Industry Partnerships to the Rescue

Filling the Growing CTE Instructor Shortages

2019 – 2022

Our first National Science Foundation Grant

- $276k over three years
- 4 Rockwell Certification Trainers
- Instructor Training
- Academic Collaborations
- Summer Camps
- Lab Tech Position

Cold Call

How to Create and Sustain
Productive Industry
Relationships

Scenarios

Tour & Talk **1**

Get out there and see the industry in your area in person

Tailor & Trust **2**

Match up your program and your graduates with industries' needs

Title & Tangle **3**

Engage industry leaders in your program and students with industry representatives

Tantalize & Titillate **4**

Do some HR work for your industry supporters and offer them access to your students

Take & Turn Away **5**

Ask for what you need and don't accept what you don't

New!

National Science Foundation Grant

- ◇ $464,846 over 3 years
- ◇ Industry adjunct co-teacher model
- ◇ Partial funding for faculty position
- ◇ ELE 246 Industrial Robotics
- ◇ 3 Fanuc Robotics Training Carts
- ◇ Benchtop conveyors
- ◇ Instructor certifications

NSF

2022 - 2025

Workforce Conversation

CVCC

LYH L♥S YOU
LYNCHBURG, VA

NSF

2021
Report
from
EMSI

THE

DEMOGRAPHIC
DROUGHT

How the approaching sansdemic*
will transform the labor market
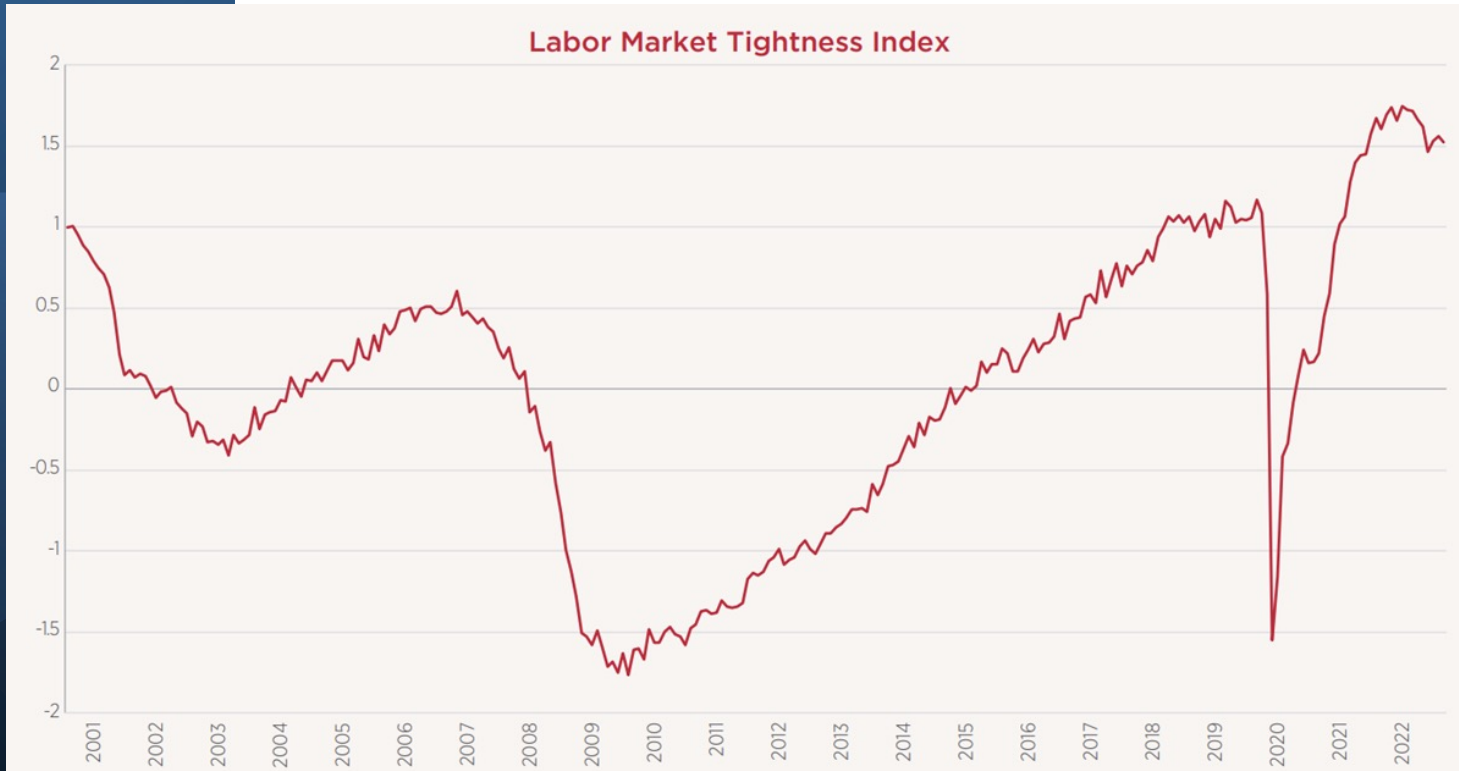for the rest of our lives

