton Hall University's Center for Entrepreneurial Studies program at the Stillman Business School. Phil is a past recipient of the "Heart of Gold" award. The award is presented to select people and organizations that have demonstrated extraordinary commitment to the Volunteer Center of Bergen County. Their commitment is measured by both volunteer involvement and financial support over the long term. He has chaired the Bergen Bike Tour for over ten years and has generated nearly \$1 million for the Volunteer Center of Bergen County and Tomorrows Children's Fund. Phil has also served as the Head Coach for the Indian Hills High Schools Boys Ice Hockey Team. He was named "Coach of the Year" by the Newark Star Ledger in 2005. Phil earned a Bachelor of Science degree from Western New England College in Springfield, MA.

# **PRESENTATIONS**

**OPENING REMARKS  
ANNUAL GENERAL MEETING**

**Frank Lysiak  
Kovatch Castings**

# **Medieval Monks, the Pony Express & Innovation**

**Josef Martens  
Katalysor LLC.**

# **Medieval Monks, the Pony Express & Innovation**

*Presented By:*

*Josef Martens, Ph.D. CSP*  
Katalysor, LLC.  
Bethesda, MD 20827  
Phone: 240-938-1274  
E-mail: [jm@josefmartens.com](mailto:jm@josefmartens.com)

# **The Post Tax-Cut Economy: Opportunities & Risks**

**Joel Naroff  
Naroff Economic Advisers, Inc.**



**Investment Casting Institute**  
2018 Spring Management Meeting

## **The Post Tax-Cut Economy:** *Opportunities and Risks for the Investment Casting Industry*

Joel L. Naroff, Ph. D.  
***President, Naroff Economic Advisors, Inc.***

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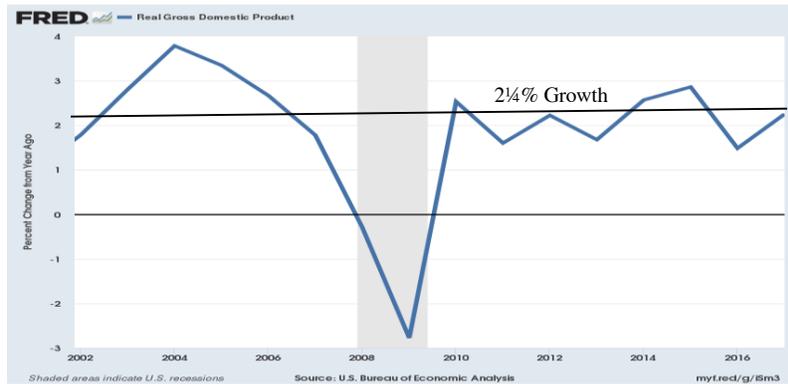
*April 16, 2018*

### ***The Economy:*** *Where have we been and where are we going?*



***The economy was already expanding decently –  
and now we have tax cuts hyping growth!***

## The Economy is In Good Shape



*With tax cuts and widespread growth,  
the economy should accelerate.*

### *Every Sector Is Kicking In, But There Are Issues That Could Affect the Investment Casting Industry*

- **Consumer spending:** *Rising take-home pay but:*
  - *The distribution of the tax cuts is uneven.*
  - *Households are tapped out: With the savings rate near record lows and debt near record highs, purchases of big-ticket items could slow.*
- **Business spending:** *Investment tax credits are helpful, but:*
  - *Will firms use their profit windfall to invest in buildings and technology, buy back stock, increase dividends or increase compensation?*
- **Government:** *Spending once again, but:*
  - *What will be funded - roads, power plants, treatment plants?*
- **Trade:** *After a lost decade, we have “in-phase” world growth, but:*
  - *Trade tensions are building that could affect even high-tech exports.*

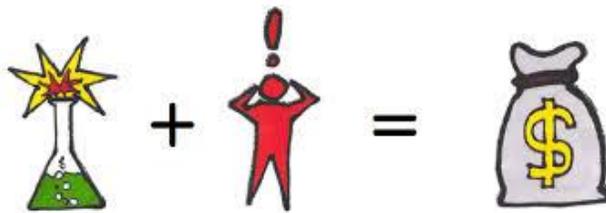
*Economic Growth Should Accelerate to around 3%!*

## The Burning Question: How Fast Can the Economy Grow?



**Trend Growth =  
Productivity + Labor Force Growth = 2.25%**

## 2018-2019: The Great Economic Experiment Takes Place



*Expansionary fiscal policy is not usually implemented  
when the economy is solid and labor markets are tight.*

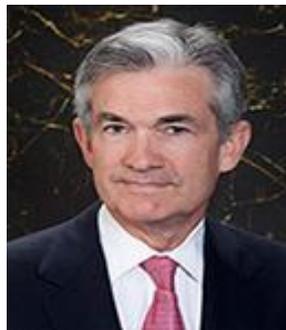
## ***The Risks:***

***“No good economy goes unpunished!”***



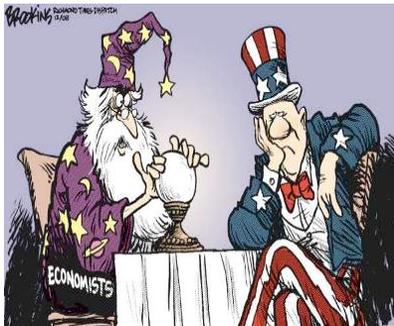
***Labor shortages could trigger rising wages and accelerating price inflation!***

## **Which Brings Us To the Fed:**



***Interest rates are already rising and should increase further:  
\*\*\*If inflation breaches 2.5%, the Fed may have to restrain growth.  
That could happen in 2019.\*\*\****

## The Next Recession: When?



"IT'S GETTING LESS HAZY...LES-6-6-6 HAZY...YES, IT'S BECOMING A LITTLE CLEARER...A LIT-T-TLE CLEARER...YES, YES, I CAN SEE IT, UH, PRETTY CLEAR NOW...WE'RE DEFINITELY IN A RECESSION...I THINK..."

*It usually takes a bubble bursting or a policy mistake to cause a recession.*

## Are There Any Bubbles Forming?



*Remember when everyone said that housing prices could continue to rise at 20% per year – and where are you going to get your workers?*

## Policy Mistakes Are Possible – Or May Have Been Made Already !



*Tax cuts at the wrong time, trade wars and/or too much  
Fed tightening are all concerns!*

## *Solid Growth For the Next 18–24 Months Comes with Concerns for the Investment Casting Industry*



- ◆ **Concern #1:** *Commodity price pressures are building and will only get worse (tariffs don't help and the dollar could fall further).*
- ◆ **Concern #2:** *Tax breaks for capital investment may not generate significant new corporate spending.*
- ◆ **Concern #3:** *A possible sharp slowdown two years out should be factored into expansion decisions.*

## Millennials, The Distribution Economy, Energy and Technology :

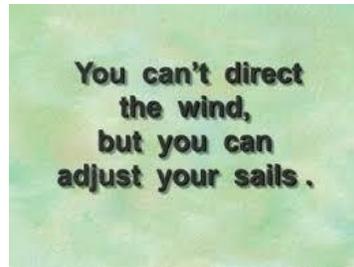
The future ain't  
what it used to be.

Yogi Berra

### Big-Trend Implications For the Economy:

- ***The Millennial/Boomer Handoff:*** The changing structure of household preferences will alter the entire economy.
  - *Affects spending patterns, labor supply, housing density, job location, transportation, production and distribution and the health care sector.*
- ***Distribution Economy:*** Proximity to markets and quality of transportation infrastructure key to economic success.
  - *Even the new Panama Canal matters – locations are changing.*
- ***Energy:*** U.S. energy primacy is becoming a reality.
  - *Drilling and pipelines are growth industries.*
  - *Is the internal combustion engine dead?*
- ***Technology:*** Concentrates economic power and changes spending patterns.
  - *Will on-demand services limit vehicle sales and appliance demand?*
  - *Will companies like Amazon, Google, Apple and Comcast dominate or fade?*
- ***Economic Nationalism:*** It's not just a U.S. phenomenon.
  - *Globalism vs. "America First" creates a trade-off between domestic markets and foreign opportunities.*

***Demographic changes and technological innovation will accelerate the changing structure of demand and production***



***Flexibility/adaptability has always been important – but it is becoming even more crucial.***

# ***2018 Market Outlook***

**Joseph E. Fritz  
Investment Casting Institute**



## **2018 Market Outlook**

**ICI Spring Management Meeting  
Sonoma, California**

**Joseph E. Fritz**  
Executive Director  
Investment Casting Institute

Market Overview 1

## **2018 Market Outlook**



- This perspective of the investment casting industry is based on the collective input of ICI Members, government agencies, related trade associations, industry publications, customers and individual contributors.
- Sales numbers, market segment breakdown, and forecasts are 'Best Estimates'.
- Neither the Institute nor its officers accept any legal responsibility for information, advice given or opinions expressed.

Market Overview 2

## Investment Casting Trends – North America



- Current estimates of 2017 sales of investment castings produced in North America reflected 2.9% growth over 2016 levels, outpacing worldwide growth of 1.5% for the same period
- In general, most sectors performed well; IGT was the key exception, and automotive appears to have peaked

### *Environment...*

- Feelings about the economy are improving
- Aerospace continues to show growth
- Automotive experiencing moderate decline
- IGT in significant near-term decline

### *Industry Concerns...*

- Government regulation cost
- Healthcare insurance
- Finding, retaining & developing skilled labor

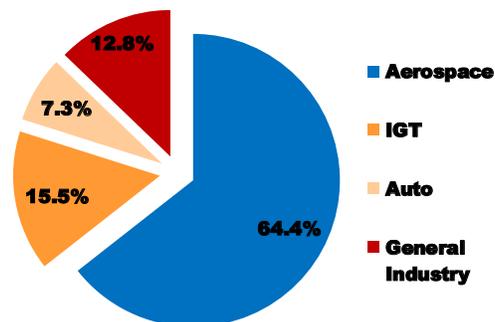
Market Overview 3

## North American Investment Casting 2017 Sales by Sector (\$ Billion)



Aerospace/Defense	3.73
IGT	0.90
Automotive	0.43
General Industry	0.74

**TOTAL: \$ 5.80 Billion**



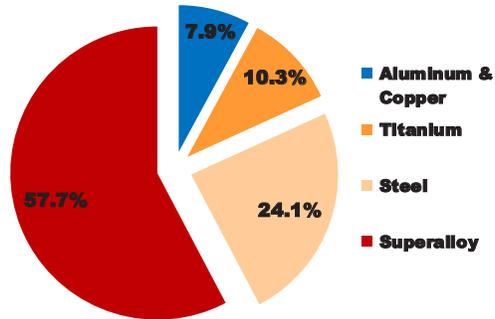
Market Overview 4

## North American Investment Casting 2017 Sales by Alloy Type (\$ Billion)



Superalloy	3.35
Steel	1.40
Titanium	0.60
Aluminum & Copper	0.46

**TOTAL: \$ 5.80 Billion**



Market Overview 5

## Market Segments



- Aerospace & Defense
- Industrial Gas Turbines
- Automotive
- General Industry

Market Overview 6

## Aerospace and Defense Outlook



- 2017 North American investment casting sales for the Aerospace and Defense sector are estimated at \$3.73 billion.
  - This represents a 7% increase over the prior year.
  
- The outlook for this sector in 2018 is strong.
  - North American Aerospace and Defense investment casting sales are estimated to surpass \$3.95 billion.
  - This represents 6% growth over 2017.

Market Overview 7

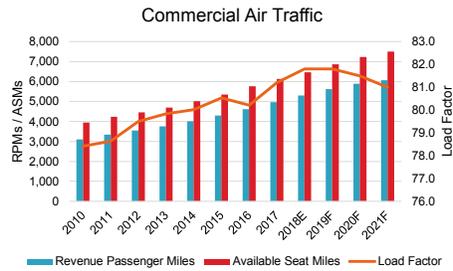
## Commercial Aerospace Market Factors



- A market correction is anticipated around 2020-2021
  - Aircraft deliveries still growing
  - Load factor over the forecast years shows that build schedules will be outpacing demand
  - Retirements expected to decline as fleet average age continues to grow more youthful
  - Revenue Passenger Miles growing but not as quickly as available Seat Miles
  
- In spite of anticipated correction, the backlog continues to grow
  - Wide body airframes largely unaffected
  - Narrow bodies and regional jets will bear the brunt
  - Regional jets will undergo correction in 2018
  - Engine deliveries to peak in 2019 at just over 3900

Market Overview 8

## Commercial Aircraft Air Traffic

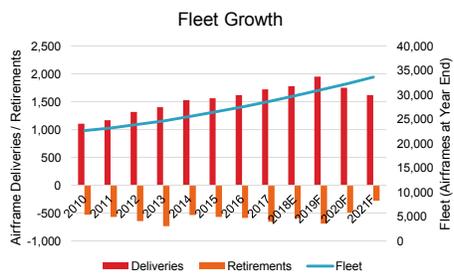


The decline in load factor over the forecast years shows that build schedules will be outpacing demand. This is indicative of a potential flattening of the market in the next decade.

Analysis Based on Published Reports from Airline Monitor Speed News / Boeing / Airbus / Public Record

Market Overview 9

## Commercial Aircraft Fleet Growth



The Market is expected to undergo a correction in the 2020 -2021 time frame.

Retirements are expected to decline as the average age of aircraft in fleet has reduced over the last several decades.

Analysis Based on Published Reports from Airline Monitor Speed News / Boeing / Airbus / Public Record

Market Overview 10

## Commercial Aircraft Deliveries, Orders and Backlog

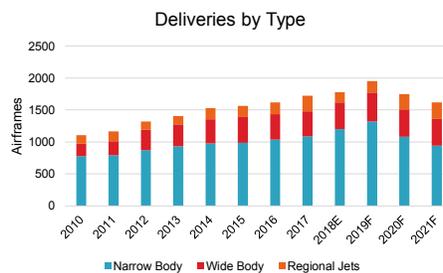


In spite of a decline in anticipated orders, the backlog continues to grow. At year end 2017, the backlog represented over 9 years' of production.

Analysis Based on Published Reports from Airline Monitor Speed News / Boeing / Airbus / Public Record

Market Overview 11

## Commercial Aircraft Deliveries by Airframe Type

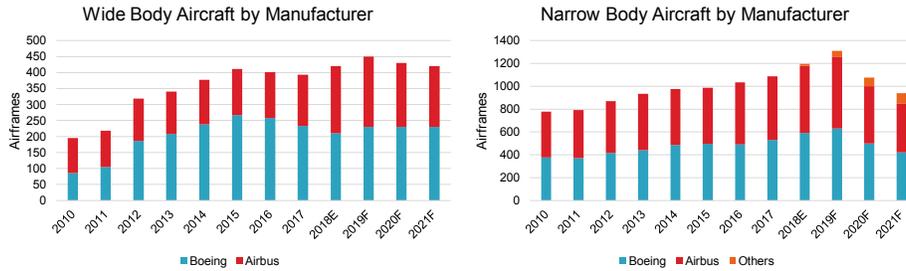


Wide body airframes are expected to show moderate growth over the forecast period, while narrow bodies and regional jets will bear the brunt of the correction.

Analysis Based on Published Reports from Airline Monitor Speed News / Boeing / Airbus / Public Record

Market Overview 12

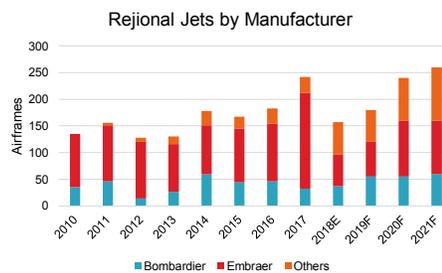
## Commercial Aircraft Deliveries by Manufacturer



Current projections show Airbus Wide Body deliveries declining while Boeing delivery schedules reflect growth over the same period.

Narrow body delivery schedules mirror each other with strong growth through 2019 followed by the forecast market correction.

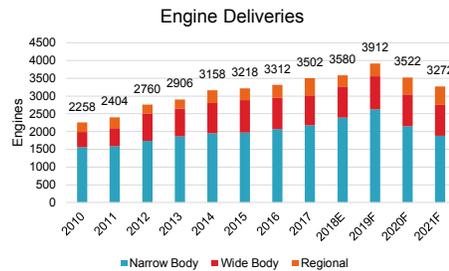
## Commercial Aircraft Deliveries by Manufacturer



Regional Jets will lead the market correction this year, but are expected to resume growth sooner with new market entries.

AVIC's ARI121 and Mitsubishi's MRJ will be entering into service during the forecast period.

## Commercial Aircraft Engine Deliveries

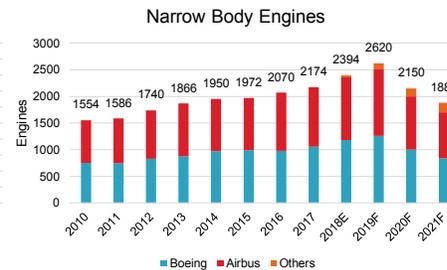
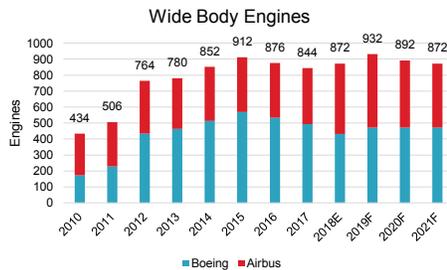


Overall aircraft engine deliveries will reach an all-time high by 2019 before feeling the effects of the anticipated market correction.

Analysis Based on Published Reports from Airline Monitor Speed News / Boeing / Airbus / Public Record

Market Overview 15

## Commercial Aircraft Engine Deliveries by Type

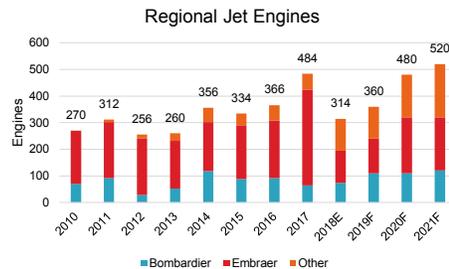


With the phasing out of the A340 and decline in B747 production, the average number of engines per wide body aircraft has declined from 2.3 at the start of the decade to 2.1 in 2017.

Analysis Based on Published Reports from Airline Monitor Speed News / Boeing / Airbus / Public Record

Market Overview 16

## Commercial Aircraft Engine Deliveries by Type



Delivery of engines for Regional Jets are forecast to rapidly recover from the market correction and surpass 2017's record by the end of the forecast period.

