

2

Agenda

- 10:00 am Welcome
- 10:20 **Mfg Facts, Trends, Challenges**
- 10:35 Research: **“Advancing Women in Manufacturing”**
- 11:00 Panel: **“How to Increase the Number of Women in Manufacturing Skilled Trades (WiMST): A Tradeswomen's Perspective”**
- Noon **LUNCH**
- 12:50 pm Breakout: **“Brainstorm on Approaches / Best Practices”**
- 1:20 Overview: **Women in Mfg Peer Group**
- 1:30 Panel: **“Organizational Approaches to Increase the Number of WiMST”**
- 2:30 Tour: **Ohlone Manufacturing**

3

Women in MFG Skilled Trades Symposium

GOALS:
 GOALS:
 This is an event for manufacturing companies & educators to come together to learn techniques and approaches to recruiting more women into the manufacturing skilled trades.
 At this event, companies will:
 1) hear directly from women in manufacturing on what attracted them and motivated them to go into manufacturing.
 2) see examples of techniques and approaches that have been successful at recruiting women, and
 3) learn what hasn't worked and the barriers to hiring and keeping women in a manufacturing setting.









Date: 2/23/2024 (Friday)
Location: Ohlone College
 Room 1302
 43600 Mission Blvd, Fremont, CA


Registration

Start	End	Event	Speakers	Room #
9:00	10:00 AM	Check-in, Breakfast & Networking		Room 1302
10:00 AM	10:10 AM	Opening Remarks / Welcome	Dr. Lori Silverman (Ohlone College, Dean) Dr. Rose-Margaret Ekeng-Itua (Ohlone College, Professor of Engr)	Room 1302
10:10 AM	10:15 AM	Intro		Zoom
10:15 AM	10:30 AM	Manufacturing: The Facts, Trends & Challenges	Mark Martin (BACC, Regional Director - Mfg)	Room 1302
10:30 AM	11:00 AM	Presentation "Advancing Women in Manufacturing" Study	Ariane Hegewisch (Institute for Women's Policy Research)	Zoom
11:00 AM	12:00 PM	Panel Session (Skilled Tradeswomen) "How to Increase the Number of Women in Manufacturing Skilled Trades (WIMST): A Tradeswomen's Perspective"	Diane Starr (EBMUD - Maintenance Machinist) - MODERATOR - Carol Barry (Tesla - Tool & Die Specialist) - Helen Feng (Kairos - Engineering Technician) - Joanna Mei (LLNL - Engineering Technician) - Masako Miyazaki (NeuroLink) - Melissa Ramos (MGS Machining - Owner)	Room 1302
12:00 PM	12:50 PM	Lunch & Networking		
12:50 PM	1:20 PM	Breakout Discussion: Brainstorm on Approaches / Best Practices	Breakout into groups of 6-10.	Room 1302
1:20 PM	1:30 PM	Women in Mfg peer groups overview	Christine Ngo (SVMfg) Linda Renteria (Casa Sanchez)	Room 1302
1:30 PM	2:30 PM	Panel Session (Manufacturers / Educators) "Organizational Approaches to Increase the Number of WIMST"	Dr. Jessie Lockhart (Velo3D, Chief People Officer) - MODERATOR - Jess Cleary (Tesla - Senior Recruiter, Manufacturing) - Bianca Crivello (LLNL, Manufacturing Section Supervisor) - Louis Quindlen (Laney College, Machine Shop Dept Chair - Emeritus) - Suzanne Teed (Ghirardelli, Director, Engineering & Maintenance)	Room 1302
2:30 PM	3:00 PM	Tour of Ohlone Facilities		

Partners:
 Bay Area Community Colleges
 AMBayArea
 Workforce Development Boards

Sponsor:
 Thanks to JPMorgan Chase for their assistance in sponsoring this event.



4

Welcome

- Dr. Lori Silverman
 - Ohlone College, Dean of Applied Tech/Business

- Dr. Rose-Margaret Itua
 - Ohlone College, Engineering Faculty

- Mark Martin
 - Bay Area Community Colleges, Regional Director - Mfg

Thanks to Liz Whalley!