HELP WANTED

- **Birth rate**

- **Baby Boomer retirement**

- **Millennials are wealthy**

- **Millennials are broke**

- **Childcare costs**

- **Opioid epidemic**

- **Declining immigration**

- **Permanent Covid losses**

Immovable Object

12-month percent change in the working age population (16-64)
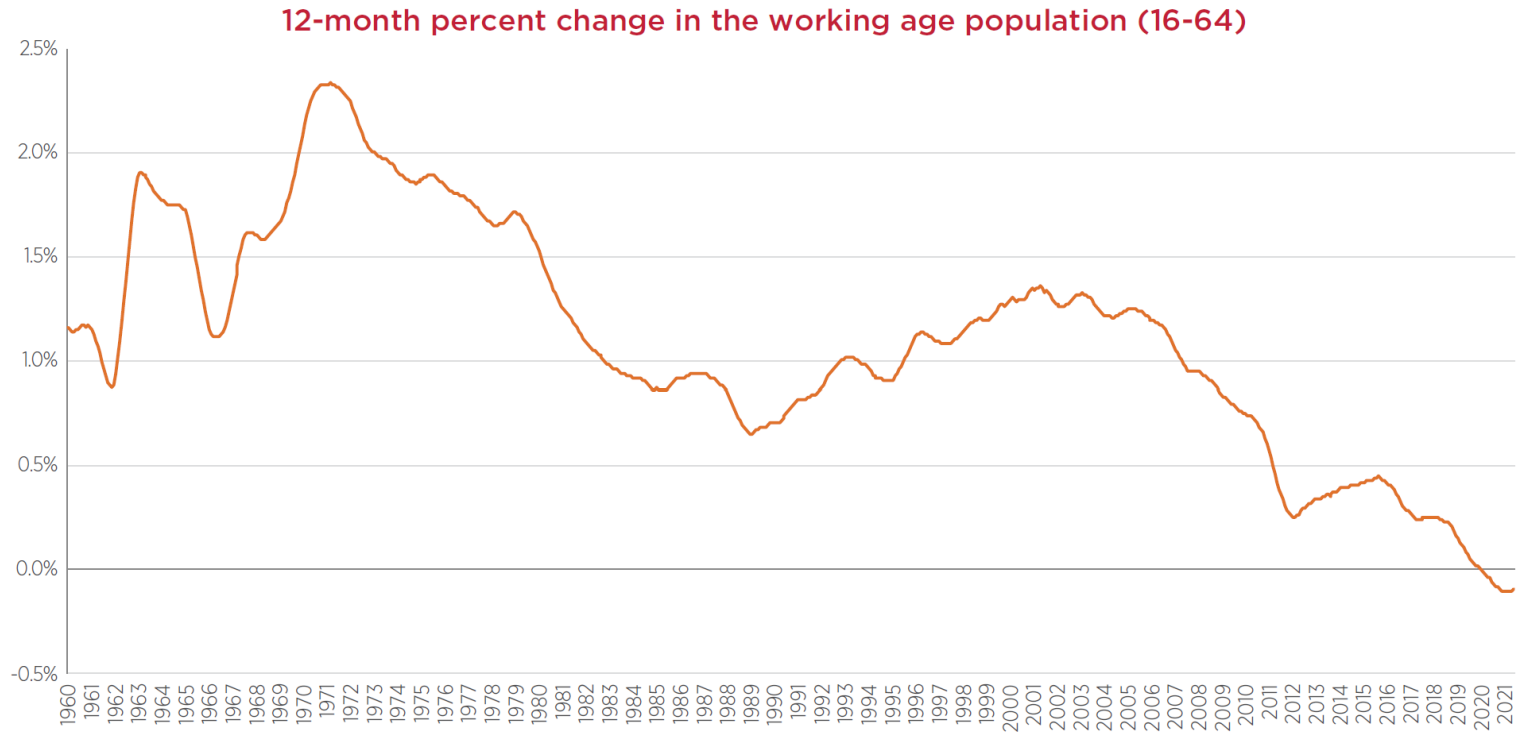
Source: US Census and Burning Glass Institute Calculations

