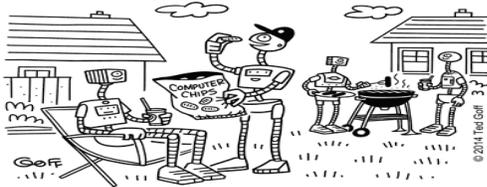


NTI 2018, C Group

Ann Arbor - University of Michigan
July 30th, 3:45-5:00 p.m., MLB Auditorium 4



LABOR DAY BBQ 2050



"Try one of these. They're salty, and they come with nine new human skills."

Asia Development Bank, June 2018

12 Asian Economies - Effect of Technological Development

66% employment decrease & 101 million jobs lost

88% employment increase & 134 million new jobs

AS OLDER, SKILLED WORKERS RETIRE, WHERE ARE THE YOUNGER, REPLACEMENT WORKERS TO SUSTAIN SKILLS NEEDED?

- "The world is on the cusp of entering a new reality in which human potential itself will become the major agent of economic growth."
- "We are entering the era of unparalleled talent scarcity that will put a brake on economic growth around the world, and will fundamentally change the way we approach workforce challenges."

-Jeffrey A. Joerres, CEO and Chairman, Manpower Group

-Jean Charest, Premier of Quebec

OUR WORKFORCE IS MISSING YOUNGER REPLACEMENTS

As older, skilled workers retire, there are not enough younger workers in the pipeline to sustain the skills base needed for growing business opportunities.

The Labor Force is Aging

PERCENT DISTRIBUTION OF THE LABOR FORCE BY AGE GROUP

Source: bls.gov



REALIZING THE POTENTIAL OF YOUNG WORKERS

Young workers represent an asset to firms in their capacities as:

- consumers
- influencers
- innovators
- tech-savvy



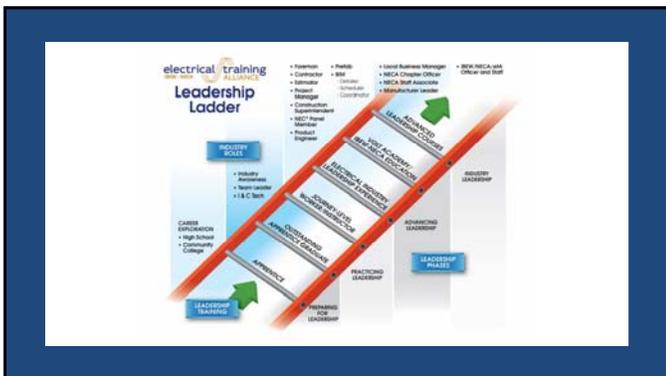












**56% OF 50,000 15-18 YEAR-OLDS
WOULD CONSIDER JOINING WORKFORCE
INSTEAD OF COLLEGE**

Reported by the Wall Street Journal, Univerum Global
"The Future of Talent"

**NEW YORK TIMES, MAY 6, 2018
RACHEL ABRAMS & ROBERT GEBELOFF**

"WITH UNEMPLOYMENT AT A 17-YEAR LOW, BUSINESSES EVERYWHERE ARE STRUGGLING TO FIND WORKERS...IN 2000, ABOUT 45% OF THOSE BETWEEN 16 AND 19 HAD A JOB, TODAY IT'S ABOUT 30%."

**INSTEAD OF PEOPLE LOOKING FOR EMPLOYMENT,
EMPLOYERS ARE LOOKING FOR PEOPLE**

- Unemployment has dipped to 3.9%
- The lowest level since December 2000
- The economy is close to "full employment"
- Whoever wants a job can get one, especially in the city
- Rural areas have suffered from high unemployment because jobs were moving out and plants were closing down – NOW, too much job growth is creating a whole different set of problems

Morning Brew, 05/06/18, Neal Freyman



Blueprint Reading



NO ROOM FOR WASTED TALENT

THERE WILL BE NO ROOM FOR WASTED TALENT IN TOMORROW'S NIMBLE AND TALENT-POOR ORGANIZATIONS, SO THERE CAN BE NO ONE WHOSE SKILLS OF KNOWLEDGE ARE ALLOWED TO BECOME OBSOLETE.

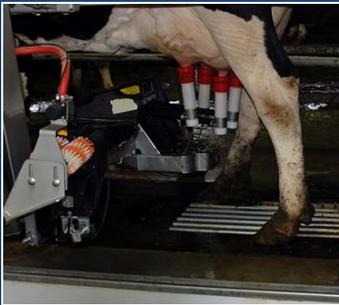
BUSINESSES MUST PROMOTE POSITIVE IMAGE OF SKILLS EDUCATION

- begin by "re-branding" vocational education to skills education
- build skilled workers into leaders through mentoring, promoting their education with certified credentials, and using former effective employees as consulting mentors
- involve yourselves with local schools to align curriculum offerings with needs of business community

HUMAN AUGMENTATION

THE INDUSTRIAL INTERNET CAN ALSO HELP MAKE WORKPLACES **MORE FLEXIBLE AND APPEALING TO NEW GENERATIONS OF WORKERS**

- With connected factories, a manufacturing engineer can receive notifications on his tablet from hundreds of miles away when a machine is malfunctioning – using the same device to resolve the problem remotely, including collaboration with colleagues
- There is a new level of flexibility on where and how work is done
- The nature of work is being transformed from “blue-collar” into a knowledge-based role – offering real-time access to data from assets such as trains, airplanes, power grids or earth-moving equipment

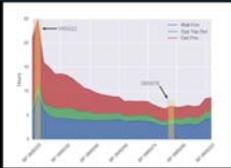


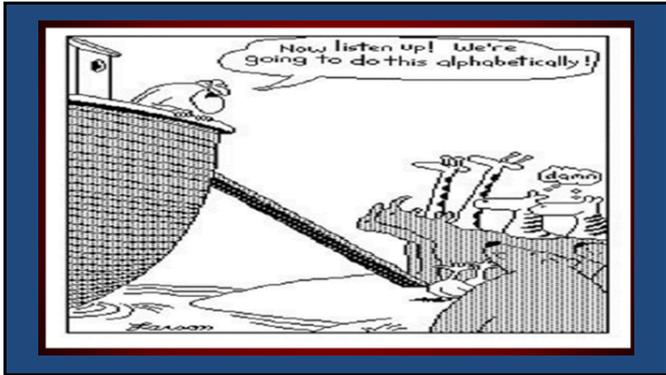
COW MILKING ROBOTS HELP JAPAN DO MORE WITH LESS

Robotic milkers – 1990s - Europe
 \$2M investment in a fully-automated barn
 \$230K for 2 milking robots
 \$18K for feeding “R2D2” robot
 More than double production
 Adding no more humans than the family workers before

“We have to change the way we live and work – young people won’t come to the dairy to work.”

“National push for automation reaches farms, as human workforce heads out to pasture”





A graphic for the NECA Technology newsletter. It features a hexagonal grid with the word "TECHNOLOGY" in a central blue hexagon. Other hexagons contain the words "Engineering", "Production", "Strategy", "Future", "Innovation", and "Competitive". Below the grid, the text reads "DON'T GET LEFT BEHIND" in bold yellow letters. Underneath that, it says "The weekly NECA Technology newsletter will keep you up-to-date the latest research and development so your business won't get left behind." and "Subscribe today: www.necanet.org/subscribe-to-neca-technology". The NECA logo is in the bottom right corner.