Analysis Based on Published Reports from Airline Monitor Speed News / Boeing / Airbus / Public Record

Market Overview 17

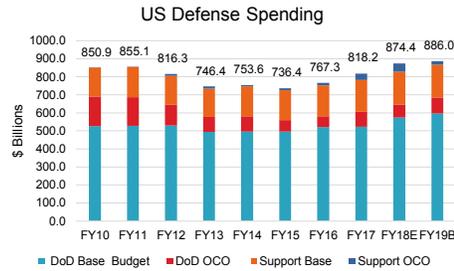
## Defense



- **Procurement on the rise**
  - **2018 budget reflects an 11.6% increase over 2017 Budget, but only a 0.7% over actual 2017 appropriations**
  - **FY2018 Budget includes \$10.2 Billion in Overseas Contingency Operations (OCO) funding**
  - **Nearly all key procurement programs using investment castings have increased in the FY18 Procurement Budget**
  - **Only program with notable decline is the AH-1Z utility helicopter**

Market Overview 18

## Defense Procurement

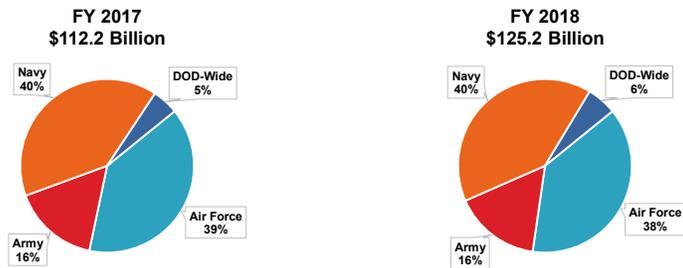


Key factors of interest driving increased DoD appropriations include increased production of F-35 and F/A-18 aircraft and advanced munitions.

Analysis Based on Published Reports from Airline Monitor Speed News / Boeing / Airbus / Public Record

Market Overview 19

## Defense Procurement Breakdown by Service



FY2018 enacted procurement represents an 11.6% increase over FY2017 budgeted procurement, but only a 0.7% increase over actual FY2017 appropriations of \$124.4 Billion.

FY2018 Budget includes \$10.2 Billion in Overseas Contingency Operations (OCO) funding.

Analysis Based on Published Reports from Airline Monitor Speed News / Boeing / Airbus / Public Record

Market Overview 20

## Defense Procurement FY18 Funding by Category



### FY18 REQUESTED PROCUREMENT FUNDING BY CATEGORY (\$ Billions)

Classified and Special Access Programs (SAP)	\$ 24.4	19.5%
Combat Aircraft (Manned)	\$ 13.2	10.5%
Ships - Surface Combatant	\$ 11.9	9.5%
Submarines & Undersea Warfare (USW)	\$ 7.6	6.1%
Rotary Wing	\$ 6.3	5.0%
Comms	\$ 4.9	3.9%
Air Weapons & Missiles	\$ 4.5	3.6%
Intelligence, Surveillance & Reconnaissance (ISR) Aircraft	\$ 3.7	3.0%
Air Support & Integration	\$ 3.7	3.0%
Tracked Combat Vehicles	\$ 3.3	2.6%
Other	\$ 41.9	33.5%
	<b>\$ 125.2</b>	

Nearly all key procurement programs using investment castings have increased in the FY18 Procurement Budget.

\*Note: Excludes RDT&E

Market Overview 21

## Defense Procurement FY18 Modernization Objectives



- ↑ 70 F-35 Lightning (JSF)
- ↑ 6 P-8 Maritime Patrol Aircraft
- ↑ 15 KC-46 Tankers
- ↑ B-21 Long Range Strike Bomber development (increased funding)
- ↑ 14 F/A 18 Hornets
- ↑ 2 KC-130J Tankers
- ↑ 4 CH-53K King Stallion heavy lift helicopters
- ↑ 13 AH-64E Apache helicopters
- ↑ 6 MV-22 Osprey tilt-rotor helicopters
- ↑ \$2.1 Billion in spares and repair parts (increased funding)
- ↑ 5 E-2D Hawkeye early warning aircraft
- ↓ 22 AH-1Z utility helicopters
- ↗ 8 Ships (Objective to increase fleet to 355 deployed battle-force ships from current 282)

- ↑ Higher than 2017 Budget
- ↗ Higher than 2017 Budget & ongoing
- Same level as 2017 Budget
- ↓ Reduced from 2017 Budget

Market Overview 22

## Industrial Gas Turbine Outlook



- 2017 North American investment casting sales for the Industrial Gas Turbine sector are estimated at \$0.9 billion.
  - This represents a 10% decrease from the prior year.
- The outlook for this sector in 2018 is weak as OEM's deplete surplus inventories.
  - North American Industrial Gas Turbine investment casting sales are estimated to fall to \$0.67 billion.
  - This represents 25% decline from 2017 levels.

Market Overview 23

## Industrial Gas Turbines



- In the latter half of 2017, the industry experienced a 25% decline in IGT orders from OEMs
  - OEMs currently working to deplete high inventory levels
  - End user demand is no longer driving the downturn
  - It's "business as usual" for aftermarket repair companies
- Driving factors
  - 2016 end-use customer orders (units) were down by 25%
  - OEMs did not respond quickly enough, resulting in building inventory levels
- 2018 is anticipated to experience further declines on the order of 25% - 30%, with recovery starting in Q4-2018 or Q1-2019

Market Overview 24

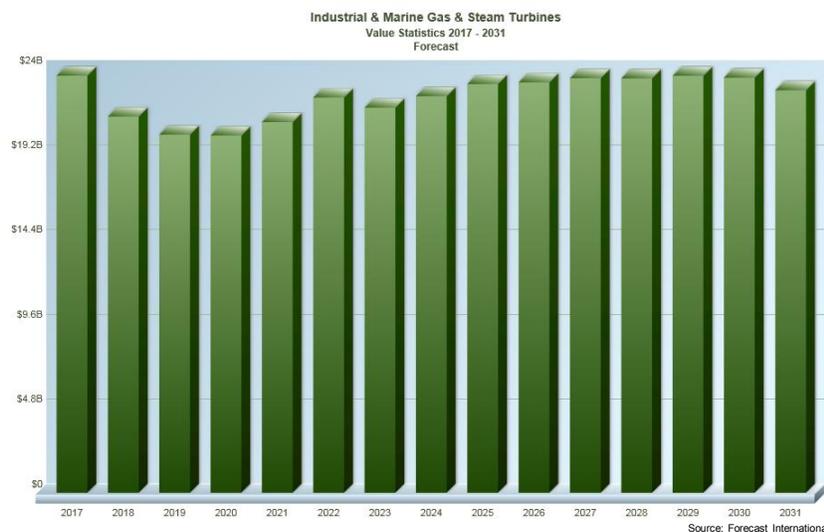
## Industrial Gas Turbines Forecast International Findings



- Forecast International reports that the long term outlook is good
- 2018-2032 unit production forecast to be 24,350 gas and steam turbines, valued at \$357.4 billion.
- Major players are GE Energy, Siemens, MHPS, and Solar Turbines, and Ansaldo Energia.
  - GE will dominate the world industrial power market
  - Siemens will remain a strong second place
- Micro-turbine manufacturer, Capstone Turbine Corporation holds the greatest market share in terms of unit production at 16.3%.

Market Overview 25

## Industrial Gas Turbines Turbine Deliveries (All Types): Actual and Forecast



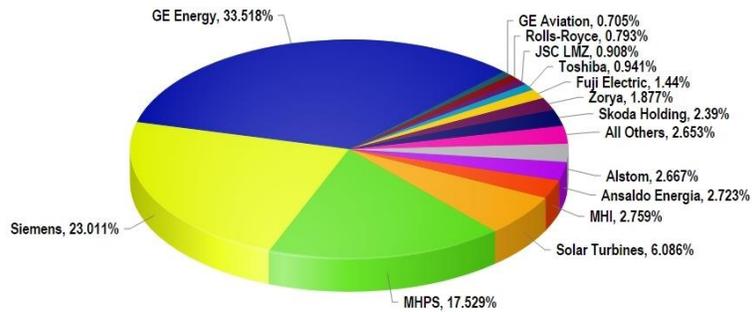
Market Overview 26

## Industrial Gas Turbines OEM Market Share



### Industrial & Marine Gas & Steam Turbines

Value Statistics % Market Share by Manufacturer 2017 - 2031



Source: Forecast International

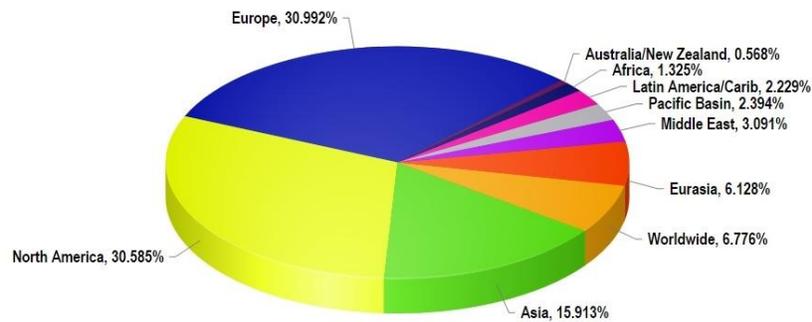
Market Overview 27

## Industrial Gas Turbines Gas Turbine Power Generation by Region



### Industrial & Marine Gas & Steam Turbines

Ten Year Value Statistics % Market Share by End User Region 2017 - 2026



Source: Forecast International

Market Overview 28

## Automotive 2017 Performance and Outlook



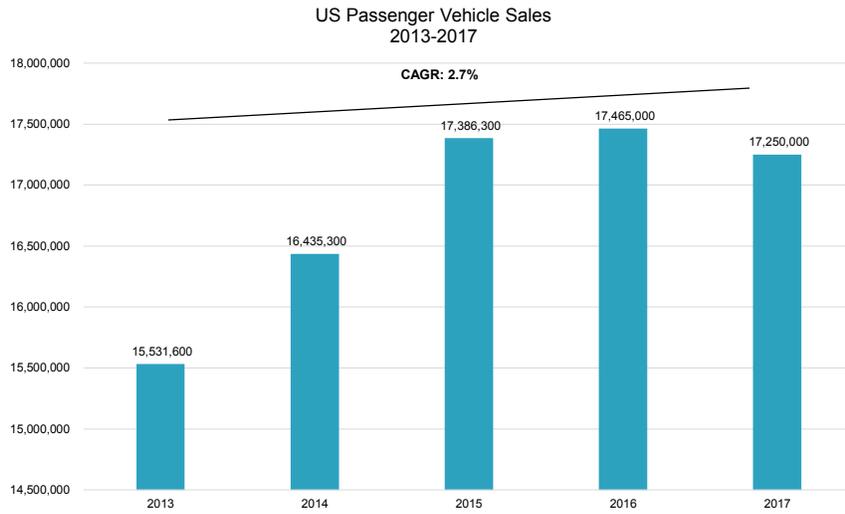
- 2017 North American investment casting sales for the Automotive sector are estimated at \$0.425 billion.
  - This represents a 1.5% decrease from the prior year.
  
- The outlook for this sector in 2018 is expected to experience minor decline.
  - North American Automotive investment casting sales are estimated to fall to \$0.420 billion.
  - This represents 1.2% decline from 2017 levels.

## Automotive US Passenger Vehicles 2017

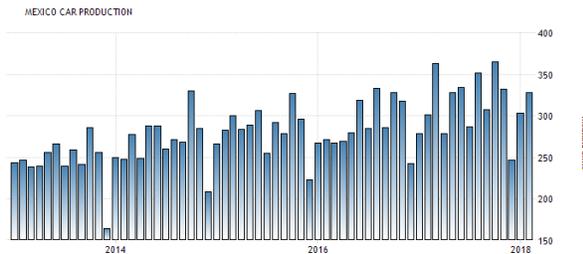
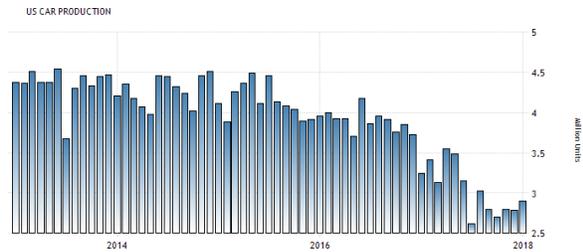


- 2017 realized the sale of 17.25 million passenger vehicles, a 1.5% decline from 2016
  - US passenger car production off by 22.5%
  - US light truck production off by 1.8%
  
- Market Drivers
  - Gasoline prices still relatively low
  - Widespread credit availability
  - Employment gains
  - ...but, American households have become more leveraged with credit purchases over the past several years
  - Production shift to Mexico partially accountable
  
- Industry experts anticipate further but moderate declines

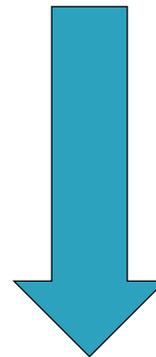
## Automotive US Passenger Vehicle Sales



## Automotive - Passenger Vehicles Production History



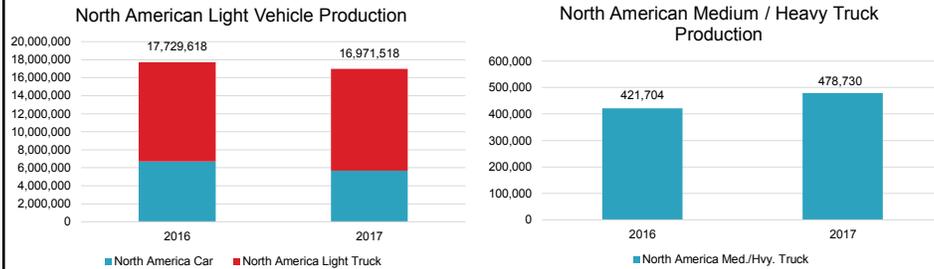
Production Shift



Source: Trading Economics | Federal Reserve

\*Note: Excludes RDT&E

## Automotive North American Production

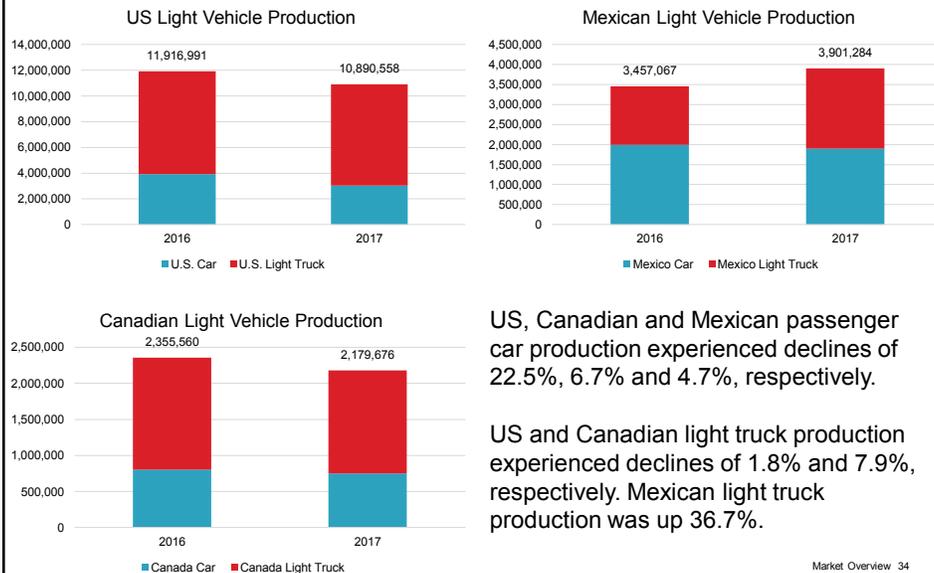


Light Vehicle Production was down 4.3% in 2017, driven by a 15.3% decline in passenger car production, offset by a 2.5% increase in light truck production.

Medium / Heavy truck production was up 13.5%.

Overall North American production was down 3.9%.

## Automotive North American Light Vehicle Production by Country



US, Canadian and Mexican passenger car production experienced declines of 22.5%, 6.7% and 4.7%, respectively.

US and Canadian light truck production experienced declines of 1.8% and 7.9%, respectively. Mexican light truck production was up 36.7%.

## General Industry



- Overall market sector generally tracks to the US rate of industrial production, though subsectors may vary



- Member survey data indicates
  - Overall, 2017 General Industry sales grew by 3.8%
  - 2018 showing signs of continued recovery, with anticipated growth estimated at 4.1%

Market Overview 35

## General Industry – Oil & Gas



- North American foundries saw approximately 20% growth in casting sales in 2017
  - Stocks of casting inventories have been depleted
  - Industry is buying to meet near term demand
- Oil Exploration
  - Land-based exploration has resumed
  - Off shore exploration expected to resume in 2019
- Price per barrel neared \$60 at year end
  - March 2018 prices ranging between \$62 - \$65
  - \$70 - \$72 per barrel anticipated by year end
- 2018 is expected to realize an additional 20% growth, with the market peaking and flattening in 2019

Market Overview 36

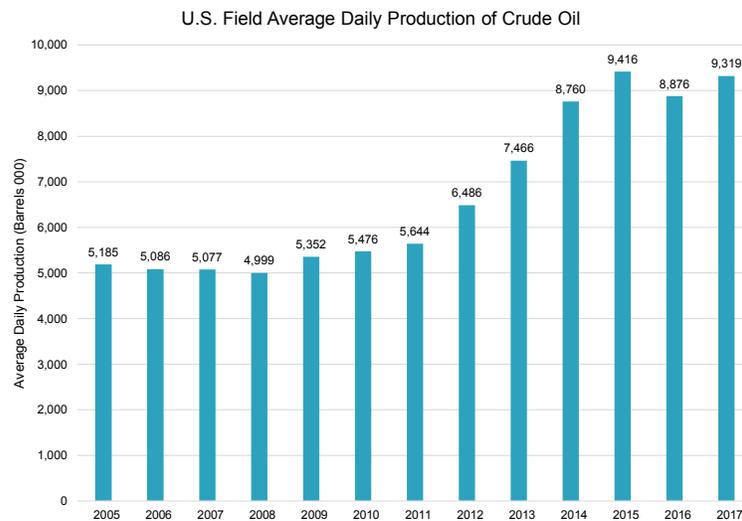
## General Industry – Oil & Gas



- 2017 US field production was up 5% from 2016
  - Q4-2017 monthly YOY change in production output showing consistent improvement
- 2017 year end US Rig Count up 130% from May 2016's low of 404 to 929
  - At 658, Rig Count still down by 54% from 2012 high of 2008
  - As of March 2018, Rig Count was up to 995
- For the first time since 1957, the US became a net exporter of LNG in 2017
  - Exporting more to Mexico and 20 other countries
  - Importing less from Canada
  - Infrastructure constraints eased with new pipelines
  - Shale Gas production continues to exhibit strong growth