Immovable Object

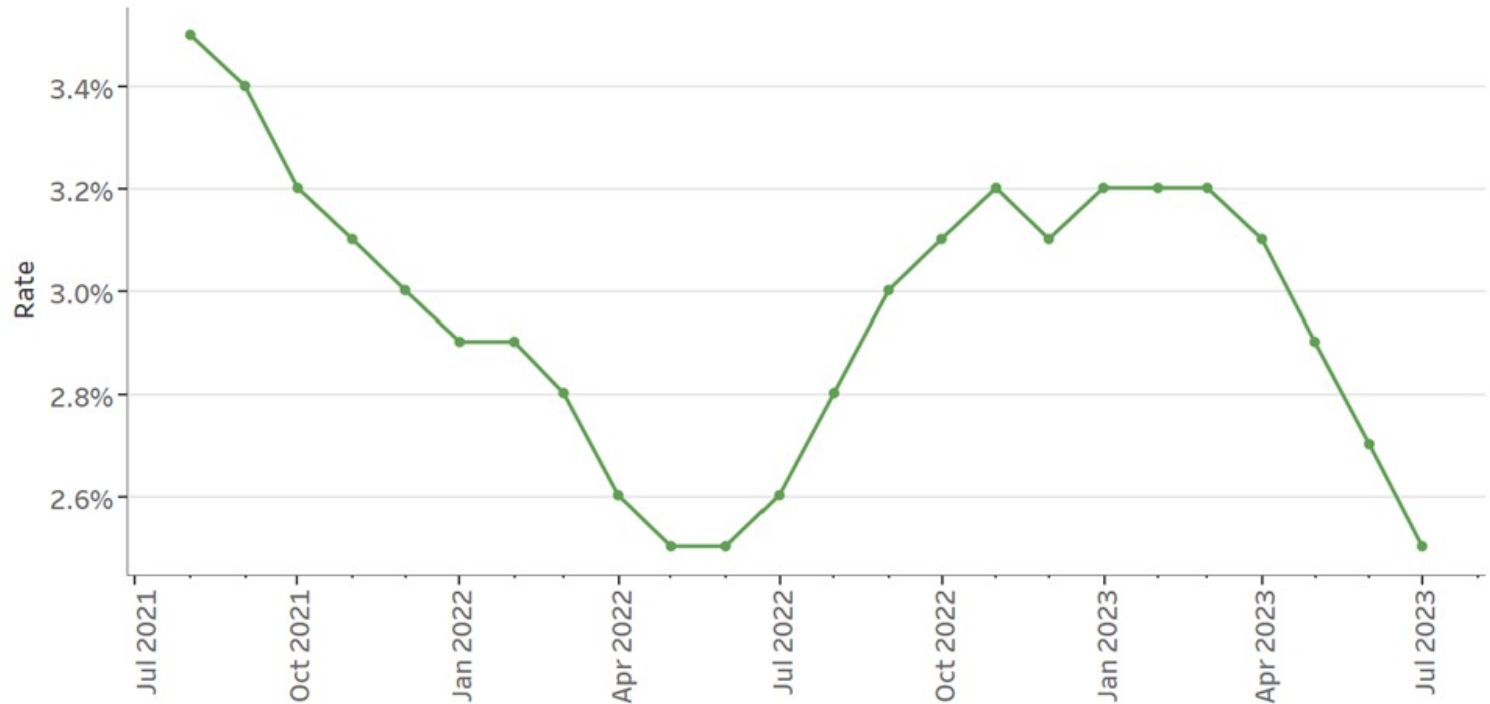