



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS

Human Factors and the Manufacturing Workforce: Keeping Workers Safe

Jennifer M. McNelly

American Society of Safety Professionals

@jmcnellyMFG

jmcnelly@assp.org

Session Overview

- Highlight the economic fact about manufacturing
- Highlight the projected trends for the manufacturing workforce
- Discuss trends and the changing nature of work
- Consider the implications on company competitiveness, safety and health
- Identify actions you can consider

5 Fast Facts

1. Manufacturers contributed \$2.38 trillion to the U.S. economy
2. For every \$1 spent in manufacturing, another \$1.82 is added to the economy
3. There are 12.82 million manufacturing workers in the United States, accounting for 8.5 percent of the workforce
4. The average manufacturing worker in the United States earned \$84,832 annually, including pay and benefits
5. Over the next decade, 4.6 million more manufacturing jobs will likely be needed





Workforce Gap

2.4 million jobs are expected to go unfilled due to the skills gap



Pace of Change

Product / Technology	Time it Took to Hit 50 Million Users
Airlines	64 years
Automobiles	62 years
Telephone	50 years
Electricity	46 years
Credit Cards	28 years
Television	22 years
ATMs	18 years
Computers	14 years
Mobile Phones	12 years
Internet	7 years
Facebook	4 years
WeChat	1 year
Pokemon Go	19 days



From Jobs to “Superjobs”



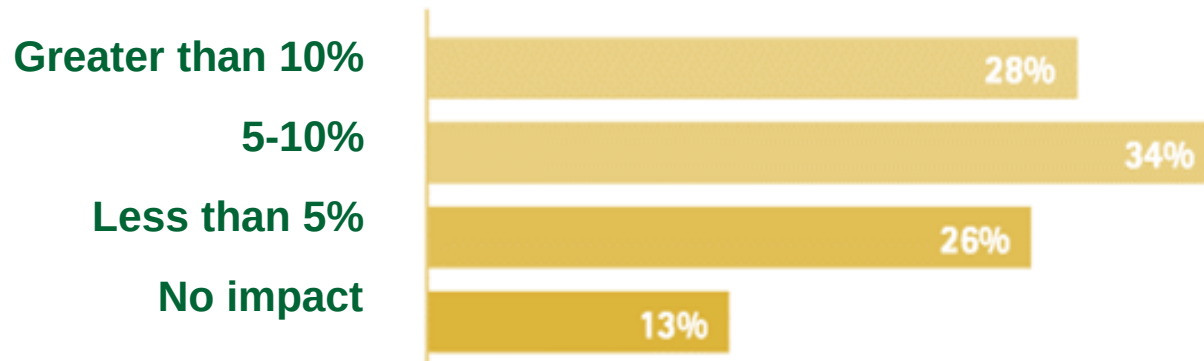
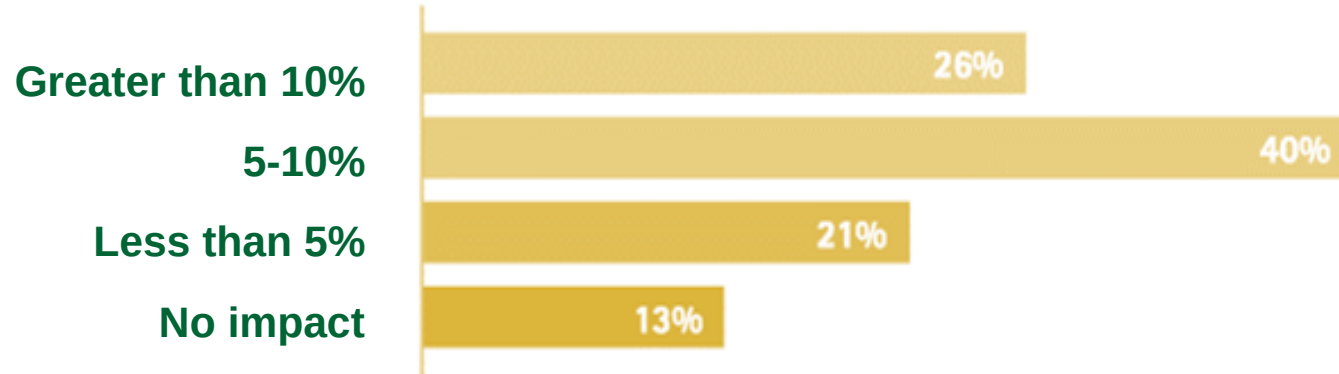
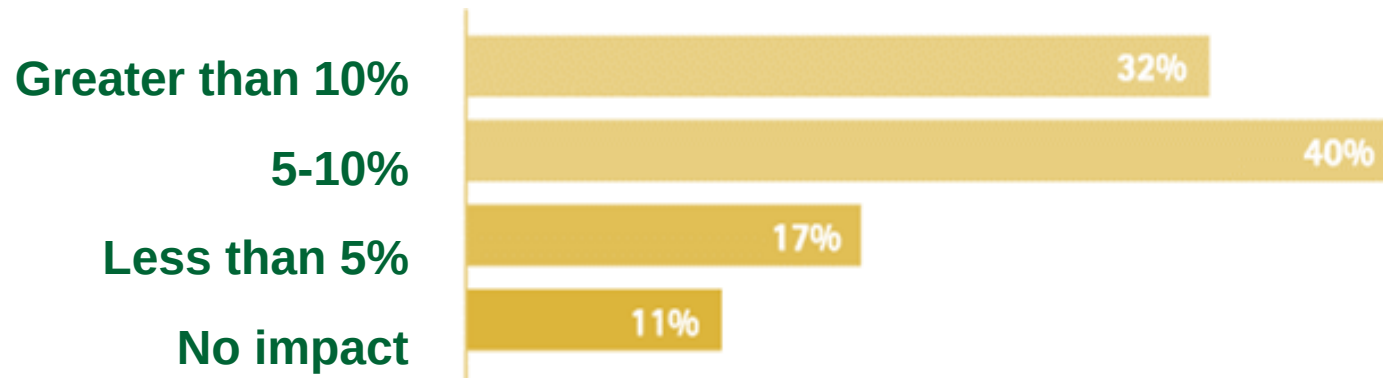
Half-Life of a Skill is 5 Years