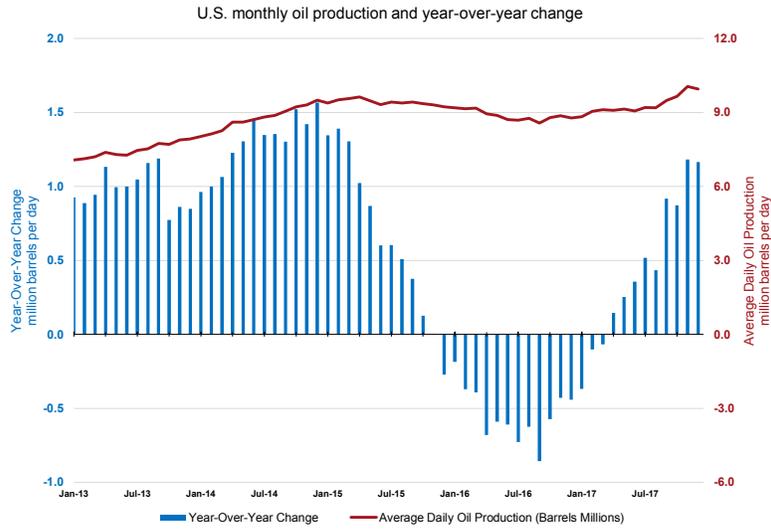
Market Overview 37

## General Industry – Oil & Gas Production up 5% from 2016



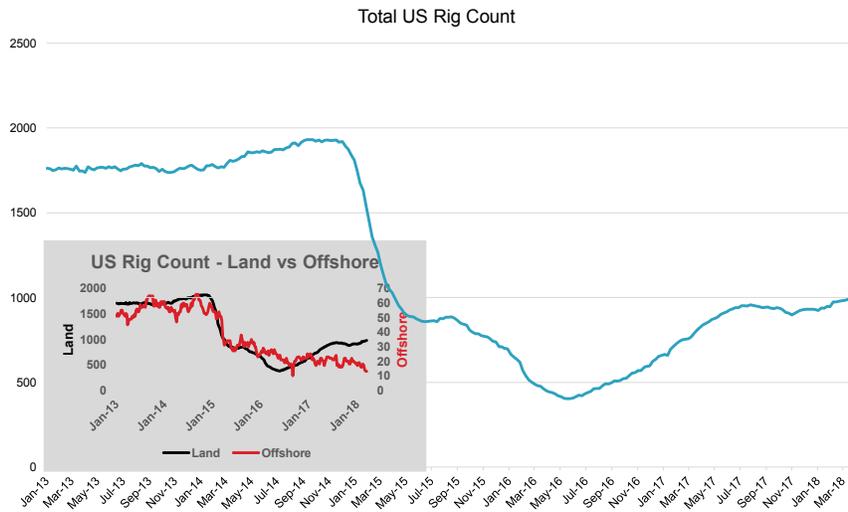
Market Overview 38

## General Industry – Oil & Gas Year-Over-Year change showing signs of promise



Market Overview 39

## General Industry – Oil & Gas Rig count on the rise

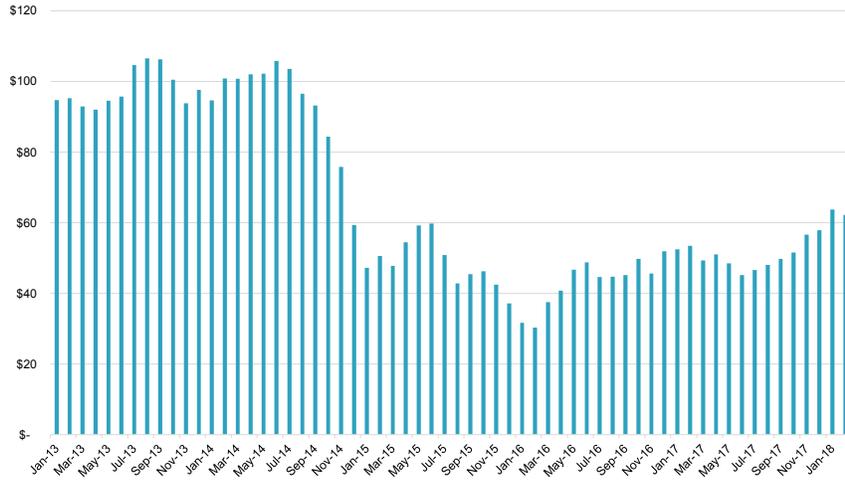


Market Overview 40

**General Industry – Oil & Gas**  
**Jan 2018 is first month above \$60/BB in over 3 years**



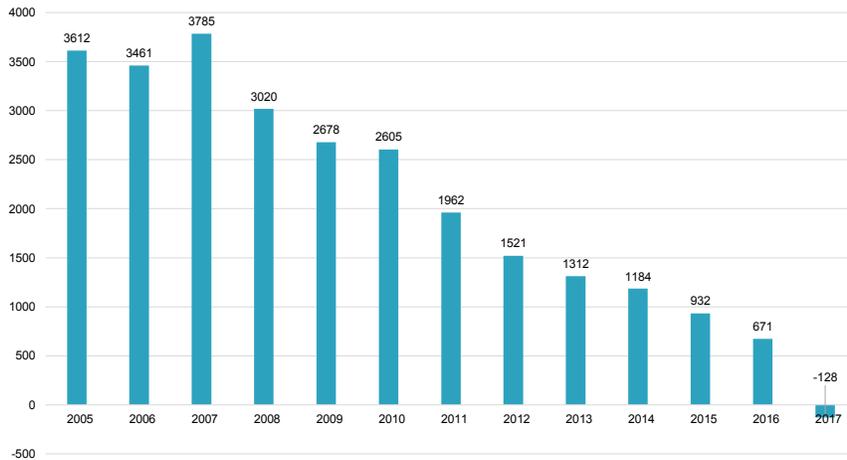
Crude Oil Price per Barrel



**General Industry – Oil & Gas**  
**US Becomes Net Exporter of LNG in 2017**



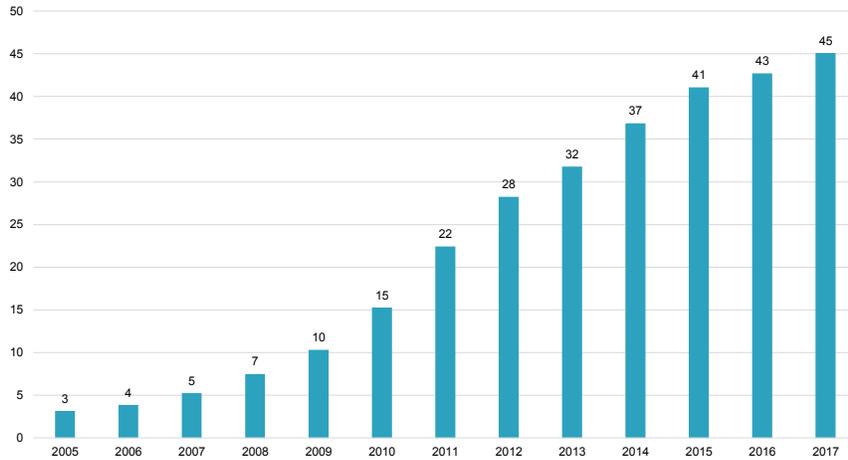
U.S. Natural Gas Net Imports  
 (Billion Cubic Feet)



## General Industry – Oil & Gas Strong Growth in Shale Gas Production



Average Monthly US Shale Gas Production  
(Billion Cubic Feet)



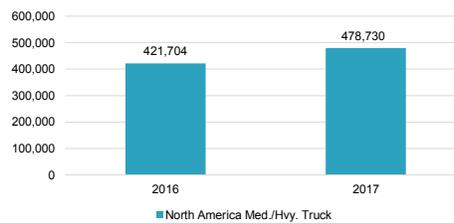
Note: 2017 data reflects average monthly production for 10 months.

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## General Industry – Heavy Vehicles North American Production



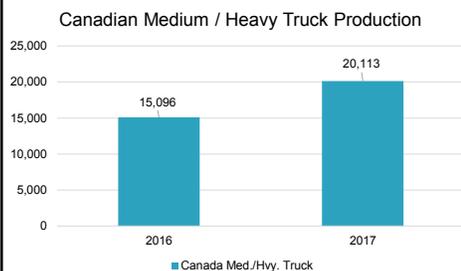
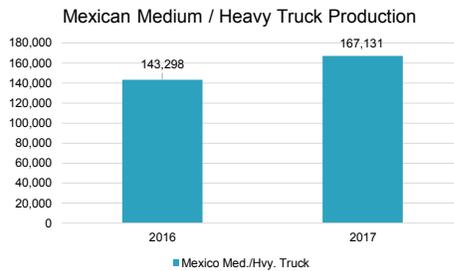
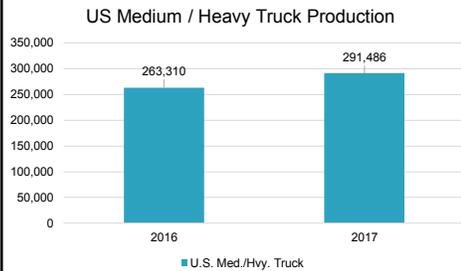
North American Medium / Heavy Truck  
Production



Medium / Heavy truck production was up 13.5%.

Market Overview 44

## General Industry – Heavy Vehicles Production by Country



US, Canadian and Mexican passenger car production experienced growth of 10.7%, 33.2% and 16.6%, respectively.

## General Industry – Agriculture



- Agriculture saw an overall 4.5% growth
  - 2017 represents 1st year of growth since 2013
    - 2WD Tractors <40 HP up 8.1%
    - 2WD Tractors 40<100 HP down 0.1%
    - 2WD Tractors 100+ HP down 8.1%
    - 4WD Tractors Up 4.9%
    - Combines up 5.1%
  - 2018 expected to remain flat or show moderate decline
    - 2018 is off to a good start
    - Industry concerns over pending U.S. steel tariffs dampening outlook

## General Industry – Construction Machinery



- In 2017, the construction machinery sector performed better than expectations, showing a only a 2% decline from 2016
  - Earlier forecasts showed double digit declines
- Improved market performance realized mid-year
  - Infrastructure bill
  - 9% growth in residential housing starts
  - Non-residential down 3%
- 2018 expected to see growth of 4% - 5%
  - Largely driven by strong growth in equipment rental market

Market Overview 47

## General Industry – Orthopedics & Medical Devices



- Orthopedic Implants
  - The industry reports a 7.6% rise in 2017 production
  - Continued growth being fueled by
    - Aging baby boomers with active lifestyles
    - Implants at younger ages; Generation-X a growing market
    - Less invasive procedures with extended implant life
- Medical Devices
  - Foundries reported 2017 growth of 5.4%
- Both sectors expected to continue growing at the same rate for the forecast period

Market Overview 48

## General Industry – Pumps & Valves



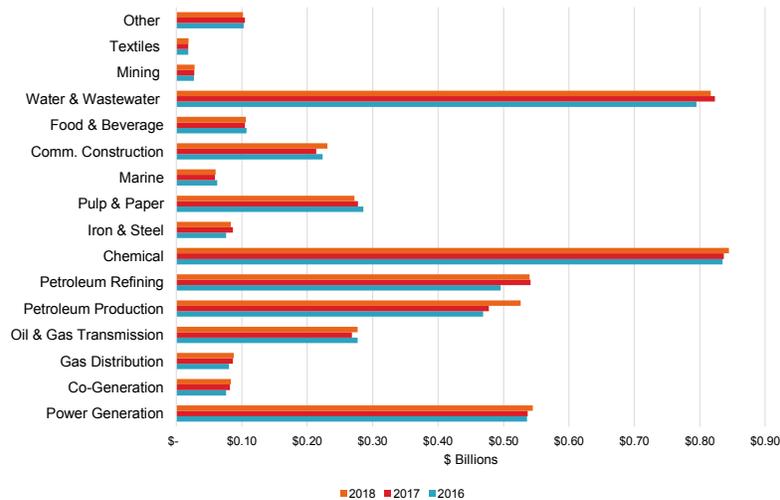
- Though 2017 overall pump & valve sales yielded 1.8% growth over 2016, there were isolated hot spots
  - Pumps & valves used in Iron & Steel production were up 13.9%
  - Co-Generation pump & valve sales were up 7.9%
  - Gas Distribution pump & valve sales were up 7.5%
  - Marine and commercial construction pumps and valves were down 5.4% and 4.2 % respectively
  
- The outlook for 2018 shows an overall 1.7% growth
  - The petroleum production subsector is expected to grow by 10%
  - Commercial construction subsector should see 8% growth
  - Iron & steel will be down 4%

Market Overview 49

## General Industry – Pumps & Valves



Pumps & Valve Sales  
(Finished and Assembled)



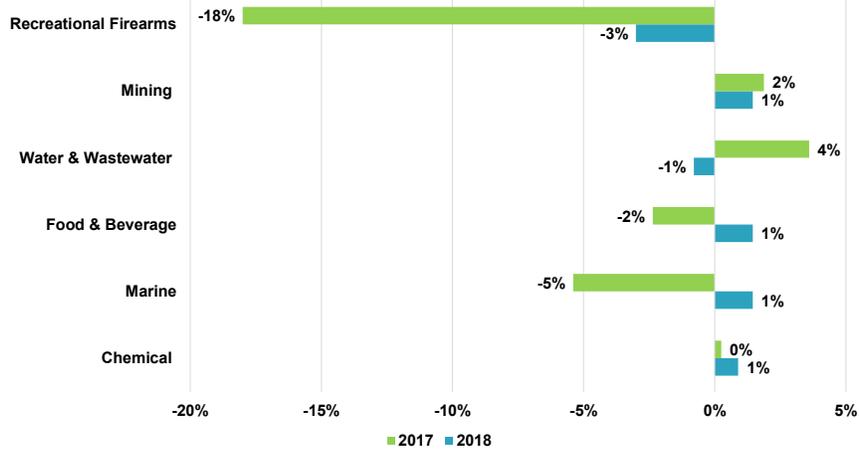
Data Courtesy of the Valve Manufacturers Association

Market Overview 50

## General Industry – Other Segments



### Other Casting Markets



## North American Investment Casting Select Market Trend Summary



	2017	2018	
General Industry	Aerospace	↑	↑
	IGT	↓	↓
	Automotive	↓	→
	Oil & Gas	↑	↑
	Agriculture	↑	→
	Construction Machinery	↓	↑
	Recreational Firearms	↓	↓
	Agriculture	↑	↑
	Construction Machinery	↓	↑
	Mining	↑	↑
	Orthopedic Implants	↑	↑
	Medical Devices	↑	↑
	Pumps & Valves	↑	↑
	Beverage & Food Processing	↓	↑

## North American Investment Casting 2017 Sales and 2018 Forecast (\$ Billion)



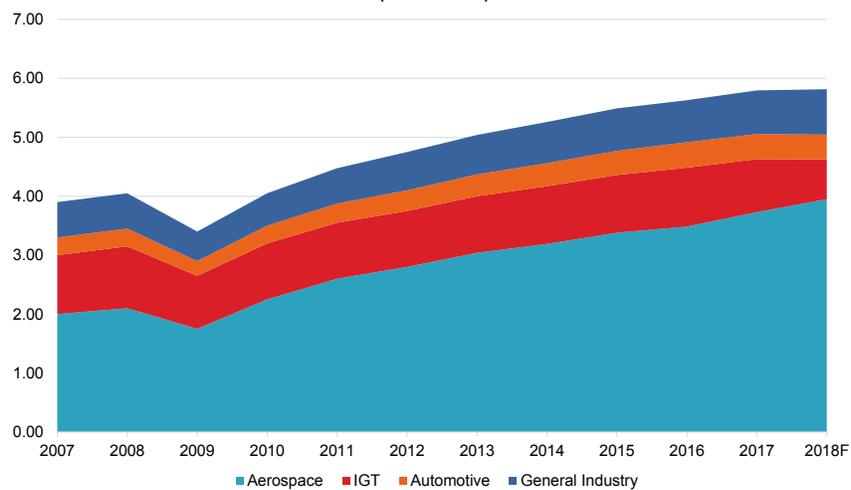
	2017	2018F
Aerospace	3.73	3.95
IGT	0.90	0.68
Automotive	0.43	0.42
General Industry	0.74	0.77
	<b>\$ 5.80B</b>	<b>\$ 5.82B (0.3%)</b>

Market Overview 53

## NA Investment Casting History



North American Investment Casting Sales  
(\$ Billions)



Market Overview 54



**Thank you!**

# **2018: Running Lean, New Decisions & Challenges**

**Rick Alaniz  
John Cruickshank  
Cruickshank and Alaniz, LLP.**

## It's 2018, Why Is Managing Labor So Hard?



Presented by: John Cruickshank & Rick Alaniz

## Answer

Because people have free will. And therefore are much harder to manage than machines.

Because they have legal protections that are changing and growing constantly.

Because your business really needs good employees. And its hard to find them among the people who don't want to work. And by the time you find them and train them up, they leave to go to a competitor for slightly more money.

# Agenda

- Because the Laws are Always Changing & Growing (state & federal)
  - *Labor*
  - *Immigration*
- Because People Have Free Will
  - *Harassment*
  - *Driver Conduct*
  - *Wage Inflation*
- Because you Want to Keep Your Best People
  - *Best Practice Ideas*

# But Let's Start with Q&A

- Anything you want to ask?
  - *Light duty/FMLA/Americans with Disabilities Act?*
  - *Paid Time Off?*
  - *Workers Comp?*
  - *Retention/Hiring?*
  - *Drug Use & Testing?*
  - *ICE Raids?*
  - *Wage strategies*

# Regulatory Developments

## Regulatory Budgets Get the Axe

- President Trump is starving the beast of regulatory agencies
- Labor, Environmental, Safety budgets have all been cut
- But this isn't the time to get overconfident.
- Agencies are still out there enforcing the rules. And there are still problems.

## Labor Laws: NLRA Still Easiest to Simply Comply With

- NLRB Diminished But Still Very Active!
  - *We are still seeing a lot of enforcement action. A lot.*
- Best practice is to comply with the law
  - *Write your No Solicitation, Intellectual Property, etc. policies fully aware of the limitations placed on the policies by the NLRA*
    - Don't give NLRB an excuse
  - *If an employee actually exercises their Section 7 rights, which is more than just talking about a union, don't fire that person*
    - Increasingly common among Millennials

## Labor Laws: Joint Employer Standard

- Unfixed.
  - *One of the recently appointed NLRB Board Members should have recused himself for participating in the original case*
- Back to the Browning-Ferris rules which focus on the potential to control rather than exercising actual control.
- Only further underscores the recommended action:
  - *Have very clear contractual relationships with your staffing companies.*
  - *You are paying them - keep them under your thumb*

# Safety: OSHA Still Active

- OSHA is still investigating complaints
- Lockout/Tag Out continues to be major problem
- Supervisors pressuring Employees to Come Back Early from Workers' Comp and other medical leave
- Recordkeeping, Recordkeeping, Recordkeeping
  - *Form 300A Should be Posted Currently*
  - *Don't forget to update your Accident & Injury Logs!*
- Fines have Jumped

## OSHA Penalties

Below are the penalty amounts adjusted for inflation as of Jan. 2, 2018.

Type of Violation	Penalty
Serious Other-Than-Serious Posting Requirements	\$12,934 per violation
Failure to Abate	\$12,934 per day beyond the abatement date
Willful or Repeated	\$129,336 per violation

# State Agency Activities

- Especially in blue states but basically everywhere
  - *State investigations are white hot*
  - *Will continue to grow*
- A lot of wage and hour focus
  - *Especially on 1099 relationships where no one pays the unemployment and payroll taxes*
- Continue to worry about any misclassification or timekeeping issues



See anyone  
you recognize?



# Immigration

## Immigration Stats

- Refugee admissions have halved since 2016
- About 1 million immigrants are expected to lose their immigration status in 2018
  - *Primarily Honduran, Somalia, Nepalese, and Yemeni*
  - *Next year, another 250,000 primarily El Salvadoran and Haitian*
- Expected: mandatory electronic verification of work authorization before the next Presidential election for all workers in the U.S.