6

Original Rosies

- Marian
- Jeanne



7

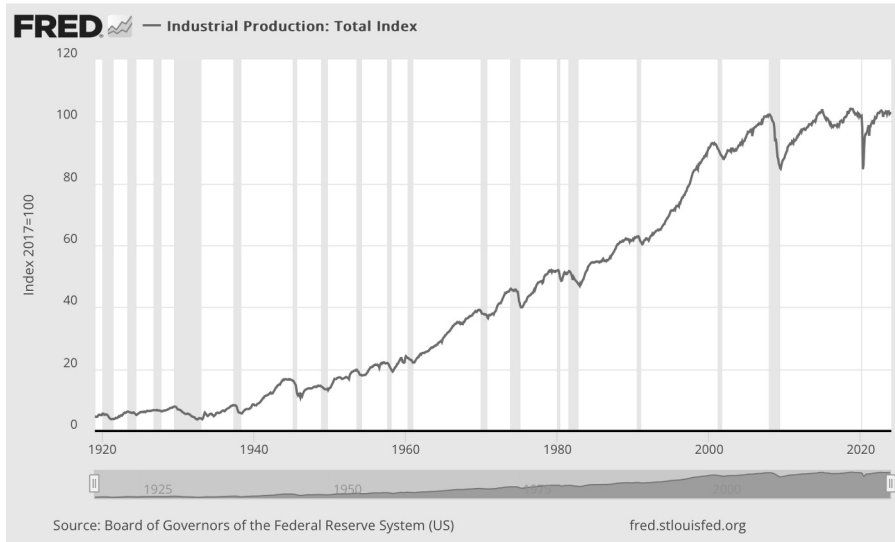
Special Guests



Tammy Brumley
 Rosie the Riveter Foundation

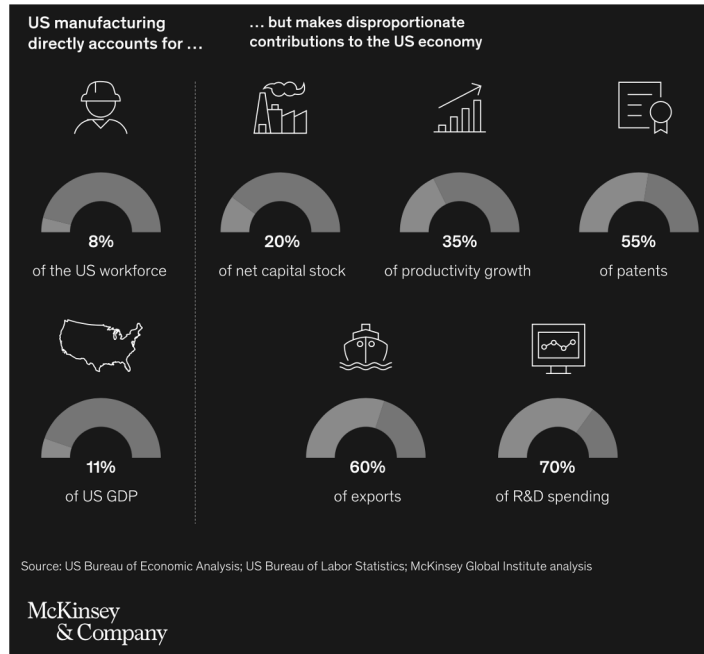
8

US Manufacturing (1919 – 2024)



11

Mfg is Important to the US

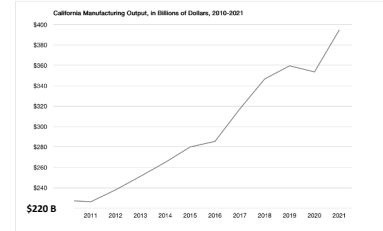
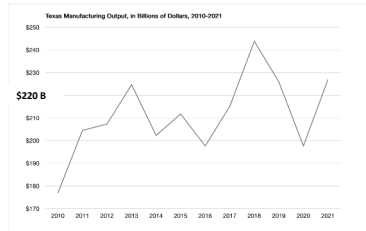