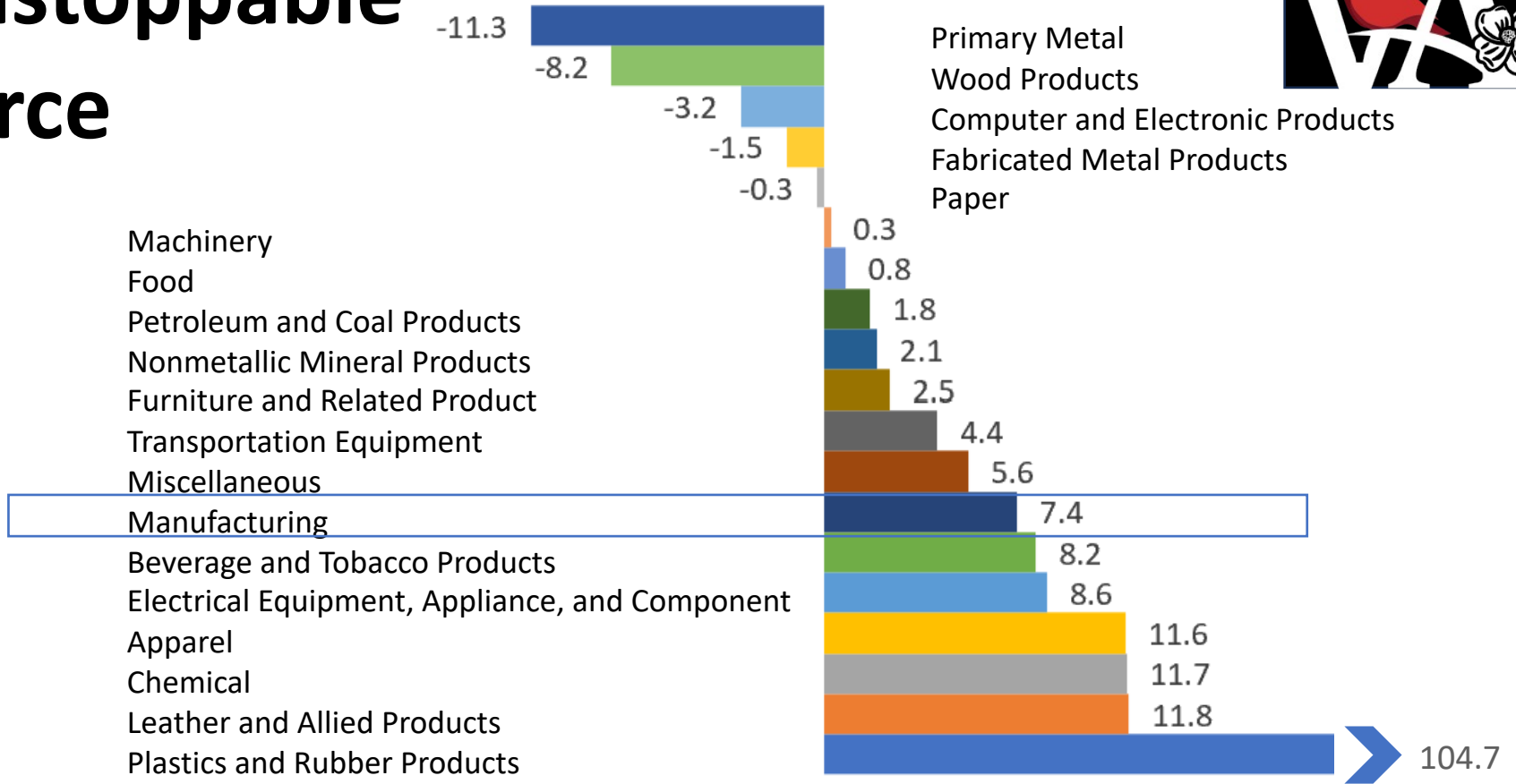**Labor Market Tightness Index**