Median Tenure is 4.2 Years



34% of U.S. Workers are Engaged



Costs 11% of Potential Earnings

- 12% overtime
- 8% cycle time
- 10% downtime



Many respondents perceived worker satisfaction to be low related to key aspects of work

How satisfied are employees in your organization with the design of their jobs (including the workflow and technologies)?

■ Not satisfied ■ Somewhat satisfied ■ Satisfied ■ Very satisfied

Autonomy to make decisions



Tools and technology



Access to relevant data and information



Overall job design



Day-to-day workflow



Note: Percentages may not total 100 percent due to rounding.

Source: Deloitte Global Human Capital Trends survey, 2019.





Employee Engagement Matters

Individuals

8-18%	Increased Performance
7-23%	Higher Employee Engagement
2-10%	Higher Customer Metrics
4-10%	Increased Citizenship





Employee Engagement Matters

Workgroups

14-29% Increased Profit

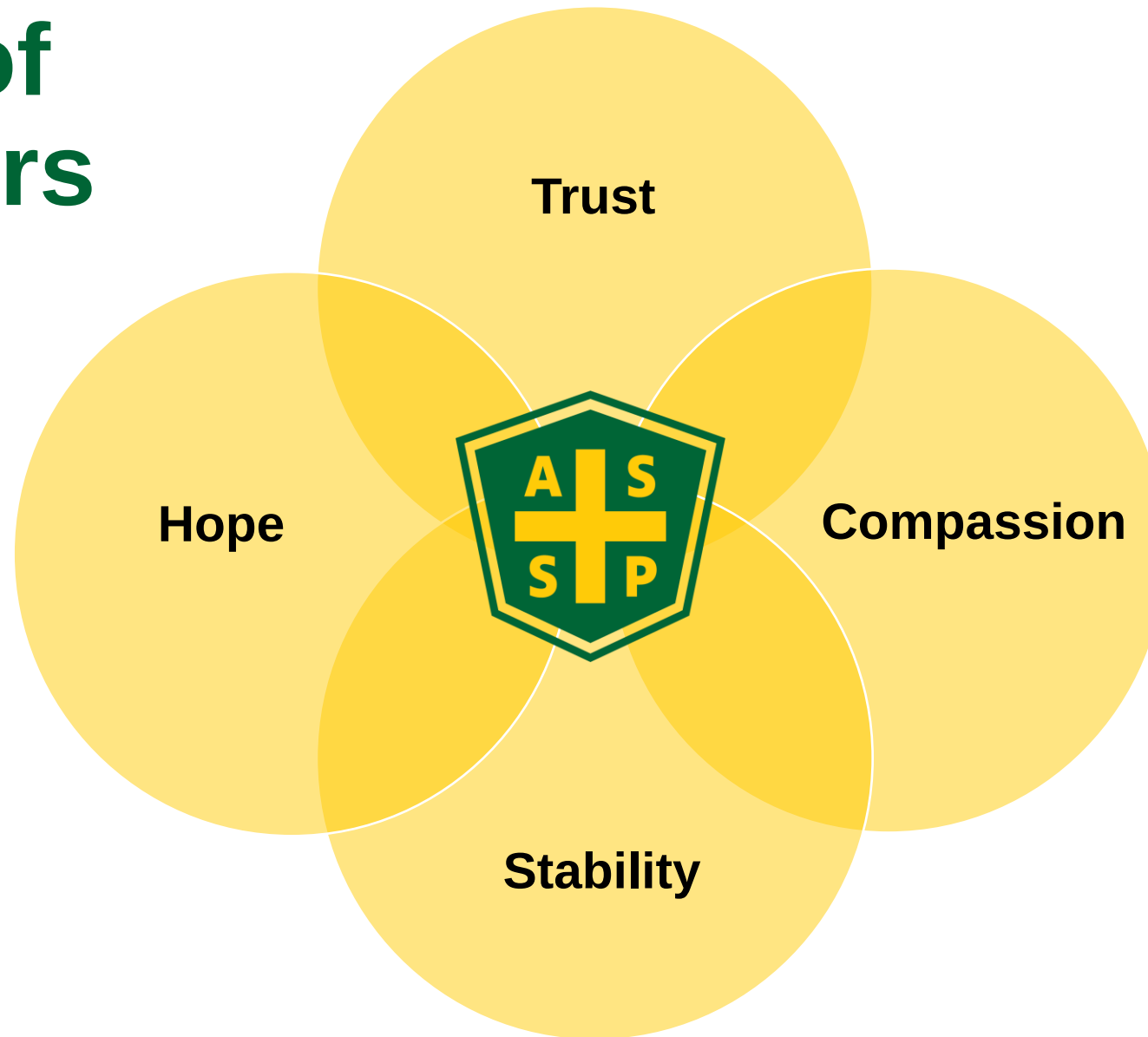
10-19% Increased Sales

3-7% Higher Customer Metrics

6-72% Lower Attrition

23-59% Fewer Safety Incidents

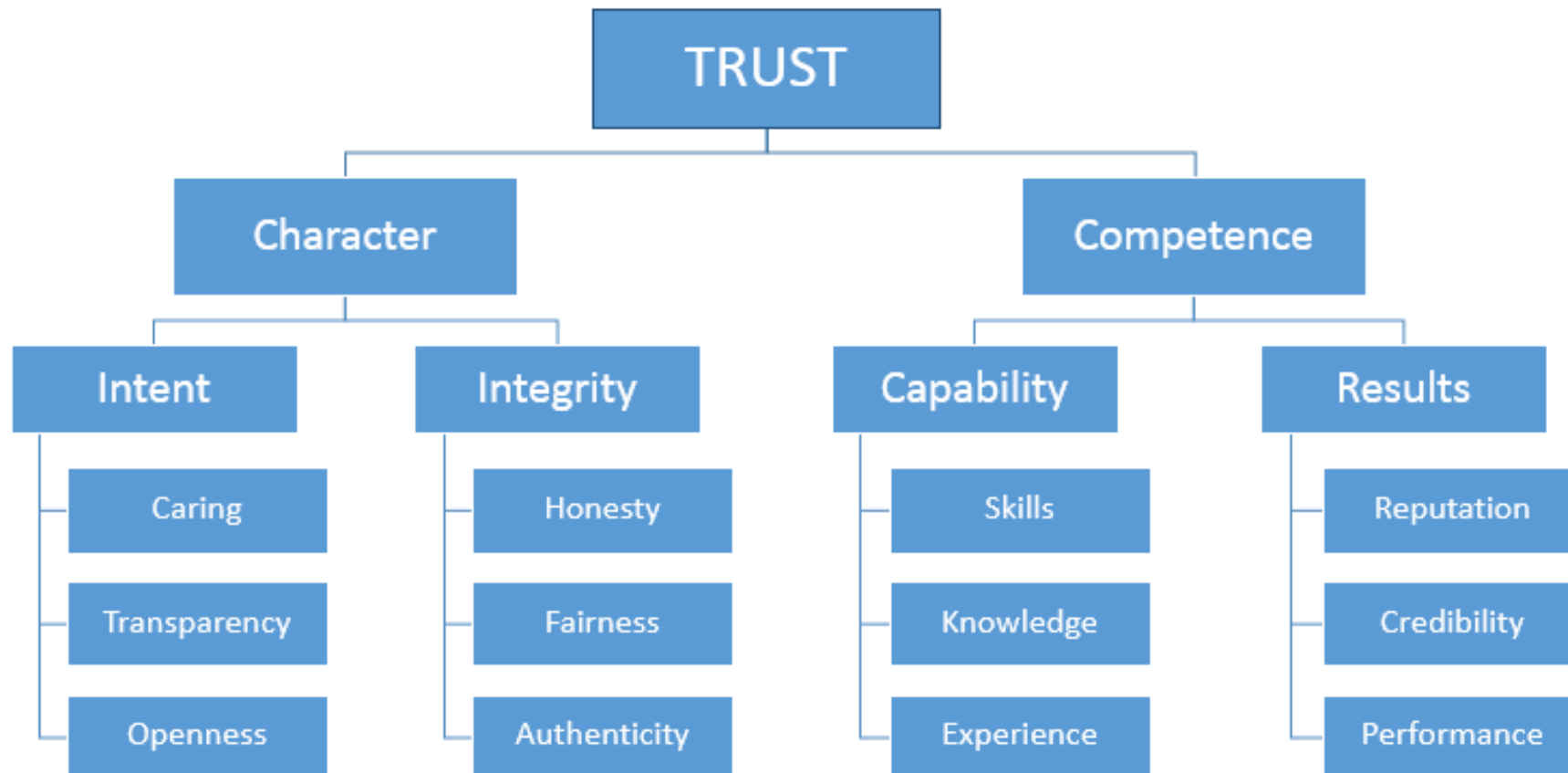
Needs of Followers