## Enforcement Actions Accelerating

- Expect still more I-9 Audits. The Acting Immigration and Customs Enforcement Director Thomas Homan issued a directive “to increase that [level of enforcement] by four to five times.” 10,000 new agents will be hired and the 7-Eleven raids “are just the beginning.”
- In 2017, HSI conducted 1700 audits (a record) and obtained \$95 million in fines (also a record).
  - *Each violation ranges from \$220 to \$2,191.*
- With the Joint Employer ruling, it is recommended you insist on your staffing companies verifying in writing – each year – that they properly I-9 their entire workforce
  - *You show that to the federal investigator and have no further comment.*

## If You I-9 Yourself

- Remember to retain the I-9 for 3 years from the date of hire, or 1 year from date of separation – whichever is longer.
  - *Missing I-9s are a common mistake*
- Don’t forget to reverify those employees that have expiring Employment Authorization Cards.
  - *Another common mistake*
- If you still haven’t been audited, now is a very good time conduct the self-audit and correct your paperwork

## In the Event of a Raid — Ask to See the Warrant

- Between the raids on 7-Eleven and in Northern California last month, they are scaring us a lot with the immigration raids
  - *Vulnerable employers need to be careful about intentional and knowing criminal charges*
- Know your rights
  - *They must have a warrant signed by a Judge or federal magistrate to enter your premises*
    - Ask to see it
    - Don't get bluffed
- Demand an inventory for anything seized
  - *Check it*

## In the Event of a Raid — Know Your Rights

- If they have a warrant, you have a right to an attorney for any interviews with supervisors/managers
  - *Highly recommended you not agree to an interview without discussing it with legal counsel*
- ICE can interview any hourly employees they want
- Your Employees Rights'
  - *They are not required to answer the questions. They can invoke the 5<sup>th</sup> amendment. They will probably be arrested.*

## Trade — Sigh...

- Everyone knows about the steel tariffs
  - *Tariffs always benefit a few select winners and hurt everyone else*

- And that's before the Retaliations

*E.U. Leader Threatens to Retaliate With Tariffs on Bourbon and Bluejeans*

By MELINDA EDDY and CHAD BRAY | MARCH 11, 2016



- In other news, the remaining 11 members of the Trans-Pacific Partnership are expected to sign the Comprehensive and Progressive Agreement for the TPP (CPTPP) this week
  - *US will likely miss out on access to those markets and 495 million customers*

## Climate — Do We Need to Worry?

- US is the only country to reject the Paris climate deal
- Are we really sure we're right and the rest of the world is wrong?
- Climate is another way to expect other countries to justify slapping tariffs on us...and now everyone's gonna rush too...
- Our great grand children will live on this plant too

# One of Our Biggest Risk Factors

## Focus on Employees that Drive for the Company In Any Capacity

- Employment lawsuits (even class actions) aren't likely to bankrupt the company
- Vehicle accident cases in which the plaintiff can show negligence and be awarded punitive damages ... can bankrupt a company
  - *Yes, even when driving their personal vehicle on company business*
- Best Practices:
  - *Yearly MVRs for all drivers*
  - *Yearly driver safety course*
  - *Have a driver conduct policy!*
    - *Have this policy personally signed*
  - *Don't overload the trucks*
  - *Perfectly documented maintenance record (no exceptions)*

## Basics of a Driver Conduct Policy

- Always wear your seat belt. Always demand everyone else in the vehicle is wearing their seat belt.
- Never deactivate the air bag on a company owned vehicle or while engaged in company business.
- Always follow all traffic laws for what ever state or community you are in.
- Do not drive while distracted or drowsy.
- If you are in an accident, notify your supervisor or HR within 24 hours (if able).

## Address Distracted & Impaired Driving

- Have express rules on cell phone use
  - *Hands free only?*
  - *Parrot ([www.parrot.com](http://www.parrot.com))*
  - *No texting*
- Also address impairment
  - *Zero tolerance for drinking and driving after company events?*
  - *Or offer corporate ride sharing*
  - *Don't forget about prescription drug use*
  - *And marijuana use*
- Very important part of your legal defense after the accident

# Scenario: The Nightmare

Danny has always been our best sales guy. He knows all the big national accounts and they all love him. He also has a drinking problem that is sometimes both a blessing and a curse at the new product launch parties. Staying late with him at the launch parties has become a ritual. You have actually seen Danny close major sales on his cell phone late into the night as customers loved what they saw.

About six months ago, the company handed out a policy that you glanced at before you signed that advised employees not to use their handheld cell phones while driving, especially not in the state of Washington where you both live. And to always use ride sharing rather than drive while impaired.

Today is the latest launch party and Danny is in rare form. He lands two deals and is close to closing a third. And he's buying rounds for everyone. You have a great time before taking an Uber home.

The next morning, you hear from a friend that Danny decided to drive himself home from the launch party and while on the road, hit a family of four. The police suspect that he may have been drinking and that he may have been on his phone at the time of the accident.

## Questions

- (1) What actual crimes may Danny have committed?
- (2) While walking to the office, you are ambushed by a reporter from the local TV stations who asks you for a comment. What do you say into her camera?
- (3) Then the Reporter asks you if you knew your employee had a drinking problem. How do you respond?
- (4) Could the company be held liable for the accident? If so, how?
- (5) What would the company point to for arguing that it shouldn't be held liable for punitive damages?
- (6) If you were on the jury in this lawsuit, would you award punitive damages to the victim's family?

# Macro Labor Outlook

## The Hard Facts

- 4.1% Unemployment Rate
  - *Full employment is 5.5%*
- 5.81 million job openings at end of 2017
- Shrinking immigrant and refugee labor
- Millennial disinterest in our jobs

# The Hard Facts

- 20 states raised their minimum wages at the start of 2018
  - *And most of those states have more increases to come*
  - *Potential wage compression issues*
- In the long run, this drives us towards more automation and technology
- In the medium run, a rising tide lifts all boats
  - *Even for your non-minimum wage folks...as Starbucks now looks more attractive*

# Labor Inflation

- Expect to see continued wage inflation
  - *In manufacturing, we are seeing a lot of 3% increases to keep people*
  - *Companies frustrated with inability to hire/victims of repeated poaching, are going up 5%*
    - Especially for skilled labor such as maintenance and machine operators
- Tip: Raising wages is the best time to announce new performance expectations
  - *Frequent targets: waste, attendance, units per hour*

# Best Practices

## Vacation v. Sick Leave v. Paid Time Off

- What is the difference?
  - *Vacation – usually awarded on an anniversary date, usually must be taken in large increments (minimum of a week), must be pre-scheduled and approved, usually not given in 1<sup>st</sup> year*
  - *Sick Leave – required in 7 states and several cities, often awarded after the 90<sup>th</sup> day of employment, can be taken in as little as 2 hour increments, minimal prior notice required*
  - *Paid Time Off – earned per pay period, can be used for both sick time or any other purpose, usually taken in minimum of 4 hour increments*

## Paid Time Off > Vacation

- Better for recruiting Millennials
  - *Common feedback in exit interviews from Millennials who resigned was they didn't want to have to work an entire year before earning time off*
- Allows you to provide paid sick leave as part of your PTO policy
  - *Rather than having separate Vacation and Paid Sick leave policies*
- Easier to manage absences especially for salaried employees

## Improving Incentive Programs

- Incentives continue to be one of our best tools for squeezing more value out of our Labor
- Optimal Attendance bonus structure:
  - If you work every (or most) scheduled days over a period, you earn a multiplier times your # of hours worked. Then recalculate OT. Very efficient way to reward people who show up and stay for all needed OT.
- RONA (Return on Net Assets) bonus:
  - *Good team bonus for your Exec team*
  - Usually tied to hitting a specific metric like 9%

# No One Can Pass a Drug Screen

- Marijuana is legal in a lot of states and decriminalized in a lot more
- What percentage of your qualified applicants are unhireable because they can't test clean on a post-offer drug screen?
- Some companies are reconsidering the post-offer drug screen
  - Still mandatory testing for post-accident and reasonable suspicion
  - Not for everyone

# Eliminate Donning & Doffing Liability

- Donning & doffing can actually be solved. Stop thinking of it as a legal issue and think of it as an operational issue
  - *You must capture all clothes changing time on a time card*
- How?
  - *Step 1: Use actual time*
  - *Step 2: Strategic time clock placement. If you place your time clocks in front of the locker room (before donning takes place), you eliminate any argument that clothes changing occurs off the clock*
- For the meal break
  - *Autodeduct the 30 minutes*
  - *Have EEs record actual time (but round)*
  - *Always pay actual time and discipline for violations*

# Don't Misclassify Employees

- Outside v. Inside Sales
  - *Primary duty must be making sales; and*
  - *Works away from ER places of business.*
    - Some state's require more than 50% time
- Independent Contractor
  - *Are they an LLC?*
  - *Do they set their own schedule?*
  - *Can they work for other companies?*
- Asst. HR/Payroll/Executive Assistant/Controller
- Hot new one: IT Professional

# Light Duty v. Modified Duty

- Light Duty – putting someone in a different job until they are fully cleared to return to work
- Modified Duty – putting someone in their own job but removing some of the job duties until they are fully cleared to return to work
- Always be wary of conditions that qualify as disabilities under ADA
  - *And therefore trigger the reasonable accommodation process*
- Remember you can modify wages if you modify job duties

# Deterrence is Better than Enforcement

- Worst outcome: having to fire EE for violating rule
  - *Generally unpleasant no matter what*
  - *And then you have to recruit, interview, hire, and train someone*
    - Who usually won't be as good as the person you fired (at least for a while)
- Best outcome: no EE ever violates the rule
  - *No one is fired, no need to do any of the above*
- Proper education of EEs about key rules and expectations is the most overlooked element of management

# Simple Ideas for Safety

- Post a Large Safety Poster in the parking lot that everyone sees before they enter the plant
- Start every meeting with a safety reminder
- Have a Safety Committee with hardhat stickers
  - *For a lot of reasons*
- Safety based incentives possible but still grey area

## Focus on Female Bullying

- Working conditions, not pay, continues to be the biggest complaint we hear from EEs
- Frequent complaints that cause Retention problems:
  - Bullying
    - A lot goes on back there that you never see
    - Pay attention to the Leads especially
    - **And women on women bullying**
  - Nepotism/Favoritism
    - Especially in scheduling and promotions

## Creating the Family Atmosphere

- Try to walk through the production area at least once a week, if not daily
  - *The companies where senior management is detached from production always have the worst problems*
  - *Seeing you around and mindful, keeps your supervisors and Leads on their toes*
- One client reported enormous positive feedback when a couple of managers began taking Spanish lessons and talked occasionally with the workers in Spanish

**THANK YOU! ANY QUESTIONS?**

John Cruickshank & Rick Alaniz  
john@cruickshank.attorney

# **How to Compete More Effectively vs Imported Castings**

**Harry Moser  
Reshoring Initiative**



# Reshoring Initiative

*Bringing Manufacturing Back Home*

## How to Compete More Effectively vs. Imported Castings

ICI Spring  
Management  
Meeting 2018

Harry Moser  
Founder & President  
Reshoring Initiative

## The Timing is Right

### World Bank: “New Technologies Fuel Reshoring/Domestic Sourcing”

- Increasing U.S. global competitiveness
- Labor now represents a smaller share of total costs
- Consumer demand for customization/short cycles requires close proximity
- Therefore: More jobs reshoring
- Global trade growth decreased
  - 2010: 12.5%
  - 2017: 4.2%

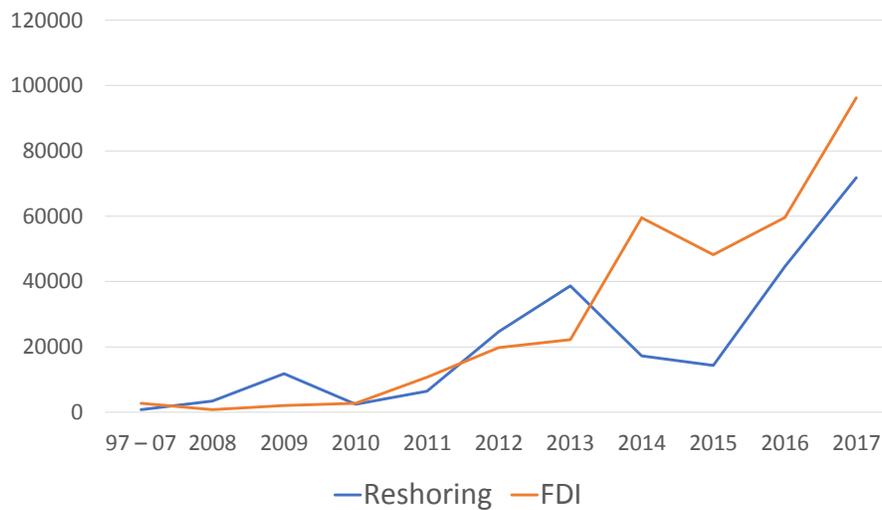
Source: World Bank, “Trouble in the Making? The Future of Manufacturing-Led Development”, Sept. 20, 2017,  
<http://www.worldbank.org/en/topic/competitiveness/publication/trouble-in-the-making-the-future-of-manufacturing-led-development>

## The Tide Turned in 2016

Manufacturing Jobs/Year			
	2000-2003 Annual Average	2016	% Change
New Offshoring	~240,000	~50,000	-75%
New Reshoring & FDI	12,000	77,000	+ 500%
Net Jobs Gained	~-220,000	~27,000	N/A

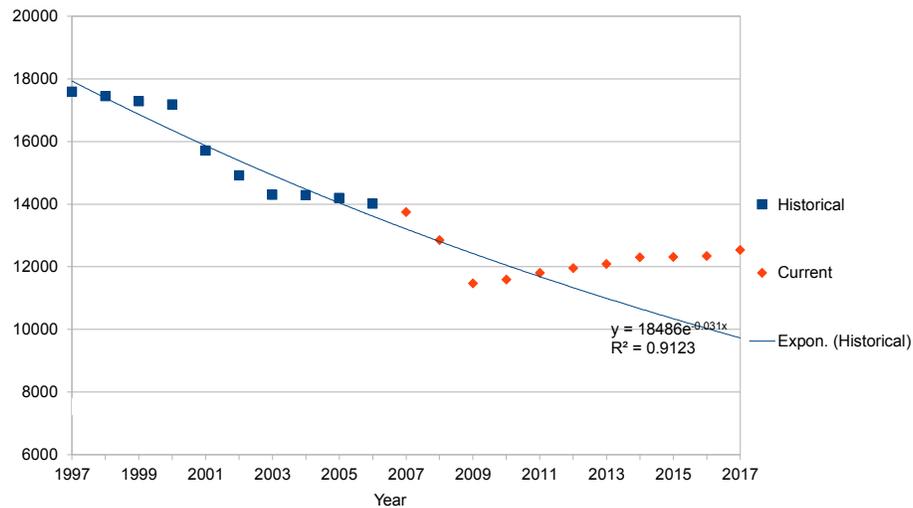
3

## Reshoring and FDI Mfg. Jobs Announcements



## U.S. Mfg. is Beating the Trend

BLS Manufacturing Employment, 000s



## Definitions

- Reshoring/Backshoring/Onshoring/Insourcing: Bringing back manufacture of products that will be sold or assembled here.
- FDI: Similar logic. Different owner.
- Localization. Producing near the consumer.
- Nearshoring: Mexico or Canada
- U.S. potentially the biggest beneficiary.

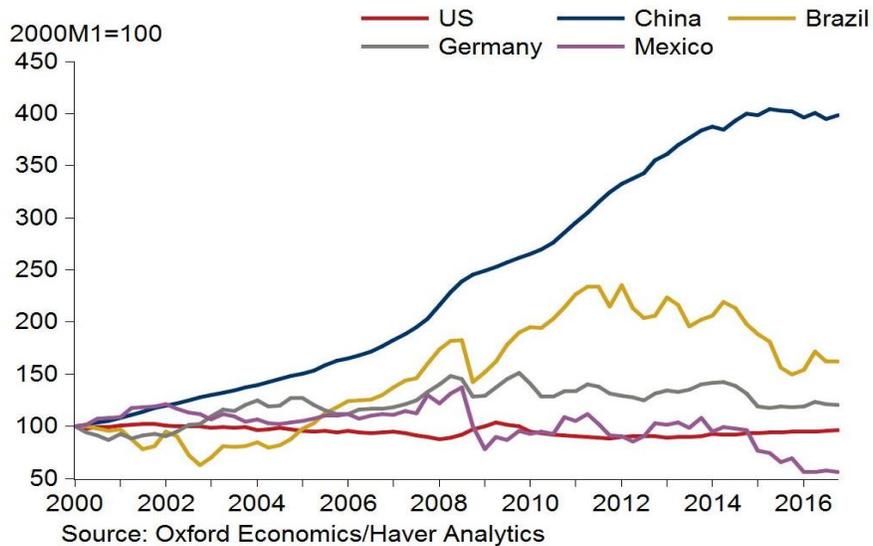
## Flawed Company Sourcing Models

60% of manufacturers:

- Apply “rudimentary” total cost models
  - Wage Arbitrage
  - PPV (Purchase Price Variance)
  - Landed Cost
- Ignore 20% or more of the total cost of offshored products
- Also applies to BOP, call centers & IT

Source: Archstone Consulting survey, American Machinist Mag., 7/16/09

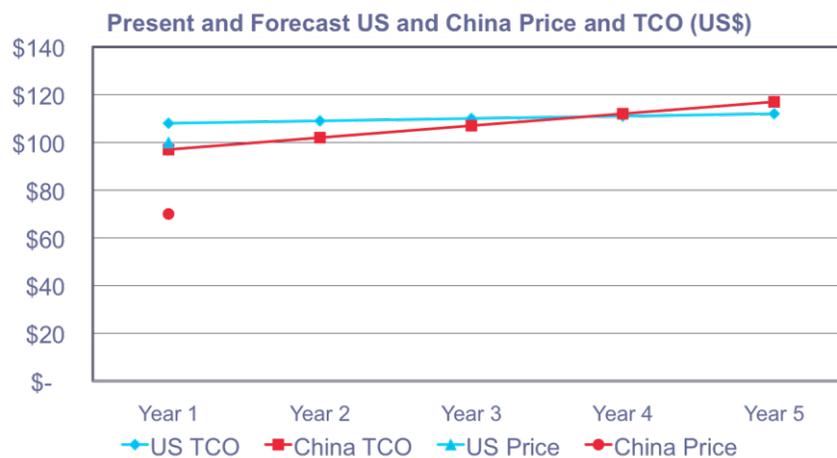
## Indexed Unit Labor Costs in Manufacturing in US\$



## The Industry-Led Reshoring Initiative Provides

- Online Library of 5,000+ reshoring articles
- Statistics from TCO and Library databases
- Case Study template for posting cases.
- Motivation for skilled manufacturing careers
- Free Total Cost of Ownership (TCO) software for:
  - Companies for sourcing
  - Suppliers of parts and equipment for selling

## TCO Comparison Example



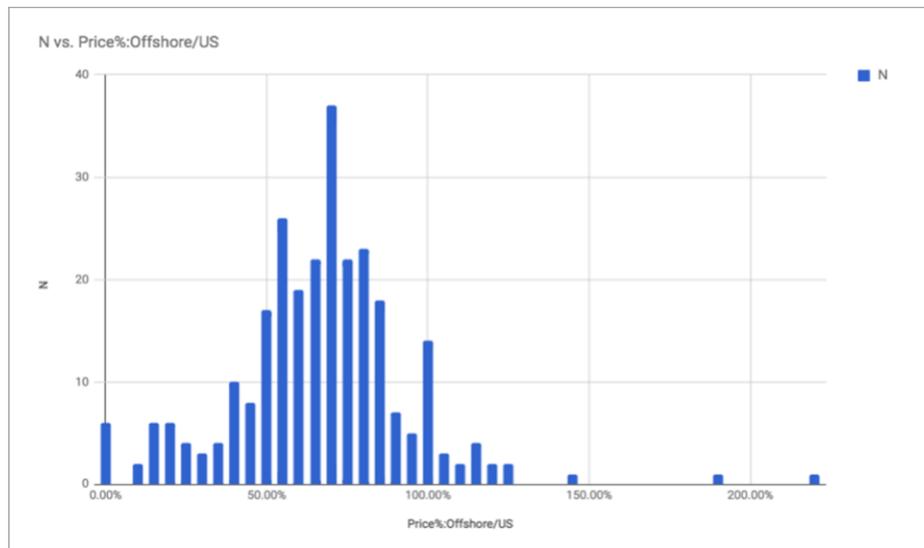
## TCO cases, China vs. U.S.