Source: Burning Glass Institute

Immovable Object

Current Local Area Unemployment Statistics

State: Virginia | **Date Range:** August 2021 to July 2023

Unstoppable Force

Primary Metal
Wood Products
Computer and Electronic Products
Fabricated Metal Products
Paper

-11.3
-8.2
-3.2
-1.5
-0.3

Machinery
Food
Petroleum and Coal Products
Nonmetallic Mineral Products
Furniture and Related Product
Transportation Equipment
Miscellaneous
Manufacturing
Beverage and Tobacco Products
Electrical Equipment, Appliance, and Component
Apparel
Chemical
Leather and Allied Products
Plastics and Rubber Products

0.3
0.8
1.8
2.1
2.5
4.4
5.6
7.4
8.2
8.6
11.6
11.7
11.8
104.7

Projected % Growth of Virginia Manufacturers 2020 - 2030

This is what happens when an unstoppable force meets an immovable object

US LABOR MARKET OUTLOOK

By **Gad Levanon**, Chief Economist, The Burning Glass Institute

MARCH 2023

THE burningglass INSTITUTE

"Brace for impact"

Mapping the Opportunities

"To strengthen students' pathways through postsecondary education and into in-demand careers, employers and colleges must work more closely together."

100% involved a **public two-year college**

AIR®

Improving Advanced Manufacturing Technician Education Using Industry Partnerships

Grows industry partnerships by providing insight and access to the local technical workforce

Recruits industry adjuncts by creating symbiotic relationships between community college technical programs and employers

Strengthens pathways for dual-enrolled students to enter CTE programs and advanced manufacturing employment

www.NecessarySkillsNow.org

Dedicated to facilitating collaboration between educators and employers to improve the employability skills of entry-level technicians in STEM fields.

Instructional Resources • Professional Development

Employability Skills

- Non-technical skills necessary for success in the workplace

- Often referred to as "soft" skills

- Soft does not mean unimportant or less important

Employability Skills

89% of recruiters say that when a hire doesn't work out, it usually comes down to a lack of soft skills.

https://www.linkedin.com/business/talent/blog/talent-strategy/global-recruiting-trends

Career Readiness Competencies Identified as "Essential" or "Absolutely Essential"

Competency	PERCENT OF RESPONDENTS
Professionalism/Work Ethic	97.5%
Critical Thinking/Problem Solving	96.3%
Oral/Written Communications	91.6%
Teamwork/Collaboration	90.0%
Information Technology Application	72.0%
Leadership	55.9%
Career Management	45.0%
Total Respondents	606

Development and Validation of the NACE Career Readiness Competencies

ADVANCED MANUFACTURING

Competencies for Personal & Career Success

- Interpersonal
- Integrity
- Professionalism
- Dependability and Reliability
- Teamwork
- Problem-Solving
- Personal Safety and Health
- Communication