McKinsey Report, 2002
<https://www.mckinsey.com/capabilities/operations/our-insights/delivering-the-us-manufacturing-renaissance>

13

California Manufacturing (2018 vs 2021)

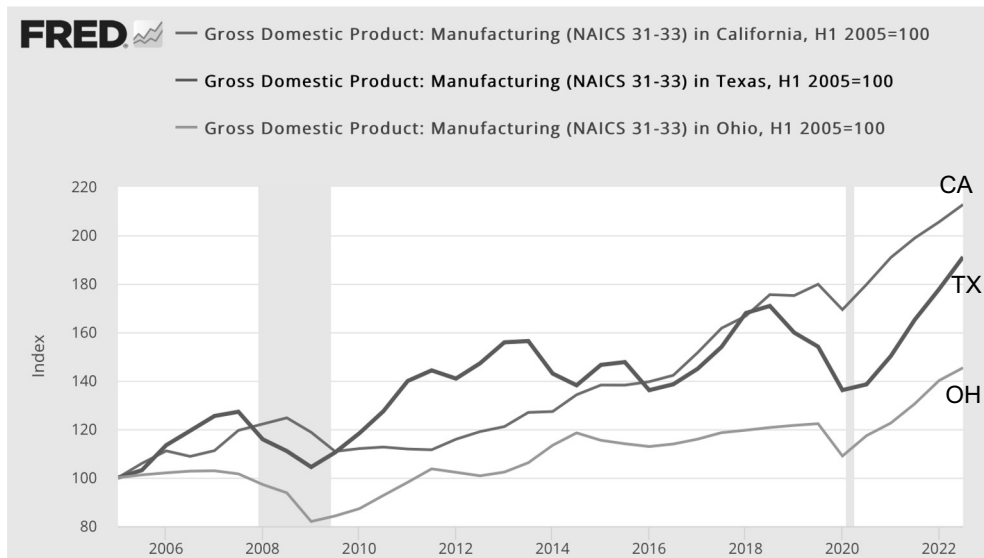
	<u>2018</u>	<u>2021</u>
• Total Manufacturing Output	\$317 B	\$395 B
• % share of total gross state product	11%	12%
• CA Employment	1.3 M	1.3 M
• CA Mfg Firms	35,700	34,400
• Bay Area Mfg Firms	approx. 25% (8k)	



Sources:
U.S. Bureau of Economic Analysis and the U.S. Census Bureau
<https://nam.org/state-manufacturing-data/>

15

CA vs. TX vs. OH



Source: St Louis Fed

16



17



18

10 Hardest Jobs to Fill (2011)

1. Skilled Trades
2. Sales Representatives
3. Engineers
4. Drivers
5. Accounting and finance Staff
6. IT Staff
7. Management / Executives
8. Teachers
9. Administrative Staff
10. Machinist

Manpower Survey - <http://us.manpower.com>

19

10 Hardest Jobs to Fill (2014)



Manpower Survey - <http://us.manpower.com>

20

10 Hardest Jobs to Fill (2018)

Which Roles Are Most Difficult to Fill in the United States?

Technology is redefining, rather than replacing, in-demand roles. Skilled trades – electricians, welders, mechanics and more – as well as drivers, sales representatives, health care professionals and teachers are ranked some of the most difficult roles to fill.

1 Skilled trades electricians, welders, mechanics 	2 Drivers truck, delivery, construction, mass transit 	3 Sales representatives B2B, B2C, contact center 	4 Health care professionals doctors, nurses, other non-nursing health professionals 	5 Teachers
6 Office support administrative assistants, PAs, receptionists 	7 Technicians quality controllers, technical staff 	8 Management/executive 	9 Restaurants/Hotel staff 	10 Manufacturing production and machine operators

Manpower Survey - <http://us.manpower.com>

22

Shortage of Mfg Employees (2022)

2.1 Million Manufacturing Jobs Could Go Unfilled by 2030

By NAM News Room | May 4, 2021 1:27pm



Home > Publications > Regional Economist

Labor Constraints Remain Greatest Challenge for Resurgent Manufacturing Sector

July 13, 2022

Get the Latest News

SIGN UP HERE

The New York Times

Factory Jobs Are Booming Like It's the 1970s

U.S. manufacturing is experiencing a rebound, with companies adding workers amid high consumer demand for products.