Comparison Basis	% of cases where U.S. has the advantage
Price	5%
TCO	53%
Difference	48%*

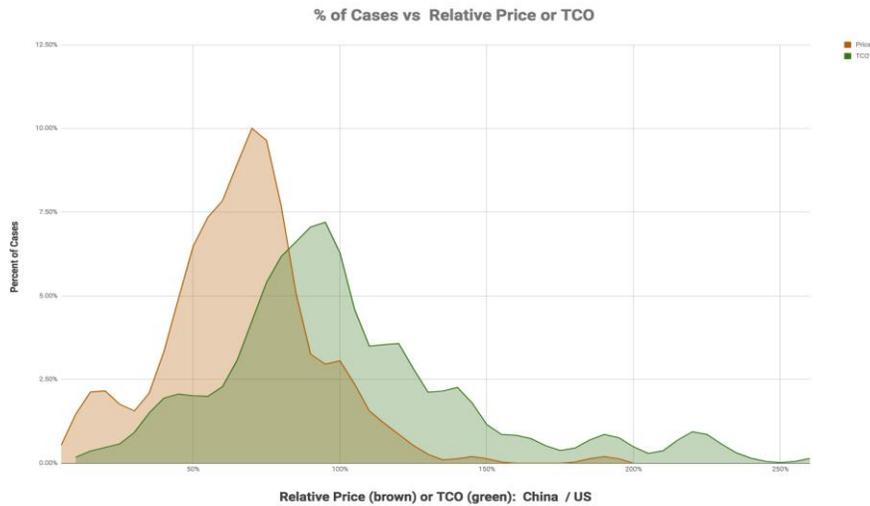
\*Conservatively 25% might return if companies shifted to TCO

Source: TCO user database

## Chinese ex-Works Price, % of U.S.



## Chinese Price and TCO, % of U.S.



Source: TCO User Database, Reshoring Initiative

## Balance the \$700 billion goods trade deficit

- 5 million manufacturing jobs
- Cut U.S. budget deficit by about 50%
- Strengthen the middle-class
- Increase manufacturing: 40%
- Strengthen recruitment
- Dramatically increase domestic demand
- Allow productivity **and** growth in mfg. employment

# Virtuous Cycle: Reshoring/Productivity



# Some Reshoringers



## Cast Iron Parts for Auto Industry (Foreign Direct Investment)



- Germany to Franklin, KY
- \$200 million investment
- 340 new jobs by 2022
- First production facility outside of Germany
- Reasons:
  - Proximity to customer
  - Skilled workforce
  - Infrastructure

Source: [http://foundrymag.com/meltpour/construction-starts-transplant-auto-parts-plant?NL=QMN-01&issue=QMN-01\\_20160927\\_QMN-01\\_666&sfvc4enews=42&cl=article\\_2&utm\\_rid=CPG03000006797420&utm\\_campaign=14758&utm\\_medium=email&elq2=e11c61d8b390485b8b0e8baed8d55d6c](http://foundrymag.com/meltpour/construction-starts-transplant-auto-parts-plant?NL=QMN-01&issue=QMN-01_20160927_QMN-01_666&sfvc4enews=42&cl=article_2&utm_rid=CPG03000006797420&utm_campaign=14758&utm_medium=email&elq2=e11c61d8b390485b8b0e8baed8d55d6c)

## Contract Aluminum & Zinc Die Casting



- Convinces customers to reshore or stay onshore:  
Dazor Manufacturing Corp.
- Dazor reshored 90% of parts
- Reasons:
  - “First-batch syndrome”
  - Travel cost; Communication; Freight cost;  
Lead time; IP risks; Automation

Source: Rebecca Carnes, Design2Part Magazine. “A Case Study in Re-shoring: One St. Louis OEM Decides to Leave China and Look in His Own Backyard.” 2013. <http://www.jobshoptechnology.com/Article.aspx?ArticleID=217>

## Gear Boxes for Agricultural Machinery



- Reshored production from China to PA and IL
- Brought contract work to Buck Co. (PA foundry) and Circle Gear (IL machine shop)
- Could create up to 20 new jobs in the future
- Reasons:
  - Quality: 25% of gear boxes from China failed due to substandard metals used
  - Equivalent price: Cost about \$900 to produce gear boxes in US, and between \$800-\$900 to produce in China
  - Total cost

Source: Jim T. Ryan, Central Penn Business Journal. "Pequeea Machine Joins the Reshoring Movement: Reshores Part Production for Better Quality." March 15, 2013. <http://www.themadeinamericamovement.com/2/post/2013/03/pequeea-machine-joins-the-reshoring-movement-reshores-part-production-for-better-quality.html>

## HUBBARDTON FORGE®



### The Results:

- We are making decisions on AI die a component by component basis.
- Have seen components that would have been sourced overseas now sourced domestically.
- Trends
  - Components that have had a **unit price difference of 50% or less** have been good candidates for keeping domestic.
  - Size/Weight of component and tooling costs make a big difference.
  - Beginning to see some trends among component types/commodities.

### Reshored & FDI'd Industries: Top 10

Rank	Industry	Jobs
1	Transportation Equipment	133,963
2	Electrical Equipment, Appliances, Components	35,340
3	Plastic/Rubber Products	29,220
4	Fabricated Metal Products	18,725
5	Computer/Electronic Products	18,393
6	Apparel/Textiles	17,166
7	Chemicals	16,257
8	Machinery	15,619
9	Wood & Paper Products	10,723
10	Furniture & Related Products	7,170

Sources: Reshoring Initiative Library Cases 2010 through 12/31/16.

### Negative Issues Offshore: Top 10

Rank	Negative Reasons Not to Offshore	# of times cited
1	Quality/rework/warranty	307
2	Freight cost	180
3	Total cost	144
4	Delivery	96
5	Inventory	95
6	Rising wages	84
7	Supply chain interruption risk/Natural disaster risk/Political instability	81
8	Intellectual property risk	72
9	Loss of control	59
10	Communications	55

Source: Reshoring Initiative Library, December 2016

## Positive Reasons to Reshore: Top 10

Positive Reasons to Reshore/FDI	# of times cited
Government Incentives	443
Skilled workforce availability/training	391
Proximity to customers/market	382
Image/brand	353
Eco-system synergies	302
Lead time/Time to market	213
Automation/technology	183
U.S. price of natural gas/chemicals/electricity	144
Manufacturing/engineering joint innovation (R&D)	142
Infrastructure	133

Source: Reshoring Initiative Library, December 2016

## Top Countries From Which Reshored and FDI'd

Rank	Country	Jobs	Companies
1	China	79,540	745
2	Germany	54,306	177
3	Japan	35,292	159
4	Mexico	19,399	115
5	Canada	15,787	120
6	Switzerland	10,947	45
7	Korea	10,821	32
8	Spain	5,708	23
9	United Kingdom	5,127	41
10	Denmark	4,670	18

Source: Reshoring Initiative Library, 2010 through 2016.

# Virtuous Cycle: Reshoring/Skilled Workforce



## But how do apprenticeships and credentials pay?



## Local Skilled Workforce Recruitment

<b>Issue</b>	<b>Solution</b>
“Trades” and “vocations” image	Call them “Professions”
Manufacturing career image due to offshoring	Help media report the local reshoring cases of the month. Use our Case Studies feature.

## Selling using TCO

- Focus on profit impact, risk management, strategic benefits
- Ask about products that are causing the customer problems:
  - Late deliveries, poor quality, intellectual property theft, excess inventory, lost orders and travel costs.
- Overcome mandates
- Work with natural allies:
  - Lean, Green, Compliance, Quality Champions
- Maximize the advantages of proximity
- Match “Chinese” price or .....?

## Circuit Boards



- Woodridge, IL
- Supplies heavy equipment companies
- Had quality issue with a Chinese component
- Found local IL source
- Result:
  - Quality problem fixed
  - Inventory cut by 94%
  - \$60M order

## Ways to Benefit

- Report reshoring cases: Publicity
- Sell to companies that are reshoring (Library)
- Encourage your customers to:
  - Reshore component sourcing
  - Reshore assembly
- Use the TCO Estimator as a sales tool
- Call on us for help. Remember Morey Corp.

## Compete With Imported Castings

- Import Substitution Program – Substitute your domestic production for imports
- We can provide data on importers of investment castings:
  - Consignee company
  - Address
  - Product
  - Tons/year
  - \$/year
- **Would you be interested?**

## Some Top Investment Casting Importers: 2017

CONSIGNEE (Unified)	CONTAINER QUANTITY	DESCRIPTION	METRIC TONS
GRUNDFOS MANUFACTURING CO (FRESNO, CA)	12.34	INVESTMENT CASTING	213.42
CUMMINS INC (LAKEWOOD, NEW YORK)	3.77	INVESTMENT CASTING	80.42
STAINLESS MOTORS INC (RIO RANCHO, NM)	1.22	INVESTMENT CASTING	25.62
SCHNEIDER ELECTRIC SYSTEMS USA INC (FOXBORO, MA)	1.08	INVESTMENT CASTING	23.93
WILDEN PUMP (GRAND TERRACE, CA)	2.51	INVESTMENT CASTING	8.13

## Investment Casting Imports: 2017

- Total Importers: 58
- Total Shipments: 961
- Total Metric Tons: 2218.73

## BOP Reshoring Research Project

- Purpose: Show that Back Office Processing can also be reshored
- Seeking company to participate
- During the research period:
  - Free Robotic Process Automation Software
  - 75% discount on consulting
- Expectation:
  - Ongoing annual cost 50% below offshore
- Criteria:
  - Offshoring \$150,000+/year
  - Accounting, HR or IT
  - Must document results

## Questions for you Mark and Pass in your Business Cards!

- Who has a reshoring case to report? **B**
- Who is interested in:
  - Import Substitution Program? **ISP**
  - BOP Research Project? **BOP**

See me here or we will follow-up.

## A non-profit with 26 sponsors

Platinum



Gold



Silver



## A non-profit with 26 sponsors



## Our Newest Sponsor!



Contact:  
Harry Moser  
Founder and President  
847-726-2975  
[harry.moser@reshorenw.org](mailto:harry.moser@reshorenw.org)  
[www.reshorenw.org](http://www.reshorenw.org)



Useful links:  
[ACETool](#)  
[Cost Differential Frontier](#)  
[Total Cost of Ownership Estimator™](#)  
[Skilled Workforce](#)  
[Economic Development](#)

# **Human Factors**

**Dagmara Makarski  
DAGMA, Inc.**

# Human Factors

**ICI 2018 - Conference**  
Fairmont Sonoma Mission Inn and Spa  
Sonoma, CA  
April 16-18<sup>th</sup>, 2018

DAGMA<sub>U</sub>

## Acknowledgements

- ▶ This presentation was prepared for the ICI Conference, held April 16-18<sup>th</sup>, 2018
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- ▶ Most of the contents contained herein were adopted based on material developed by Transport Canada and referenced by Skybrary Aviation Safety, with web-searched pictures used as visual aids. References are provided to the source content. We acknowledge and thank the owners for their contributions.
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## Objective

To raise awareness of human error and to understand how to prevent or reduce the occurrence and consequences of human error in the casting industry.



## Overview and Outcomes

- ▶ Introduction - DAGMA Inc.
- ▶ Understand human errors and their impacts on productivity
- ▶ Understand Human Factors and management tools needed to minimize behavioral causes of human errors
- ▶ Introduce **Mistake Proofing** concept to implement process changes that eliminate human errors
- ▶ Reduce risks affecting your organization

## Introduction

Dagmara Makarski, M.A.Sc., P. Eng  
*Technical Director,*  
DAGMA Inc.

## DAGMA Inc.

Implementing sustainable management  
systems on solid foundations.



**Founded: June 1, 2012 – Headquarters: Toronto, CA**

## DAGMA Inc. - “Who we are and what we do”

- ▶ Expert knowledge of aerospace and manufacturing industries
  - ▶ Specializing in implementation and maintenance of ISO9001 and AS9100 standards
  - ▶ Supporting Environmental, Health and Safety and Automotive Management Systems
- ▶ Third-Party Certified Auditors
  - ▶ Providing Internal and External Audit services
- ▶ Providing Training services
  - ▶ SAE International Instructor - Delegate Product Release Verification Training for all aircraft engine components
  - ▶ Human Factors, Root-cause Analysis, FMEA, Mistake Proofing (MP), Internal Auditor Training, etc.

## Human Error

AKA: Mistakes

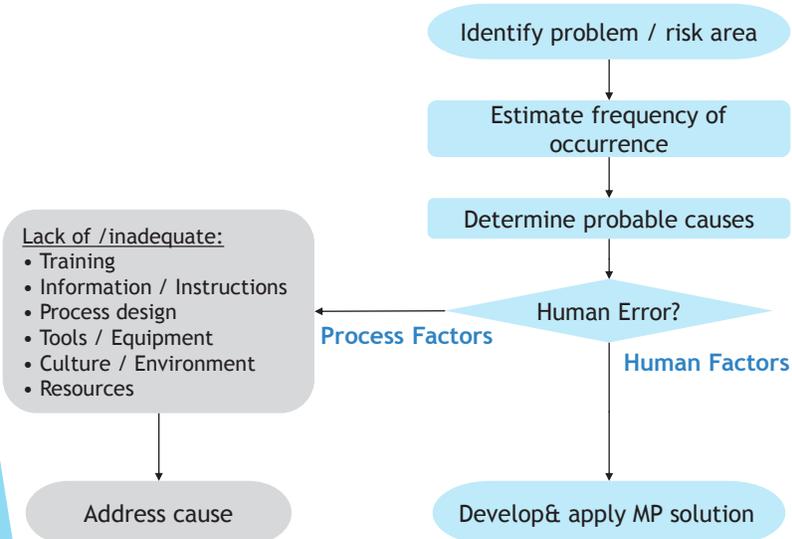
## Definition - Human Error

The *unintentional act* of performing a task incorrectly - or failing to perform a task, which can *potentially degrade the system*.

Making errors is a *natural* human tendency

Most often the work is done correctly

## Solutions for Human Error



## Casting Process



[www.reliance-foundry.com/site/reliance-foundry/images/blog/posts/cast-iron-mold-pouring-6.jpg](http://www.reliance-foundry.com/site/reliance-foundry/images/blog/posts/cast-iron-mold-pouring-6.jpg)



<http://image.mustangandfords.com/f79454089+w650+h650+cr1block-castings.jpg>

Controlled Melt |  
No Porosity



Uncontrolled Melt |  
Porosity Result



[http://berntsen-foundry.com/wp-content/uploads/2016/01/IMG\\_46201.jpg](http://berntsen-foundry.com/wp-content/uploads/2016/01/IMG_46201.jpg)

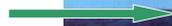
## The Heinrich Ratio

Fatal  
Accident



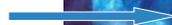
1

Accidents



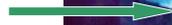
10

Reportable  
incidents

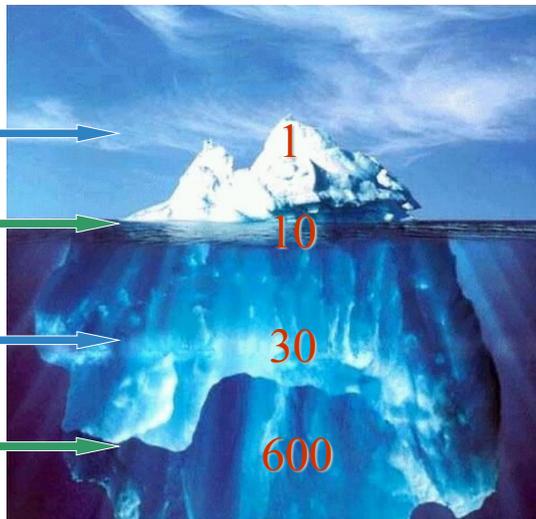


30

Incidents



600



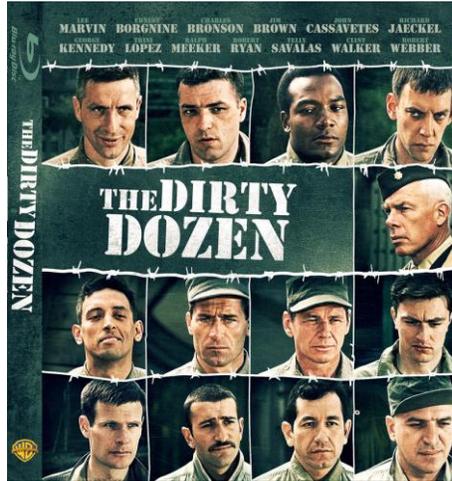
# Human Factors

The “Dirty Dozen”

## Definition - Human Factors

**Human Factors is the ‘discipline of  
*optimizing human performance in  
the workplace*’**

## The “Dirty Dozen”



## The “Dirty Dozen”

- **Complacency**
- Distractions
- **Fatigue**
- Pressure
- **Stress**
- Norms

### Lack of:

- Communication
- Knowledge
- Teamwork
- Resources
- **Assertiveness**
- Awareness

- True Human Factors vs. Workplace Factors

## Complacency

Feeling of *self-satisfaction*, accompanied by loss of awareness of potential dangers

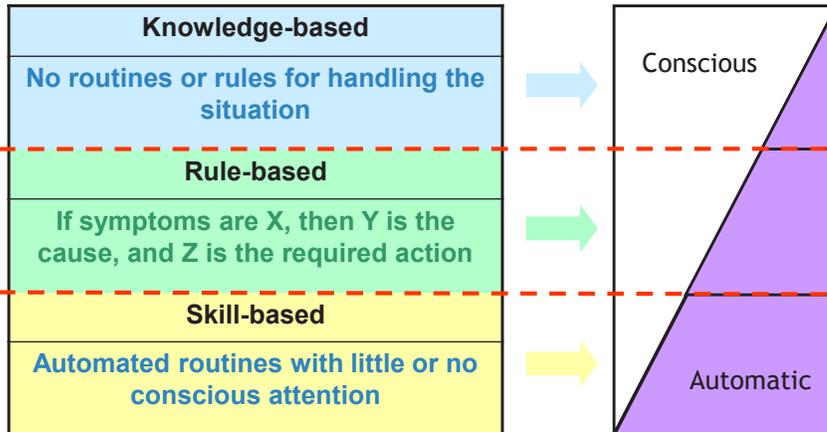


## Complacency

- ▶ Arises when conducting *routine activities* that have become habitual and which may be “considered as *easy and safe*.”
  - ▶ See only what is expected
  - ▶ Always expect to find a fault!
  - ▶ Avoid working from memory; assuming that something is ok when you haven’t checked it; signing off work that you are unsure has been completed
- ▶ Often following written instructions, adhering to procedures (inspection routines) can provide suitable stimulus

## Human Error Model

- ▶ What type of performance is most prone to complacency?