Competency Modules

- Created by a team of academic faculty and manufacturing industry leaders
- Based on the US Department of Labor competency model
- Specific challenges are designed to encourage exploration of competencies

Advisory Board Opinions

Employability Skill	Essential	Preferred	Not Important
• Take responsibility for completing one's own work assignments	87.5%	12.5%	0.0%
• Persist and expend extra effort to accomplish tasks despite difficult conditions, tight deadlines, or obstacles and setbacks	66.7%	33.3%	0.0%
• Establish and maintain personally challenging but realistic work goals	66.7%	25.0%	8.3%
• Bring issues to closure by pushing forward until a resolution is achieved	62.5%	33.3%	0.0%
• Strive to exceed standards and expectations	58.3%	41.7%	0.0%

Today's Focus:

Communication & Expectations

Boomers/Generation Jones?

- Keeping up with the Joneses

- Optimistic, 1960s childhood

- Became cynical in 1970s, Nixon, oil crisis and stagflation

- Most highly educated generation in American history

- Faced high unemployment, multiple recessions and record-high mortgage rates

- Feelings of missed opportunity of older Boomers

Age Range by Generation

Beresford Research/USA Today

Generation names are based on when members of that generation become adults

Generations	Born	Current Ages
Gen Z	1997 – 2012	11 – 26
Millennials	1981 – 1996	27 – 42
Gen X	1965 – 1980	43 – 58
Boomers II (a/k/a Generation Jones)*	1955 – 1964	59 – 68
Boomers I*	1946 – 1954	69 – 77
Post War	1928 – 1945	78 – 95
WWII	1922 – 1927	96 – 101

US population by generation

- In millions, 2022 (Statista)
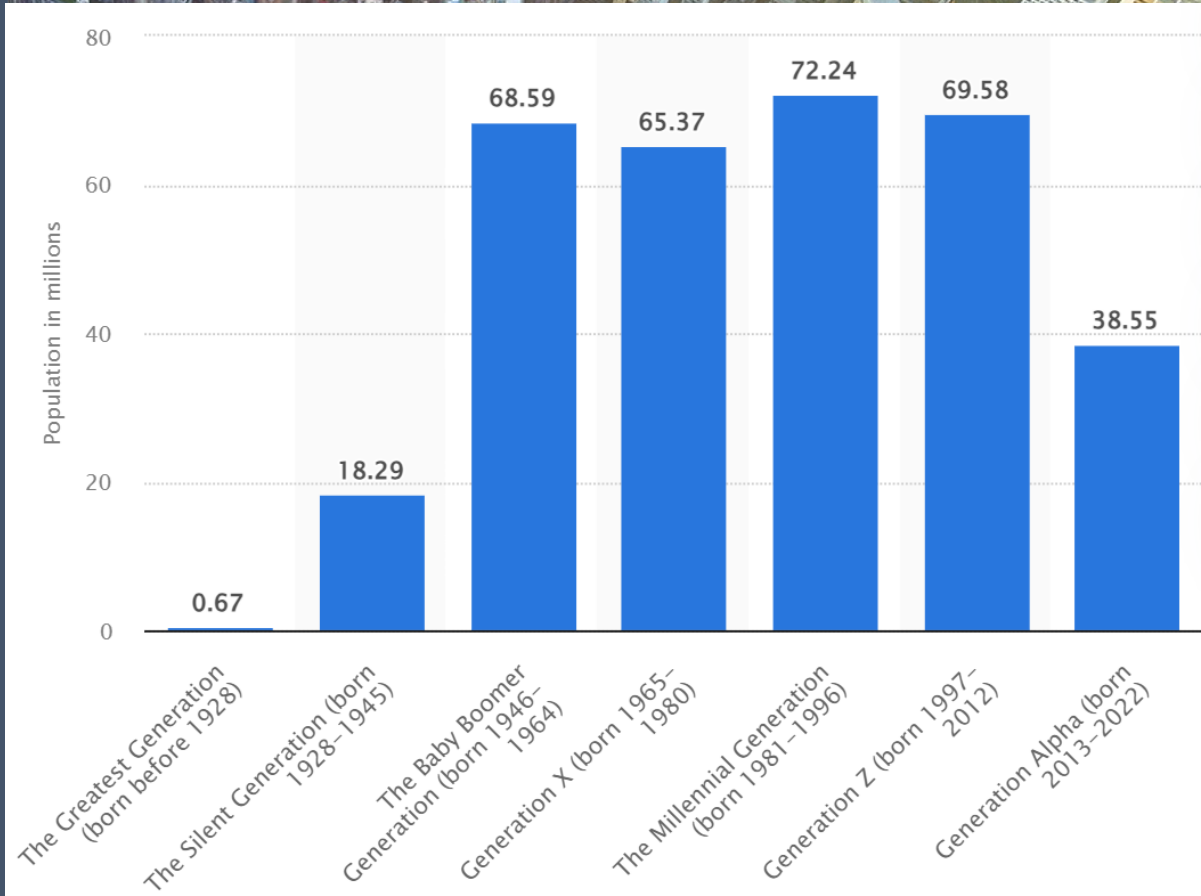
Post War to Boomer 1
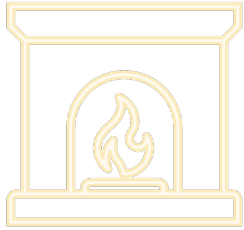
❖ Traditional values