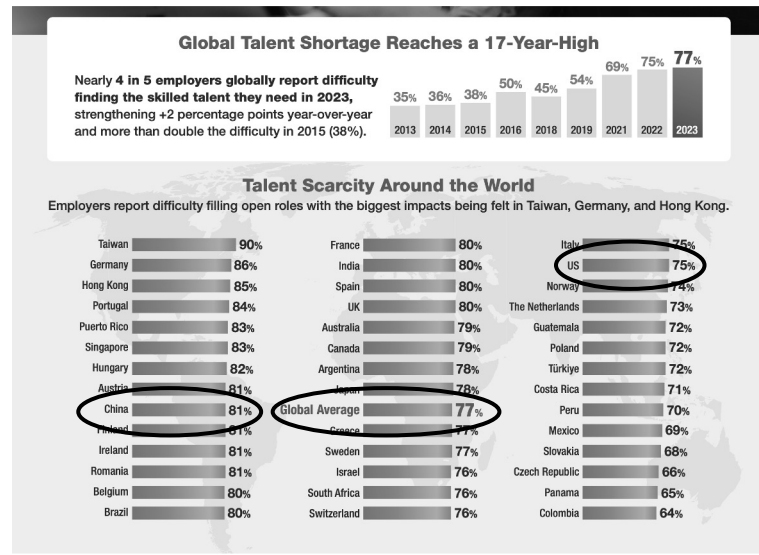
Give this article 561



A furniture factory in Hickory, N.C. Data suggest the rebound is largely a product of the pandemic recession and recovery. Travis Dove for The New York Times

23

Worldwide Talent Shortage (2023)



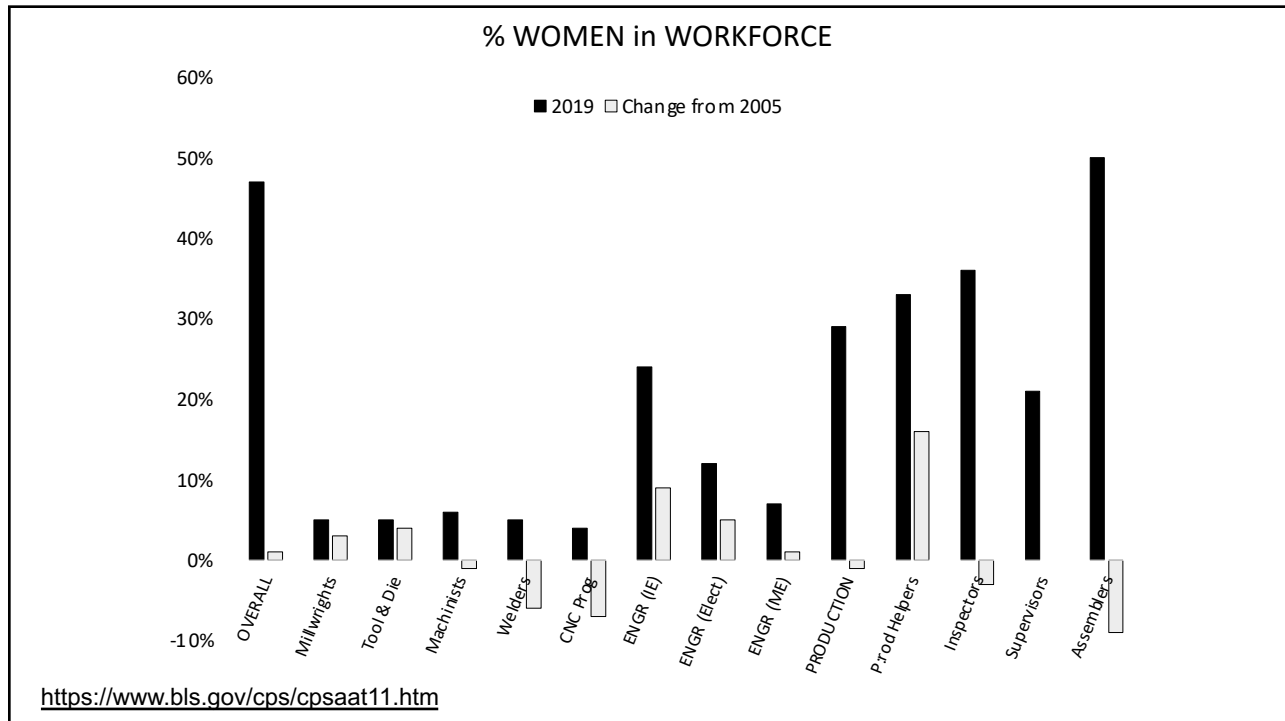
Manpower Group Research (2023)