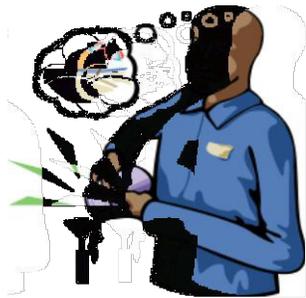


## Signs of Complacency

	High Performers	Low Performers
Number of errors made	No significant difference	
Number of checks made	Higher than average	Lower than average
Error correction		

## Distraction

Anything that draws a person's attention away from the task on which they are employed



## Distraction

- ▶ Some distractions in the workplace are unavoidable, others can be avoided or delayed
  - ▶ Noise, assistance requests vs. messages from home, management decisions and communication
- ▶ Psychologists say distraction is #1 cause of forgetting things
  - ▶ When return to a task there is a tendency to think you are further ahead than you actually are
- ▶ Reduce errors from distraction by:
  - ▶ Completing a task before responding if possible
  - ▶ Return to a task three steps back
  - ▶ Have someone else check the work

## Distraction - Management

- ▶ Management plays a key role in reducing distraction of employees
  - ▶ Provide a good workspace design
  - ▶ Management of environment
  - ▶ Establish and implement procedures that create “circles of safety” or “do not disturb” areas around workers engaged in critical tasks

## Fatigue

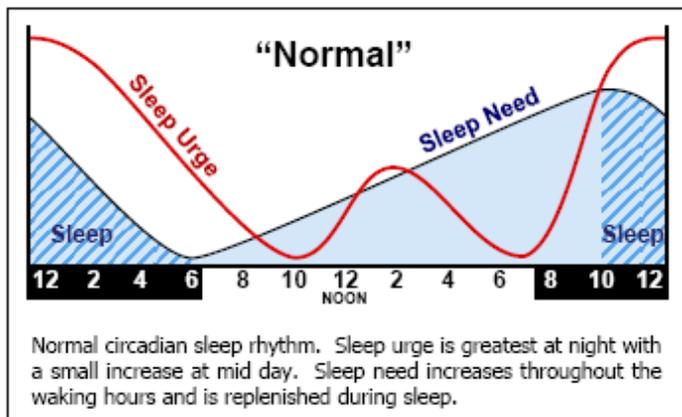
A natural physiological reaction to prolonged physical and/or mental stress



## Fatigue - sources and signs

- ▶ Performance impairment arising from loss of sleep and / or circadian disruption
  - ▶ Irregular Schedules, Medical Factors
- ▶ Degrades virtually every aspect of performance
  - ▶ Poor judgement
  - ▶ Slowed reactions, yawning, difficulty staying awake
  - ▶ Forgetting routine checks
  - ▶ Degraded problem solving

## Fatigue - Circadian Rhythm



## Fatigue - management

- ▶ Everyone tends to underestimate the problem and overestimate one's ability to cope with it
  - ▶ Especially critical for maintenance and production personnel
- ▶ Management should ensure that workers are aware of signs and symptoms of fatigue, in themselves and others
  - ▶ Encourage Fatigue 3-sided *self-management programme*
    - ▶ Regular Sleep
    - ▶ Healthy Diet (constant sugar level, no drugs or alcohol)
    - ▶ Exercise

## Stress

The body's response to demands placed on it:  
Chronic or Acute

### ACUTE Stress

- ▶ Arises from real-time demands placed on our senses, mental processing and physical body
  - ▶ Dealing with Emergency

### CHRONIC Stress

- ▶ Arises from long-term demands and is accumulated
  - ▶ Finances, illness, divorce
  - ▶ Winning the lottery

## Stressors

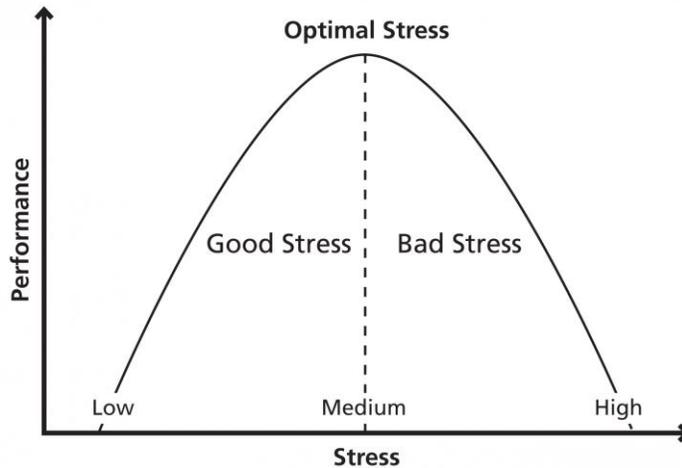
- ▶ Stressor is anything that:
  - ▶ Worries us, prods us, thrills us, scares us or threatens us
- ▶ Three types of stressor
  - ▶ Physical, Physiological and Emotional
- ▶ Cause:
  - ▶ Changes in personality, moods
  - ▶ Lack of concentration, poor memory
  - ▶ Long term: susceptibility to infections, absence from work, illness and depression

## Workplace Stressors

- ▶ Pressure from management to ensure on-time performance can conflict with safe practices
- ▶ Work overload
- ▶ Stress transfer from one employee to another



## Yerkes - Dodson Law (1908)



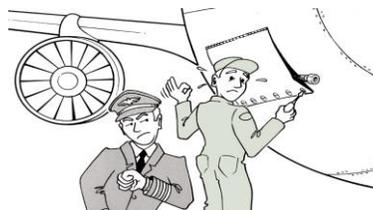
<https://blogs-images.forbes.com/stevemeyer/files/2014/10/Yerkes-DodsonLaw-1940x1576.png>

## Stress Management

- ▶ Important to recognize early signs of stress
  - ▶ Determine if Chronic or Acute
- ▶ Coping with daily demands of work can be achieved with simple breathing and relaxation techniques
- ▶ Having channels of communication available to discuss issue
  - ▶ Reduction of Chronic stress requires lifestyle changes - required support from the company.
  - ▶ Implement employee assistance (wellbeing) policies that include stress-reduction programmes

## Pressure

Urgent demands influence performance



## Pressure

- ▶ Expected when working in a dynamic environment
- ▶ Too much when it interferes with ability to complete tasks
- ▶ Quantity vs. Quality
- ▶ Created by lack of resources, time - deadlines!
- ▶ Sources:
  - ▶ Direct or Indirect from the company, clients, co-workers
  - ▶ **Ourselves** - taking on more work than we can handle
    - ▶ Poor judgements often result of assumptions of what is expected from us

## Pressure - Management

- ▶ Teaching employees assertiveness skills to say “NO”
- ▶ Communicate concerns with colleagues, company and clients
- ▶ To meet critical deadlines, resources should always be obtained to ensure that tasks are completed to the required level of quality
- ▶ Teach employees 4 steps:
  - ▶ STOP
  - ▶ LOOK
  - ▶ LISTEN
  - ▶ ACT

## Assertiveness

Communication and behavioral style that allows us to express feelings, opinions, concerns, beliefs and needs in a positive and productive manner.



Passive



Assertive



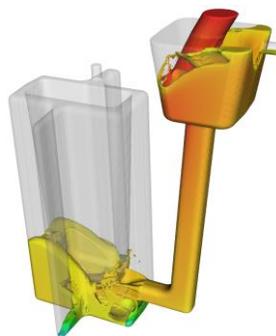
Aggressive

## Assertiveness - Management

- ▶ Teaching assertiveness techniques, focused on:
  - ▶ Keeping calm
  - ▶ Being rational
  - ▶ Using specific examples instead of generalizations
  - ▶ Inviting feedback
  - ▶ Criticisms should be directed at actions and consequences, rather than people and their personalities
- ▶ Allows others to maintain dignity and reaching productive conclusions

## Awareness

**Knowledge or perception of a situation or fact;  
Being conscious of something**



## Lack of Awareness

Failure to recognize all the consequences of a situation or an action



## Lack of Awareness - Management

- ▶ Can result from other human factors
  - ▶ Stress, Fatigue, Pressure and Distraction
- ▶ Working in isolation can lead to tunnel vision
  - ▶ Creates lack of awareness of our actions on others and wider tasks
- ▶ Management can help ensure:
  - ▶ Building experience throughout career (cross-training)
  - ▶ Developing foresight of our actions on others
  - ▶ Attitude of professionalism - "What if ...?"
  - ▶ Check work of others and challenge decisions
  - ▶ Maintain vigilance

## Resources

A source of supply, support or aid that can be readily drawn upon when needed



## Lack of Resources and Management

- ▶ Resources can include:
  - ▶ Human, time, data, tools, skills, experience and knowledge
- ▶ If available resources are of low quality or are lacking, it will interfere with the ability to perform a task
  - ▶ Often work-arounds are performed to complete the task - **dangerous!**
- ▶ Management Responsibility is to ensure that all necessary resources are available
  - ▶ Greater chance that task will be completed more effectively, correctly and efficiently
  - ▶ Forward planning to acquire, store, maintain and locate resources is essential

## Knowledge

A familiarity or understanding of information, acquired through experience or education



## Lack of Knowledge

- ▶ Lack of Experience and/or Training due to:
  - ▶ Insufficient or not updated training materials
  - ▶ New equipment and operating procedures
  - ▶ Advances in technology
    - ▶ Ex: new software
- ▶ Causes workers to misjudge situations and make bad decisions
  - ▶ Difficult to perform casting process without substantial knowledge and relevant experience
  - ▶ Making assumptions
  - ▶ Working from memory

## Knowledge - Management

- ▶ ISO9001:2015 new requirement: 7.1.6 Organizational Knowledge
  - ▶ Organization shall determine knowledge necessary for operation of its processes to achieve conformity of products and services
  - ▶ Knowledge shall be maintained and made available as necessary
  - ▶ Determine how to acquire any additional knowledge
- ▶ Management responsibility:
  - ▶ Succession and Strategic Planning
  - ▶ Strictly enforce regulatory requirements for training & qualification
  - ▶ Employee continual professional development & sharing of knowledge
    - ▶ Include latest knowledge of human error and performance
  - ▶ Complete Organizational Risk Assessment

## Communication

The dynamic process by which we engage and interpret messages



## Communication

- ▶ Refers to transmitter and receiver, as well as method of transmission via filters
  - ▶ Transmitted instructions may be unclear
  - ▶ Receiver may make assumptions about meaning of instructions
  - ▶ Transmitter assumes message is received and understood
  - ▶ Examples of filters (barriers) to good communication?
- ▶ **Verbal communication: what % is actually understood?**

## Communication

- ▶ Refers to transmitter and receiver, as well as method of transmission via filters
  - ▶ Transmitted instructions may be unclear
  - ▶ Receiver may make assumptions about meaning of instructions
  - ▶ Transmitter assumes message is received and understood
  - ▶ Examples of filters (barriers) to good communication?
- ▶ **Verbal communication: what % is actually understood?**

**Approximately 30%**

**Body language and tone of voice are more significant**

## Improving Communication

- ▶ **Do**
  - ▶ Ask Questions, Ask for feedback
  - ▶ Use Active Listening
    - ▶ Paraphrase without being critical
    - ▶ Summarize what is understood
  - ▶ Use positive body language
  - ▶ Watch for filters: theirs and yours
  - ▶ Take responsibility for the message
- ▶ **Do Not**
  - ▶ Make assumptions
  - ▶ Tune out

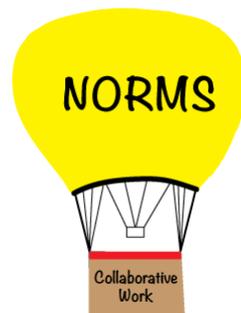
## Communication - Management

- ▶ Detailed information is continuously transferred
  - ▶ Before, during and after any task
  - ▶ Across handover of shifts
- ▶ Complex messages should be written down
  - ▶ Encourage use of logbooks, worksheets and checklists
  - ▶ Provide coaching on effective communication within your organization
    - ▶ *Is sending emails effective?*
    - ▶ Keep it: concise, clear, concrete, considerate, correct and courteous



## Norms

Unwritten rules dictated and followed by the majority of a group



## Identifying and Changing Norms

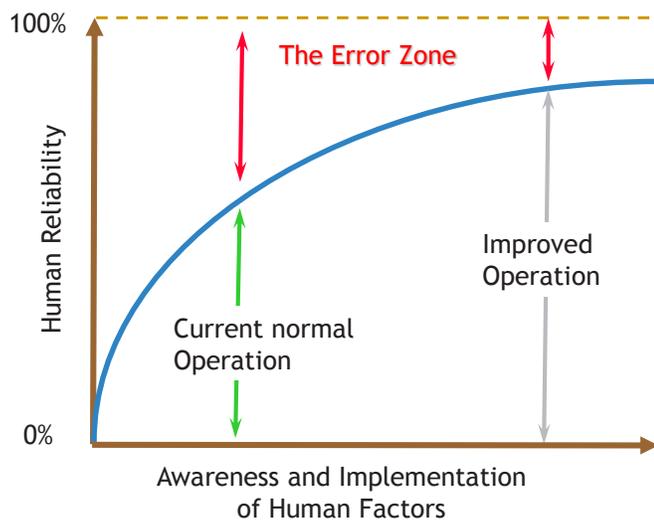
### Identifying norms

- ▶ Is the behavior:
  - ▶ A personal habit?
  - ▶ Long-time common practice - Group behavior?
  - ▶ Supported by an unwritten rule?
- ▶ Does it enhance or detract from an established safety/quality standard?

### Changing norms

- ▶ Always question the behavior
- ▶ Accentuate positive norms
- ▶ Discuss negative norms openly and maintain your standards

## Organizational Performance



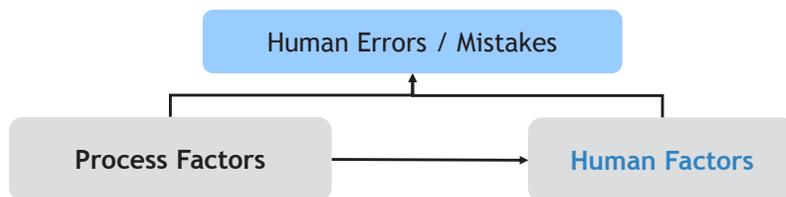
## Chain of events



# Mistake Proofing Methods

*Poka-Yoke*

## Provide Protection

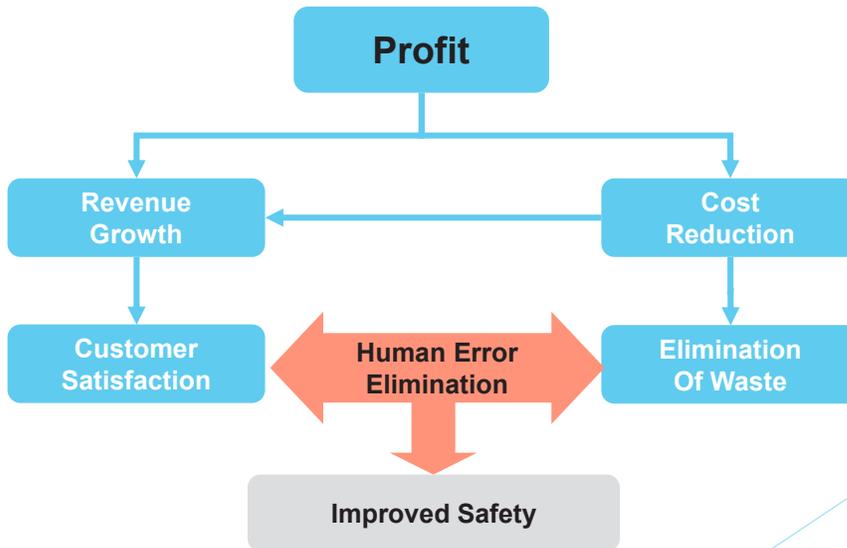


**Reduce the risk**



**Create a Safety Net**

## Lean Manufacturing



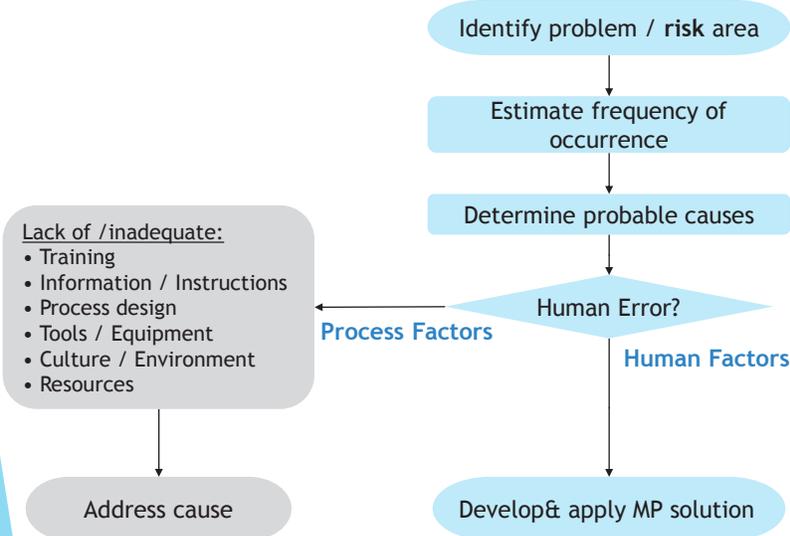
## Definition - Mistake Proofing

Mistake-Proofing (MP) is a process control technique focused on human error elimination **through technical means**

What Does That Mean?

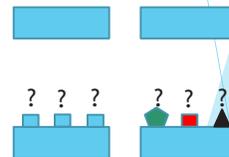
Finding simple, inexpensive ways to prevent errors from happening, rather than relying only on procedures or inspection to find and correct defects.

