The Changing Face of Manufacturing
Transformational change... CREATES OPPORTUNITIES Powered by POSSIBILITIES.
The industry is shifting to new materials and technologies. This shift creates new opportunities, eliminating old processes and parts.

Electric vehicles contain 95% LESS components than their fossil fuel based counterparts.
New opportunities for automation in emerging electric vehicle industries will spark a transformational change in automation technology.
Autonomous Technology

Automotive OEM’s focus on Autonomous Technology & The Driver Experience

- Interior Redesign
- Sensor Manufacturing
- Connector and Wire Harness
THE TRANSFORMATIONAL CHANGE – GENERAL INDUSTRIES
From phones to snacks….

Robots produce the things we use in our daily lives
READY, SET, GONE!

The opportunities are here now. Don’t let them race past you.
CREATING SOLUTIONS FOR A DIVERSE CUSTOMER BASE
What’s interesting about this image?

It’s not only about the dirty D’s!
A New Business Reality
THE NEXT FRONTIER IS HERE
Global annual investment in robotics from 2015 to 2019 (in billion U.S. dollars)

- **E-Commerce**
- **Mobility Trends**
- **Service Markets**

Billions of dollars invested

2015: 60 billion
2016: 80 billion
2017: 100 billion
2018: 120 billion
2019: 140 billion

Global Annual Investment in Robotics $135B by 2019
Ease of Use

Technology is becoming increasingly intuitive and easy to use; ready for the next generation of automation.
Ease of Use

• The drive to make technology more intuitive and adaptive to a new manufacturing workforce.

• Time saving technologies can increase productivity and address skilled labor shortages.
iHMI Interface

- Common iHMI Interface across all FANUC products
- Designed for new or infrequent users
- Simplifies setup, programming, and operation
Cobots Are Cool!!!!
THE INDUSTRIAL INTERNET OF THINGS

GET CONNECTED!

Analytics, AI and Machine Learning are the future battlefield
The Importance of Analytics

Partnered with CISCO for Network Security and Reliable Cloud Services

Data analysis detects failing component from historical data comparison and notifies customer.
-Action Required-

Replacement component automatically sent to customer

Alert message sent to customer and FANUC Service team

Component changed during weekend
-ZERO DOWN TIME-

ZDT Data Storage

ZDT DATA COLLECTOR
A SKILLED WORKFORCE IS THE COMPETITIVE DIFFERENTIATOR IN A GLOBAL ECONOMY
The Manufacturing Workforce Message

• The inability to compete is the biggest threat to jobs, not automation.
• Technology advances have always always changed the nature of jobs.
• The skills gap is real & requires our attention.
BRIDGING THE SKILLS GAP WITH CERTIFICATIONS

- Apprenticeship programs declined 40% in the U.S. from 2003-2013.
- STEM jobs outnumbered the unemployed 2:1. In fact, job openings have been growing at double-digit rates since mid-2017.
- STEM employment will grow 19% through 2020.
- Traditional—and expensive—collegiate career route is giving way to parallel work-study tracks.
- Employers more than ever recognize the value of Industry Certifications and incentivize high demand occupations.
The next generation

Of innovation is here

POWERED BY POSSIBILITIES.
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