24

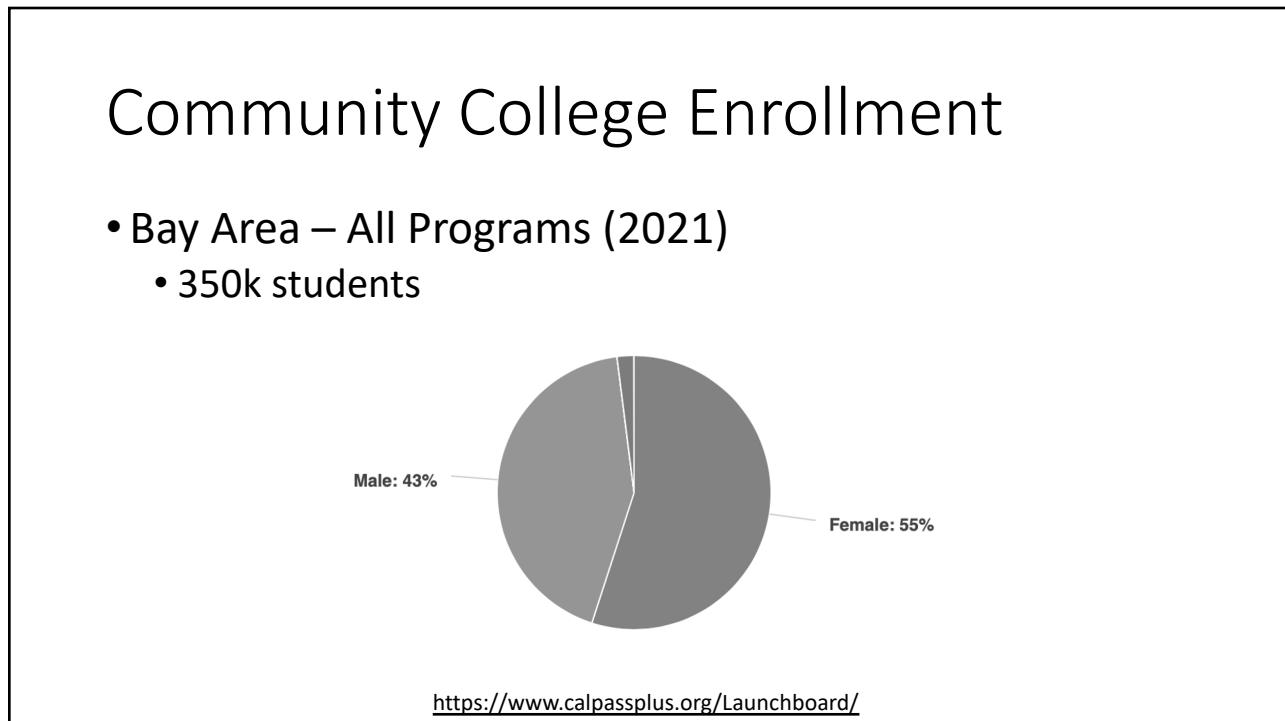
We need more employees in skilled trades manufacturing careers