## Solutions for Human Error

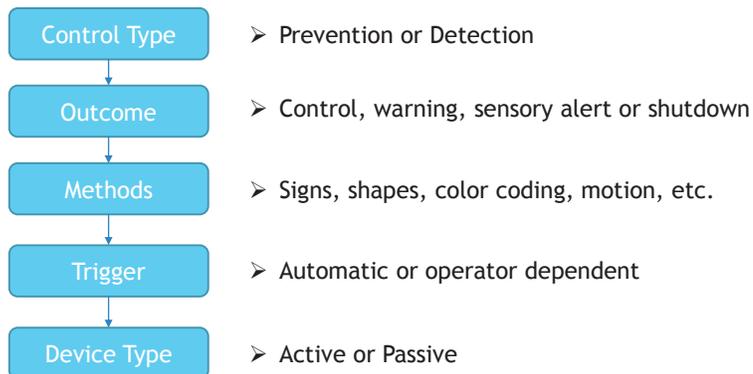


## Mistake Proofing Examples

- ▶ Wax injection tooling orientation
  - ▶ Interference pins on fixture ensure tooling fits only in one way
  - ▶ Program machine to only accept correct tooling with poka yoke
    - ▶ Consider location of pin cables, color and shape
- ▶ Use fitted trays for wax patterns to keep parts in same orientation and not touching
  - ▶ Caps to distinguish LH from RH parts / label tooling LH or RH
- ▶ Other examples?
  - ▶ Casting operations
  - ▶ Real life

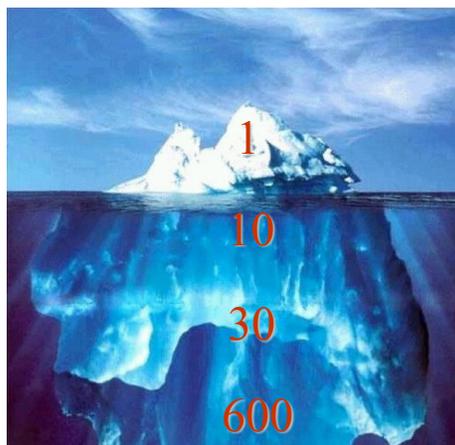


## MP Design Considerations



## Summary

- ▶ Reducing **human and process errors** at the bottom of the iceberg provides:
  - ▶ Improved Quality and Safety
  - ▶ Reduced Costs
  - ▶ Efficiency Gains
  - ▶ **Reduced operational, organizational and personal risk**
  - ▶ Competitive Advantage



## References

### ▶ Transport Canada

- ▶ *Human Factors for Aviation, Instructor's Guide and Advanced Handbook* (2003)
- ▶ Transport Canada videos - Module 1 - Pitch Control

### ▶ Skybrary Aviation Safety

- ▶ [https://www.skybrary.aero/index.php/The\\_Human\\_Factors\\_%22Dirty\\_Dozen%22](https://www.skybrary.aero/index.php/The_Human_Factors_%22Dirty_Dozen%22)

### ▶ Images

- ▶ <http://medicare.kiwi/wp-content/uploads/2017/06/safety-net.jpg>
- ▶ <http://www.differencebetween.info/sites/default/files/images/5/str.jpg>
- ▶ <http://mrcovers.com/tim/blu/150dpi/TheDirtyDozenBlurayCoverBunnyDojo.jpg>
- ▶ [http://www.waterpoloplanet.com/HTML\\_Mike\\_pages/images/mr26\\_Strength\\_Training\\_clip\\_image004.gif](http://www.waterpoloplanet.com/HTML_Mike_pages/images/mr26_Strength_Training_clip_image004.gif)
- ▶ [fatigue-clipart-443683-Royalty-Free-RF-Clip-Art-Illustration-Of-A-Cartoon-Tired-Businessman-Sleeping-On-His-Desk](http://www.fatigue-clipart-443683-Royalty-Free-RF-Clip-Art-Illustration-Of-A-Cartoon-Tired-Businessman-Sleeping-On-His-Desk)
- ▶ <http://www.china-investmentcastings.com/files/Content/one.jpg>
- ▶ <https://www.alphacasting.com/images/slideshows/production/injection-et-montage/injection-et-montage-1.jpg>
- ▶ <http://www.cargosmarton.com/wp-content/uploads/2015/05/6-reasons.jpg>
- ▶ <http://www.daystar.ac.ke/images/dipcomm.png>
- ▶ <http://www.clipartbest.com/cliparts/dT6/MzX/dT6MzXET9.jpeg>
- ▶ <https://www.ashtoncollege.ca/wp-content/uploads/2014/12/bigstock-Global-Human-Resources-Busines-copy.png>
- ▶ [https://openclipart.org/image/2400px/svg\\_to\\_png/194026/Behavior-Types.png](https://openclipart.org/image/2400px/svg_to_png/194026/Behavior-Types.png)
- ▶ <https://www.flow3d.com/wp-content/uploads/2014/03/gravity-casting-filling-simulation.png>



Any Questions?

Thank-you!

**Looking “From The Top Down” to  
Change Your Business Culture &  
Train To Avoid Sexual Harassment**

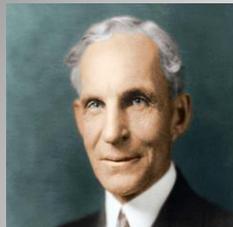
**John Molinelli  
Price, Meese, Shulman & D’Arminio**

**LOOKING “FROM THE TOP DOWN” TO CHANGE YOUR BUSINESS  
CULTURE AND TRAIN TO AVOID SEXUAL HARASSMENT**



INVESTMENT CASTING INSTITUTE  
2018 SPRING MANAGEMENT  
MEETING

**Presented by :**  
**John L. Molinelli, Esq.**  
**PRICE, MEESE, SHULMAN & D'ARMINIO, P.C.**  
*Woodcliff Lake, New Jersey*



Henry Ford once said:

“The only thing worse than training your employees and **having them leave** is NOT training them and having **them stay**”.

## TRAINING GOALS

For the top level manager

ELIMINATION

EDUCATION

PREVENTION

CULTURAL CHANGE

As a Senior Administrator, why is this important to me?

- Job Turnover/substandard services
- Reputation

LITIGATION COSTS!

The "250" case

**ECONOMIC CONSEQUENCES**

## RIGHTS + RESPONSIBILITIES

ALL EMPLOYEES HAVE THE **RIGHT** TO WORK IN A PROFESSIONAL ATMOSPHERE FREE OF DISCRIMINATION AND HARASSMENT.

ALONG WITH THAT RIGHT COMES THE **RESPONSIBILITY** OF EACH EMPLOYEE TO ENSURE THAT SUCH DISCRIMINATION AND HARASSMENT DO NOT OCCUR IN THE WORKPLACE.

- We start with a good policy---
- HARASSMENT AND DISCRIMINATION IS UNACCEPTABLE CONDUCT AND WILL NOT BE TOLERATED
- THE COMPANY IS COMMITTED TO CREATING AND MAINTAINING A WORK ENVIRONMENT IN WHICH ALL INDIVIDUALS ARE TREATED WITH RESPECT AND DIGNITY

## YOUR COMPANY ANTI-DISCRIMINATION / ANTI-HARASSMENT POLICY

- **We prohibit discrimination of any kind directed toward, or by:**
  - **ALL EMPLOYEES**
  - **VENDORS**
  - **VISITORS**
  - **VOLUNTEERS**
- **Harassing conduct will not be tolerated either in the workplace, or in any other work-related setting.**
- **\* Policy applies to ALL employees – NO EXCEPTIONS.**

## Legal Standards

- Title VII, Civil Rights Act
- Americans with Disabilities Act
- State Laws prohibiting Discrimination (LAD)
- The “Lehmann” Standard
- Federal Age Discrimination and Employment Act
- The Faragher Defense: Faragher v City of Boca Raton

## HOSTILE WORK ENVIRONMENT

- WHAT KIND OF CONDUCT IS OCCURRING?
- HOW OFTEN DOES THE CONDUCT OCCUR?
- IS THE BEHAVIOR PHYSICALLY THREATENING OR OFFENSIVE BASED ON NATURE OF CONDUCT?
- DOES THE CONDUCT UNREASONABLY INTERFERE WITH WORK PERFORMANCE?

## EXAMPLES OF CONDUCT THAT MAY CREATE A HOSTILE WORK ENVIRONMENT

- **VISUAL CONDUCT**
- **VERBAL CONDUCT**
- **PHYSICAL CONDUCT**

- **The Workplace**
- **Any location that can be reasonably regarded as an extension of the workplace:**
  - **An off-site meeting / conference**
  - **An off-site business related social function**
  - **Any facility where Company business is being conducted and discussed**

- **WHAT IS A HOSTILE WORK ENVIRONMENT**

**THIS TYPE OF DISCRIMINATION OCCURS WHEN OFFENSIVE CONDUCT IS WIDESPREAD OR SEVERE ENOUGH TO ALTER THE CONDITIONS OF AN EMPLOYEE'S JOB AND CREATE AN ABUSIVE WORKING ENVIRONMENT.**

- race
- color
- creed
- religion
- age
- gender
- marital status /civil unions
- familial status
- national origin
- ancestry
- citizenship
- handicap / disability
- pregnancy
- veteran status
- military status
- sexual orientation
- cellular / blood trait
- genetic information
- gender identity / expression

### **“Protected Characteristics”**

### **The Faragher Principals**

**“THE POLICY MUST BE MORE THAN MERE WORDS – IT REQUIRES AN ‘UNEQUIVOCAL COMMITMENT FROM THE TOP THAT OPPOSITION TO HARASSMENT IS FOLLOWED BY CONSISTENT PRACTICE”**

**Faragher v City of Boca Raton**

**IT IS AN AFFIRMATIVE DEFENSE**

---

## WHAT MAKES AN ANTI-HARASSMENT POLICY EFFECTIVE?

Commitment From the Top

Consistent Application

Timely Response

Corrective Measures

### POLICY REQUIREMENTS FOR COMPLAINTS AND INVESTIGATION

#### COMPLAINT PROCEDURE

The Company needs to encourage:

Employees who feel that they have been the victim of unlawful discrimination / harassment should :  
**IMMEDIATELY REPORT** such conduct to:

- Immediate Supervisor
- Any other manager to whom they feel comfortable, regardless of department
- Any member of the Company's Division of Personnel

\* Verbal / Written Complaint

## STEPS OF INVESTIGATION

- **INVESTIGATION**
- **REPORT OF FINDINGS**
- **DISCIPLINARY ACTION**
  - **Violation of Policy**
  - **False Complaint**

Confidentiality + Cooperation

Where we need to be now that  
#metoo is here to stay



**Creating a New Culture**

- The key is to create a culture in which women and others who are within the special class of protected persons are treated as EQUALS and for employees to treat others with respect!
- Its NOT a knowledge problem but one of **Behavior**

**Lets look at some evidenced based ideas---**

- Empower the Bystander
  - 2 roles no one wants: victim and harasser
- Encourage Civility
- Encourage Reporting
  - Strong evidence that victims don't report
  - They don't want the risk or to ruin the careers of others—they just want it to stop!
  - Give multiple people report receiving authority to make it more comfortable for the victim
  - Information Escrows? The book is still out

**DISCIPLINE**

- QUESTIONS

Thank you and good luck  
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*Woodcliff Lake, New Jersey 07677*  
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# **Stay Interviews: A Powerful & Low-Cost Employee Engagement & Retention Tool**

**Marcia Zidle**  
**Smart Moves Coach**

## Investment Casting Institute

### 2018 Spring Management Meeting



*A Powerful, Low Cost Engagement  
and Retention Tool!*

*Marcia Zidle  
Smart Moves Coach  
Accelerating Your SUCCESS*

## How to Keep Top Talent?



## “Can’t Assume They’re Engaged”

**1 in 3**

high-potential employees admits to not putting all his effort into his job

**1 in 4**

believes he will be working for another employer in a year

**1 in 5**

believes her personal aspirations are quite different from what the organization has planned for her

*“Really, the future of our organization is in their hands.”*

3

## Do You Know Your Talent?

Do your leaders REALLY know what their team members are thinking?



4

## How Do You Know?

**Just  
ask!**

5

## #1: Engagement Surveys



6

## #2: Exit Interviews



7

## #3: Stay Interviews



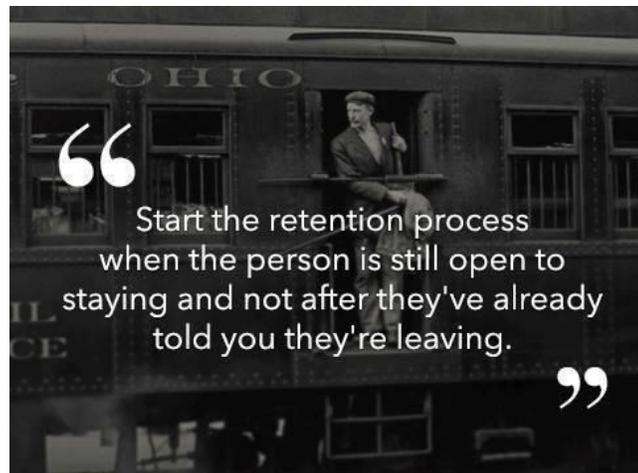
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## A Key Question



9

## In Other Words...



10

## Today's Agenda



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## What It Is?

A Stay Interview is a **structured** discussion a **leader** conducts with each individual employee to learn the specific actions she must take to strengthen that employee's engagement and retention with the organization

### Stay Interviews...

- Bring information that can be used **today**
- Focus on **individual employees** including top performers
- Put **managers** in the solution seat



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## What is a Stay Interview?



- ▶ **Periodic** one-one-one discussion between manager & valued employee to:
- ▶ Identify and reinforce the **factors** driving an employee's engagement
- ▶ Identify and minimizes any **triggers** that might cause them to leave
- ▶ Send a message: **"We Appreciate You?"**

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## The Power of Stay Interviews



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## #1: They Engage



15

## #2: They Personalize



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### #3: They Get Real-Time



17

### #4: They Lead to Action



18

## #5: They Save Money



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## Prevents Turnover



**TURNOVER COSTS =**  
**Cost Per Hire + LOST PRODUCTIVITY**  
(Not \_\_\_% of Annual Pay)

**Actual client turnover costs by job:**

- ✓ Physician...\$225,808
- ✓ Software engineer...\$131,000
- ✓ Call center representative...\$29,447
- ✓ Truck loader/unloader...\$4,955

The Stay Interview Secret



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## Creates Value

*Leads to Increased:*



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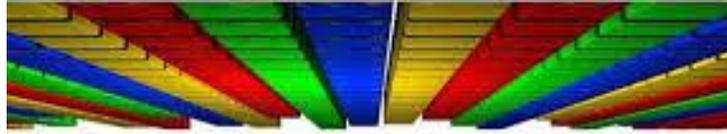
## In Other Words...

***It's Just Good Business!!!!***



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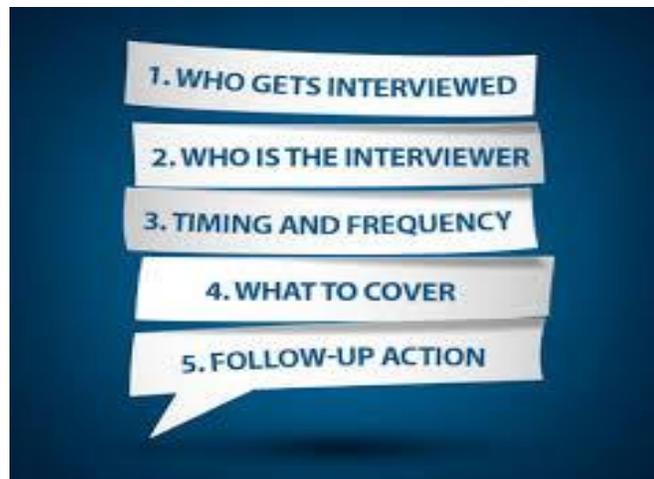
# Stay Interview Tool Kit



## Guidelines



# Five Components



## #1: Who Gets Interviewed

*All or Some?*



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## Focus On Key Employees



*Do You Know Who They Are?*

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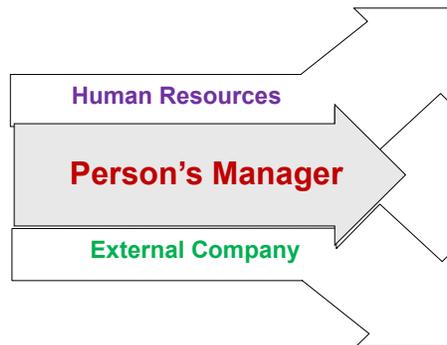
## #2: Who Is the Interviewer



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## Three Possibilities

Who Do You Think is Best?



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## It's the Manager



"If you have a turnover problem, look first to your managers" ... *Gallup*

Employees stay for managers first and co-workers second... *salary.com*

Employees' levels of engagement higher when their supervisors had higher levels of engagement... *DDI*

"When employees stay, it is because of their immediate managers" ... *National Education Association*

Employees who stay primarily for their supervisors stay longer, perform better, and are more satisfied with their pay... *TalentKeepers*

## #3: Timing and Frequency



## Best Practices



**2X**

**Spread Out Quarterly!**

## #4: What To Cover



## Let' Start With Some Tips



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### ➤ Setting: Informal



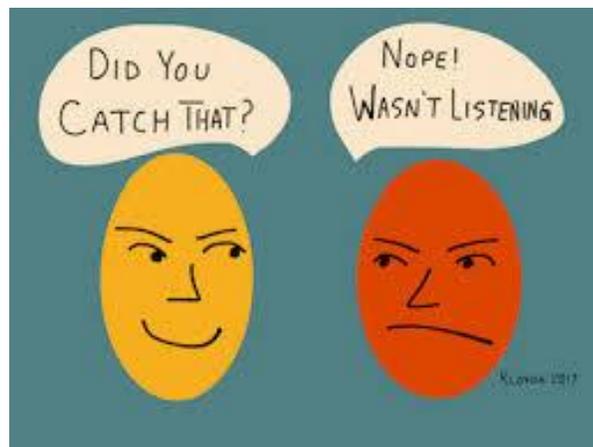
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➤ **Conversation: Not an Appraisal**

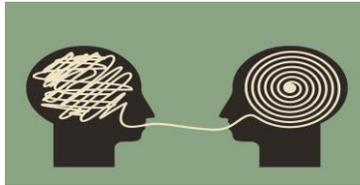


**let's talk**

➤ **Listen: Not Just Hear**



## ➤ Focus: Understanding



THE BIGGEST  
COMMUNICATION PROBLEM IS  
WE DO NOT LISTEN TO UNDERSTAND.

WE LISTEN TO REPLY.

## ➤ Goal: Learn About Their...



## 4 Step Interview Process



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### Step 1: How to Start

***“I would like to have an informal chat with you to ensure that the company and I understand what you really enjoy about your job and any factors that are frustrating you to the point where you might begin to consider other opportunities.”***



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## Step 2: Then Move to Asking.....



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## 1. Like Most About Your Job?



***What parts are the most enjoyable?  
What do you look forward to when you come  
to work each day?***

42

## What Might You Hear?



43

## 2. Like Least About Your Job?



*What parts are the least enjoyable?  
If You could change one thing about your job,  
what would it be?*

44

## What Might You Hear?



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## 3. Why Do You Stay Here?



*What keeps you working here?*

*What is the best thing about this job/company  
that motivates you to stay?*

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## What You Might Hear!