❖ Strong work ethic

❖ Formal attitudes
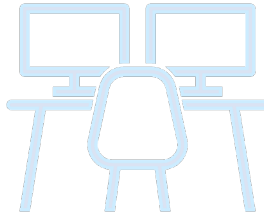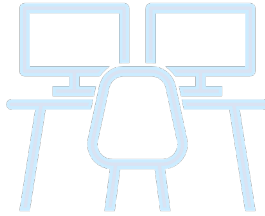
✓ Security

✓ Standard hours

✓ In-person engagement

Stereotypes: Mentors & historians, or long-winded dotards

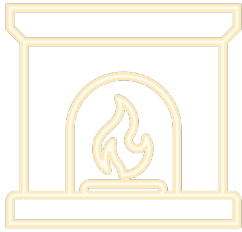# Boomer II -Generation Jones
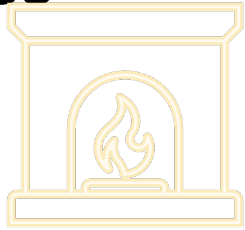
❖ Responsible

❖ Loyal

❖ Fixed mindset

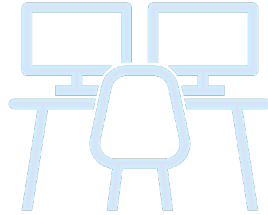✓ Flexibility

✓ Reduced schedules

✓ Authority and hierarchy

Characteristics summarized from surveys posted on Indeed.com

Generation X

❖ Independent

❖ Entrepreneurial
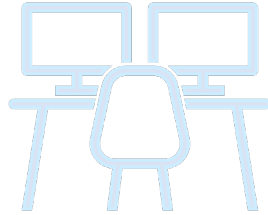
❖ Motivated

✓ Balance

✓ Financial rewards

✓ Autonomy

Stereotypes: Lone wolves & entrepreneurs, or rebellious & uncooperative

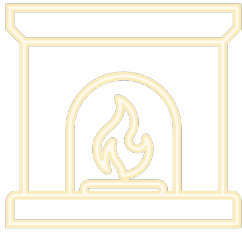# Millennials

- ❖ Creative
- ❖ Tech-savvy
- ❖ Results-oriented

- ✓ Relaxed environment
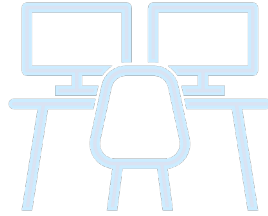- ✓ Meaningful work
- ✓ Value-added management