Hmmm, I wonder if there's a potential untapped pool somewhere

26

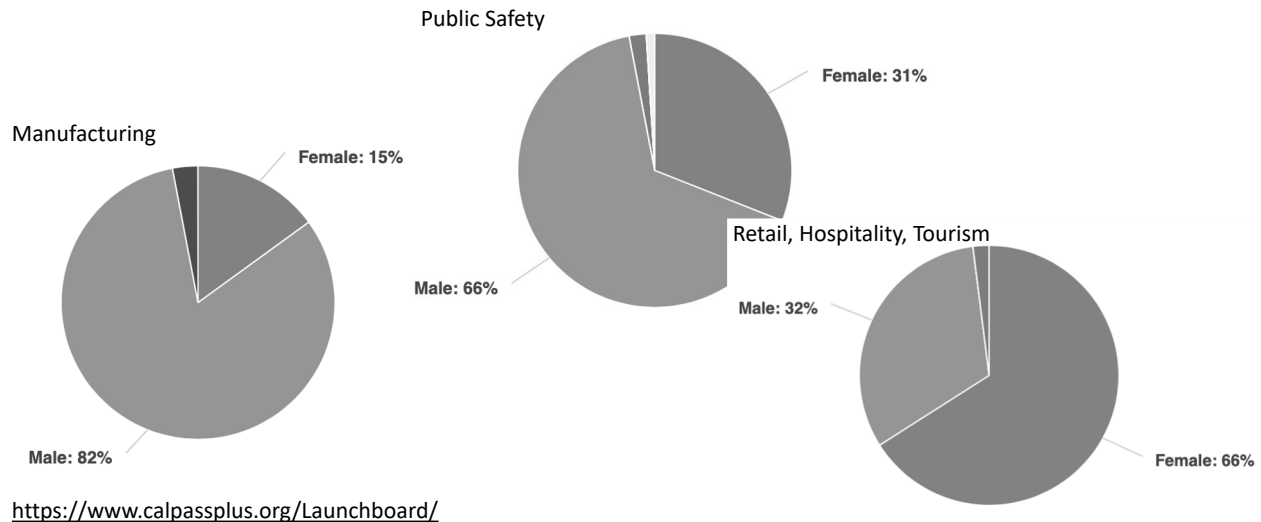


27



30

Community College Enrollment - Bay Area Programs (2021)



31

The Question(s)

Why aren't there more women in the skilled trades?

How do we attract, and retain, more women into these careers?

32



“Advancing Women in Manufacturing: Perspectives from Women on the Shop Floor”

Research Study

Ariane Hegewisch
Senior Research Fellow
Institute for Women’s Policy Research

Research Study



33

PANEL:

How to Increase the Number of WiMST: A Tradeswomen's Perspective

- Diane Starr (EBMUD - Maintenance Machinist)
- Carol Barry (Tesla - Tool & Die Specialist)
- Helen Feng (Kairos - Engineering Technician)
- Joanna Mei (LLNL - Engineering Technician)
- Masako Miyazaki (Neuralink – Prototype Build Engr)
- Melissa Ramos (M95 Machining - Owner)

34

Brainstorm on Approaches / Best Practices

- Breakout into groups of 6 – 10 and brainstorm on these questions:
 - "What have you seen implemented at companies / organizations? And what has worked or not worked?"
 - How can we get more women into the manufacturing skilled trades?
 - We're looking for new ideas as well as what you've seen work).
 - We'll compile these and use for future sessions
 - **Put these in the Google form**
 - **Return here by 1:20**
- BayAreaManufacturingCareers.com/wimst.html



39

PANEL: Organizational Approaches to Increase the Number of WiMST

- Dr. Jessie Lockhart (Velo3D - Chief People Officer)
- Jessica Cleary (Tesla - Senior Recruiter, Manufacturing)
- Blanca Crivello (LLNL - Manufacturing Section Supervisor)
- Louis Quindlen (Laney College - Machine Shop Faculty, Emeritus)
- Suzanne Teed (Ghirardelli - Director, Engineering & Maintenance)

41

BayAreaManufacturingCareers.com



44

BayAreaManufacturingCareers.com

• Bay Region CC's (28)

- Manufacturing Programs (16)
- Manufacturing-related Programs (7)



45