### *Top Seven Reasons*

1. Career growth, learning and development
2. Great people, boss
3. Works that is meaningful
4. Being part of a team
5. Recognition for work well done
6. Fair pay and benefits
7. Flexibility



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## 4. What Might Tempt You to Leave?



*What is making you dissatisfied?*

*What's attracting you to other companies..  
what do they have that we don't?*

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## What You Might Hear!



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## 5. Help You Be More Successful?



***How can I support you in your career goals?***

***What can I do to make your experience here better for you?***

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## What You Might Hear!

Be Open to:



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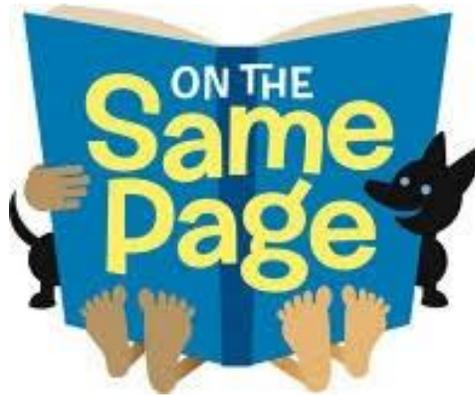
## Step 3: Summarize

**KEYPOINTS**

***“Let me review what I heard you say about the reasons you like it here as well as reasons why you might leave. Then, let’s develop a plan to make **this a great place for you to work!**”***

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## Make Sure You're...



53

## Step 4: Build the Stay Plan



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## Action Planning

**Based On Our Discussion, What Are Some Ideas to Increase Your Engagement?**



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## Some Examples

- ▶ Register for a webinar to enhance their skills
- ▶ Recognize their accomplishments with your boss
- ▶ Be on project team to work with other departments
- ▶ Accompany you / present at a management meeting
- ▶ Review in three months their request for a promotion

**relevant.**

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## 5 Success Factors

- ▶ **Actions: Relevant and Important**
- ▶ **Focus First on Low Hanging Fruit**
- ▶ **Include Actions Manager Will Take**
- ▶ **Include Actions Employee Will Take**
- ▶ **Have It In Writing With Due Dates, etc.**



**Goal is to Increase Stay Factors  
and Decrease Leave Factors**

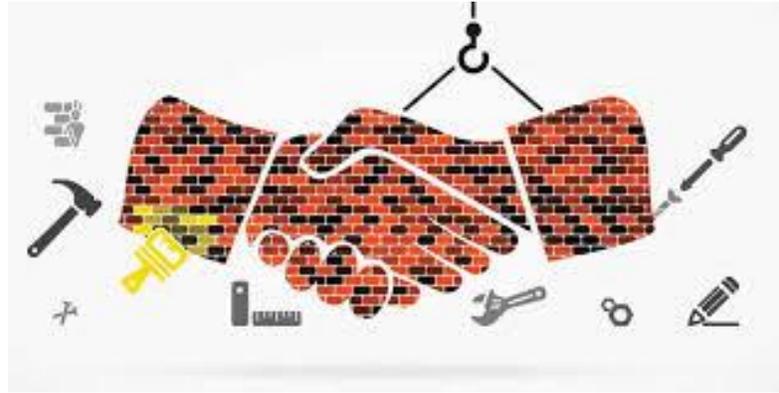
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## #5: It Doesn't End Here



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## Why It's Important!



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## Quick Recap



60

## Bottom Line



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## Final Thought

**“Today’s market place is incredibly competitive in every industry around the globe.**

**The difference between success and failure is **TALENT** period!”**

**Indra Nooyi,  
CEO PepsiCo**



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# Thank You!

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“Success Seems to Be  
Connect with Action.  
Successful People  
Keep Moving!”

*Conrad Hilton*



**MARCIA ZIDLE**  
The Smart Moves Coach  
Will Keep You Moving  
Towards Success!

---

**Feel Free to Contact Me**

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# **Cyber Security – A Pragmatic Approach**

**Doug Creeley  
NextLevel**

## Cyber Security – A Pragmatic Approach

BUILDING ENTERPRISE VALUE

### What's Happening

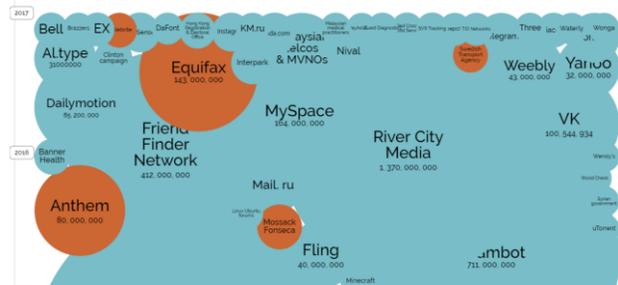


Cybercrime black marked valued at \$2B/annually

Cybercrime costs \$445B/year

Record year of data loss – over 2B records

Companies of all sizes, in all industries compromised



## What Can You Do

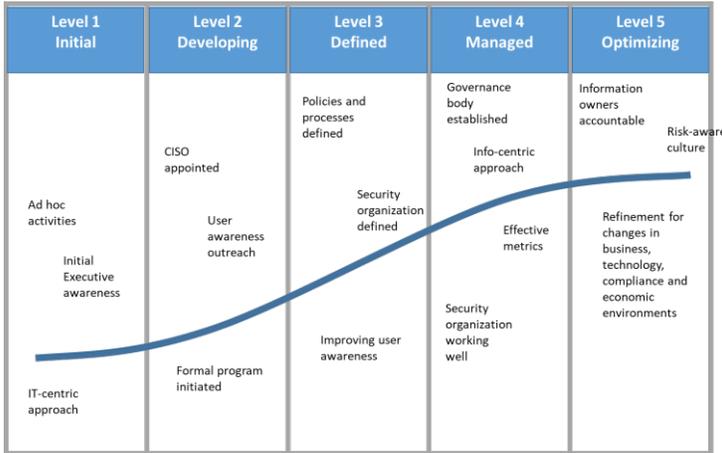


Information Risk Management and Cyber Security should be managed as any other business function. Treat it that way.

## What Should You Consider

- **Question 1:** Does your organization have formal governance processes for information technology and information security, including a written security policy and an appointed individual (CISO or ISO) charged with safeguarding and protecting information assets?
- **Question 2:** Does your organization track device and software inventories, along with associated configurations for devices and software designed to protect the organization's information?
- **Question 3:** Does your organization routinely monitor and review user accounts, especially system and privileged accounts?
- **Question 4:** Does your organization deploy tools to help prevent malware, encrypt data, and control network traffic?
- **Question 5:** Does your organization have a formal plan of training for cyber security awareness during on-boarding, periodically throughout employment, and appropriate reminders and collection of assets during terminations?
- **Question 6:** Does your organization have continually improved documented incident response plans driven both by reported incidents and incidents detected from reviewing system or data activity log reviews?
- **Question 7:** Does your organization have a documented business continuity plan and corresponding recovery plan which explicitly include information and cyber risk?

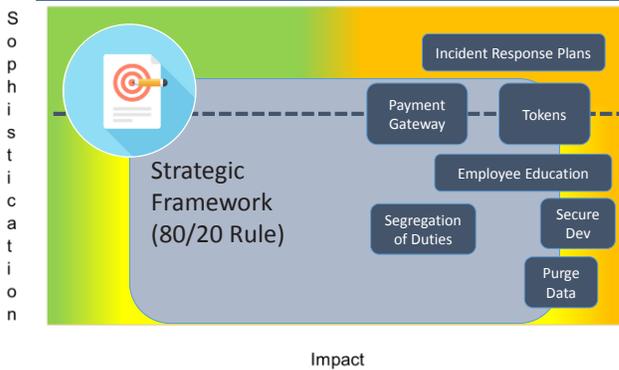
# Growth Curve for Cyber Security



Like any other business function, Cyber Security will grow and mature in phases.

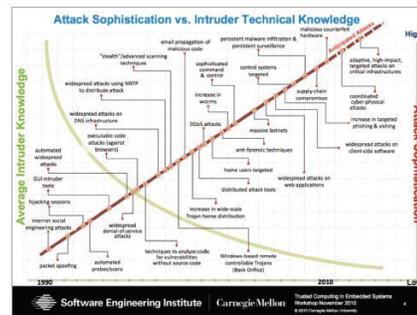
Cyber Resilience doesn't begin until Level 4 (Managed).

# Choose the Correct Objectives



- Independent reporting sources\* tell us approximately 75% of reported incursions are very low to moderate in sophistication.
- Less than 25% of reported incursions are more than moderately sophisticated.

**No company is too small to target, too secure to compromise, or too profitable to worry about cyber-risk. Train your people, invest in leveraged technology, and evaluate your cyber-insurance policy**



# *Backup Materials*

## Defensive Strategies

An evolving set of tactics

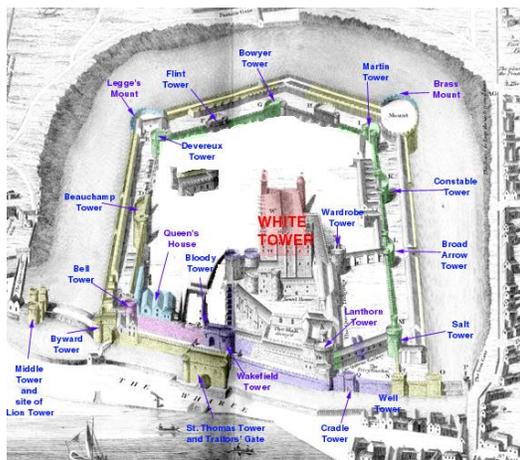
## The Walled City



- Initial defensive strategy
- Focus on keeping intruders at bay with:
  - Firewalls
  - Passwords
  - Virus Protection
- Once in, may have unlimited access

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## Moat and Castle



- Next Generation Strategy
- Focus on layers of protection with:
  - Defense in depth
  - Vulnerability scanning and patching
  - Segregated networks
  - Limited use of administrative passwords
- Once in, more difficult to exploit

10

## *Two Men and a Bear*

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- Economic strategy
- Focus on implementing sufficient security controls to make it too costly for criminals to exploit
- Criminals move on to the next target

11

## *The Shopping Mall*

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- Evolving strategy
- Focus on watching and taking action on bad actors along while limiting usefulness of exploits
  - Monitoring
  - Encryption
  - Honey Pots
  - Big data use profiles and alerts
- Quickly find and stop intrusions

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# Actions

So now what do I do?

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## *Setting the Stage*

---

- We're not doing all we can:
  - Boards and C-Suite are not leading and aligning strategy
  - Poor info sharing even at basic levels, not real-time
  - Eliminating/upgrading legacy systems slow process
  - "Tone at the Top" by the board and C-Suite – cyber awareness
  - Government – fragmented efforts, confusing rules, poor grades
  - International law enforcement challenges – jurisdictions/extradition

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## *Basic Cyber Hygiene*

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- Culture of cyber awareness
- Password control – complexity, changing, discipline
- Privileged access controls (who is watching the watcher?)
- USB drives tightly monitored – toothbrush etiquette
- All hands training on phishing, spear-phishing, social attacks
- Patch known vulnerabilities promptly
- Virus/malware up to date
- Frequent, full backups of critical data
- Travel sensitivity – Device loss and alone time in the hotel
- See something, say something feedback loop

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## *Board & C-Suite Prep/Proactive Efforts*

---

- Set the “Tone at the Top” – live it and enforce it (leadership)
- Align all internal/external resources with defined priorities
- Hire and validate great people and partners
- Validate strategy/team using hard-core outsiders
- Detailed risk, resilience and plan reviews
- Understand executive specific vulnerabilities
- Technical board member or committee
- Exercise full response plan across the enterprise

**“By the time you hear the thunder, it’s too late to build the ark”**  
- Unknown

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## *People: Critical at all Levels*

---

- Entire organization focus – this is not just an IT issue!
- IT & cyber industry shortage means marginal execs and employees, turnover, and rapid obsolescence
- Standing guard 24/7 difficult and boring
- Finding, training, retaining and motivating – hard but worth it
- Validate through vetted outside expertise
- Trusted people can turn malicious for outside reasons
- 360 degree communications for team success

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## Contact Information

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Cyber Resilience Planning -  
Clarity, Understanding, Prioritized Action

[nlbev.com](http://nlbev.com)

*Thank You*



BUILDING ENTERPRISE VALUE

# **Tax Cuts and Jobs Act of 2018**

**Philip Murphy  
Murphy, Miller & Baglieri**



# Tax Cuts and Jobs Act of 2018

Investment Casting Institute  
2018 Spring Management Meeting  
April 15 - 18, 2018  
Sonoma, CA

## Tax Cuts and Jobs Act

- **Signed into law on 12/22/17**
- **The law leaned toward the Senate version**
- **Winners and losers**
- **Removed the individual mandate in the ACA**
- **Sweeping changes to the individual income tax provisions**

# Tax Cuts and Jobs Act

- Large tax breaks to corporate taxpayers
- Provided for a 20% deduction to pass-through entities
- Several changes to related to business expenses
- Increased the estate tax exemption – it’s a good time to die!
- Radically changed international tax treatment of foreign income, rates and repatriation

# Tax Cuts and Jobs Act

## – Individual Tax Changes:

	2017 Law	2018 Law
Individual Rates	10,15,25,28,33,35,39.6%	10,12,22,24,32,35,37%
		Top bracket starts at \$500,000 S /\$600,000 M
Standard Deduction	\$12,700 (\$6,350 Single)	\$24,000 (\$12,000 Single)
		Blind or > 65 add \$1,300, 1,600 if unmarried
Personal Exemptions	\$4,050, subject to phase out	Repealed
Child Care Credit	\$1,000 per child subject to phase out beginning at \$110,000 (\$75,000 single)	\$2,000 per child subject to phase out beginning at \$400,000 (\$200,000 others) \$500 for other dependent
Top Capital Gains	20%(plus 3.8% Surtax)	20% (plus 3.8% Surtax) 15% breakpoint if \$77,200 M / \$38,600 S
Kiddie Tax	Unearned income taxed at parents highest incremental rate	Utilized the Trust rates

# Tax Cuts and Jobs Act

- Individual Tax Changes:

	2017 Law	2018 Law
<u>Itemized deductions:</u>		
Medical	Subject to 7.5% of AGI floor	Same
SALT	Unlimited subject to AMT and phase out based on AGI	Limited to \$10,000 MFJ (\$5,000 for other)
Mortgage Interest	Limited to acquisition indebtedness >1,000,000 plus HEL \$100,000	Limited to \$750,000 acquisition indebtedness Old rules grandfathered Eliminates Home Equity Loans
Charitable Contributions	50% Base limit to public Charities	60% Base limit to public charities and certain private foundations  Repealed 80% deduction for amount paid for the right to purchase tickets for college athletic events
Miscellaneous Itemized Deductions	Tax prep, safe deposit box, investment, unreimbursed business expenses etc. subject to a 2% floor	Eliminated
Moving expense	Qualified moving expenses	Eliminated
School Teacher Deduction for supplies	Above the line deduction up to \$250	Same

# Tax Cuts and Jobs Act

- Individual Tax Changes:

	2017 Law	2018 Law
<u>Other changes:</u>		
Alimony	Generally deductible in year paid	Eliminated deduction for divorce decree executed after 12/31/18
AMT	Exemption \$78,750 M/ \$50,600	Increased exemption to \$109,400 M and \$70,300 S
ACA Mandate	Penalty applies	Repealed

# Tax Cuts and Jobs Act

## Business Taxes:

	2017 Law	2018 Law
Corporate tax rate	Graduated rate: Up to \$50,000 - 15% \$50,000 - \$75,000 - 25% \$75,000 - 100,000 - 34% \$100,000 - \$335,000 - 39% >\$335,000 - 34% > \$10,000,000 - 35%	Flat 21% Rate
Qualified Business deduction	Not applicable	20% deduction for pass through and sole proprietor "Qualifying Business"
Method of accounting	Cash method limited to non-inventory business . Small business < \$10M allowed to use cash method	Cash method allowed for business < \$25M even if inventories are required

# Tax Cuts and Jobs Act

- Business taxes:

	2017 Law	2018 Law
Section 179 Deductions	Can expense up to \$510,000 of qualifying property begins to phases out if QP exceeds 2M	Can expense up to \$1,000,000 of qualifying property begins to phase out if QP exceeds 2.5M
Bonus Depreciation	Expense 50% of qualifying property	100% of qualifying property (which includes used property) Begins phasing out gradually in 2022
Luxury Auto Limits	Maximum Depreciation Deduction \$3,160, \$5,100, \$2,440 & \$1,500 each year	Maximum depreciation deduction \$10,000, \$16,000, \$9,600, \$5,760 & \$5,760
Sec 199	9% deduction for qualified production activity income	Repealed
AMT	AMT tax required	Repealed
Interest deduction	Unlimited deduction for business	Deduction for net interest expense is limited to 30% of adjusted taxable income for business > \$25M in gross receipts

# Tax Cuts and Jobs Act

## Business Taxes:

	2017 Law	2018 Law
NOL	2 Year carry back / 20 year Carry forward	No Carry back / Unlimited carry forward Limited to 80% of taxable income each year
Entertainment expense	Limited to 50%	No deduction allowed
Meals	Limited to 50%	Limited to 50%

# Tax Cuts and Jobs Act

- Lets' talk 20% deduction:
  - Includes pass-through and sole proprietor business
  - Must be “Qualified Business Income” (“QBI”) other than a “specified service business” (“SSB”).
  - A SSB is includes services such as health, law, accounting, financial, performing arts, consulting, athletics, brokerage services or any other business where the principal asset is the reputation or skill of one or more employees (exception for engineering and architecture).

## Tax Cuts and Jobs Act

- Lets' talk 20% deduction:
  - The 20% deduction is calculated based on the net income of the business before the 20% deduction
  - Exception for SSB if the individual's taxable income is does not exceed \$315,000 (Joint) or \$157,500 (other returns)
    - Phase out from \$315,000 - \$415,000 (joint)
    - Phase out from 157,500 – \$257,500 (other returns)

## Tax Cuts and Jobs Act

- Lets' talk 20% deduction:
  - The hurdles in the calculations for the QBI deduction:
    - Step 1: QBI x 20%
    - Step 2: Total W-2 wages x 50%
    - Step 2a: Total W-2 wages x 25% plus 2.5% of unadjusted basis of all qualified property
    - Step 4: Take the lower of Step 1 or Step 2/2a (which every has the highest result for step 2 or 2a)

## Tax Cuts and Jobs Act

- Lets' talk 20% deduction:
  - What constitutes wages of the calculation:
    - W-2 box 1 wages

## Tax Cuts and Jobs Act

- What to do:
  - Evaluate you organizational structure
    - Consider converting to a “C” corporation
    - Convert LLC / LLP to corporate tax status and make back to back “S” elections
  - Convert independent contractors to employees
  - Split of qualifying business activities into separate entities
  - Evaluate the compensation of the ownership group

# Tax Cuts and Jobs Act

- Estate Tax Considerations

	2017 Law	2018 Law
Estate tax	40% rate , \$5,490,000 exemption \$10,980,000 for married couples	Exemption doubled to \$11,200,000 \$22,400,000 for married couples
Tax Basis upon death	Step to FMV	Step up to FMV
Exemption		Expires on 12/31/2025

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