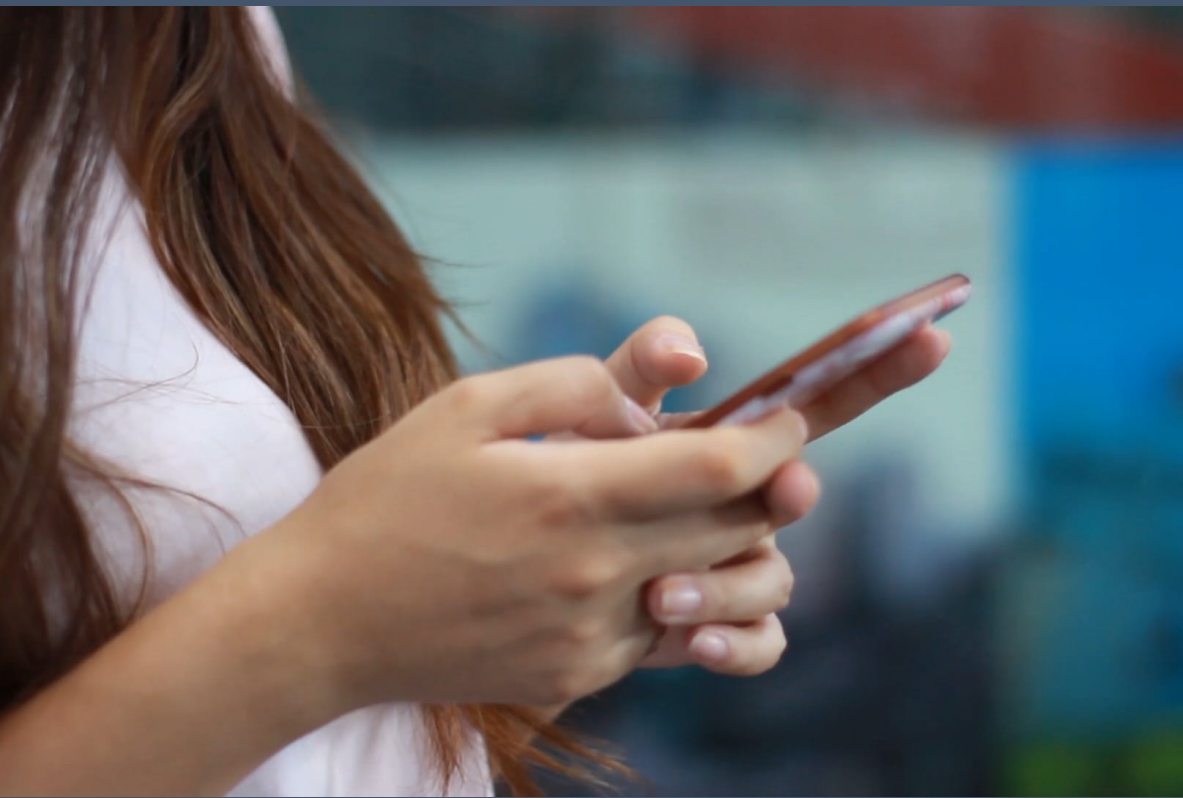Characteristics summarized from surveys posted on Indeed.com

Zoomers

- ❖ Integrated
- ❖ Highly tech adaptive
- ❖ Interdependent

- ✓ Flexibility
- ✓ Social responsibility
- ✓ Clear direction

Stereotypes: Networkers & protégés or lazy narcissists

Skit 1

The Phone

Boomer/Gen X/Zoomer

Skit 2

My Endless Story

Post War/Millennial

What's on your mind?

Ask us!

Linked in.

Danny Murphy
Marci Gale

FOLLOW US ON
INSTAGRAM

@mechatronicsrocks
@papamurph

Marci Gale — GaleM@centralvirginia.edu
Danny Murphy— MurphyW@centralvirginia.edu