Trust

Barrett Trust Matrix





Compassion



Language Matters

When you hear this . . .	Offer this as way to expand thinking
Instead of:	Try:
I'm not good at this!	What's missing?
I'm awesome at this!	I'm on the right track.
I give up!	This may take some time and effort.
I can't make this any better.	I can always improve, so I'll keep on trying.
I can't do _____.	I'm going to train my brain in _____.
I made a mistake.	Mistakes help me learn better.
She's so smart. I'll never be that smart!	I'm going to try to figure out how she does it so I can try it.
Plan A didn't work.	Good thing the alphabet has 25 more letters!
It's good enough.	Is it really my best work?



Stability

Invite Openness

Questions That Create Receptivity	Questions That Create Resistance
Would you like to talk this out with me?	Can I offer some advice?
What are your strengths in this area?	Why do you think you are in this mess?
What would you like to do next?	Why did you do that?
Who can help accomplish this?	Whose fault is this?
How can we move this forward?	When did it start to go wrong?
What are some options for our team to succeed at this?	Where did the process break down?
What would you like to achieve here?	How did this happen?



Three Conversations

Tell, Sell, Yell		Deep Dialog
Transactional	Positional	Meaningful & Empowering

- Exchanging information
- Holding check-ins and one-on-ones
- Telling what to do
- Taking a position
- Convincing, promoting and defending
- Selling an idea
- Asking questions for which you have no answer
- Listening for potential
- Co-creating



Listening Is an Act of Creation and Compassion

“

Listening is a magnetic and strange thing, a creative force.

The people who listen to us are the ones we move toward.

When we are listened to, it creates us, makes us unfold and expand.

- Anonymous

”

“

Being truly listened to is an experience that feels so much like being loved that most people can scarcely tell the difference.

- Anonymous

”

Forget the mistake
remember the lesson



Beyond Compliance



AMERICAN SOCIETY OF
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Working together for a safer, stronger future.®



Jennifer M. McNelly
Chief Executive Officer
American Society of Safety Professionals
@jmcnellyMFG
jmcnelly@assp.org

