

An Agile Path to a Competitive Advantage Manufacturing Industry Compensation & Benefits Study Reveal 2023

June 7th, 2023



Today's Presenters



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North Side Bank

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North Side Bank & Trust Company has served the Greater Cincinnati area since 1891, and remains privately held and family-oriented to ensure we know our clients and they know us.

We pride ourselves on calling our customers, their families, and children by name when they walk through our doors. Our commitment to serving the communities is unwavering across our nine locations in the Greater Cincinnati area.

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Study Overview



Travis Knight, CPA

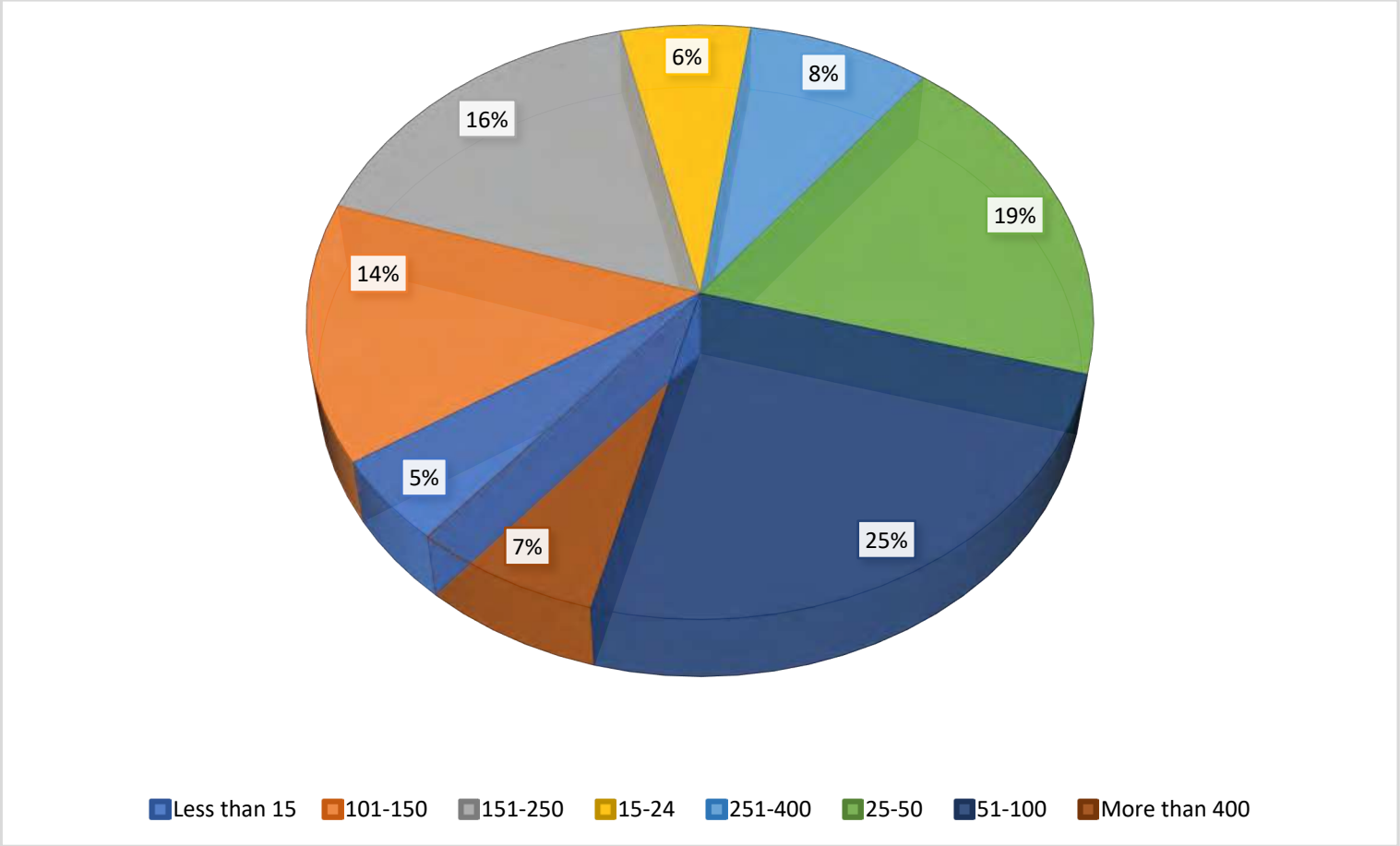
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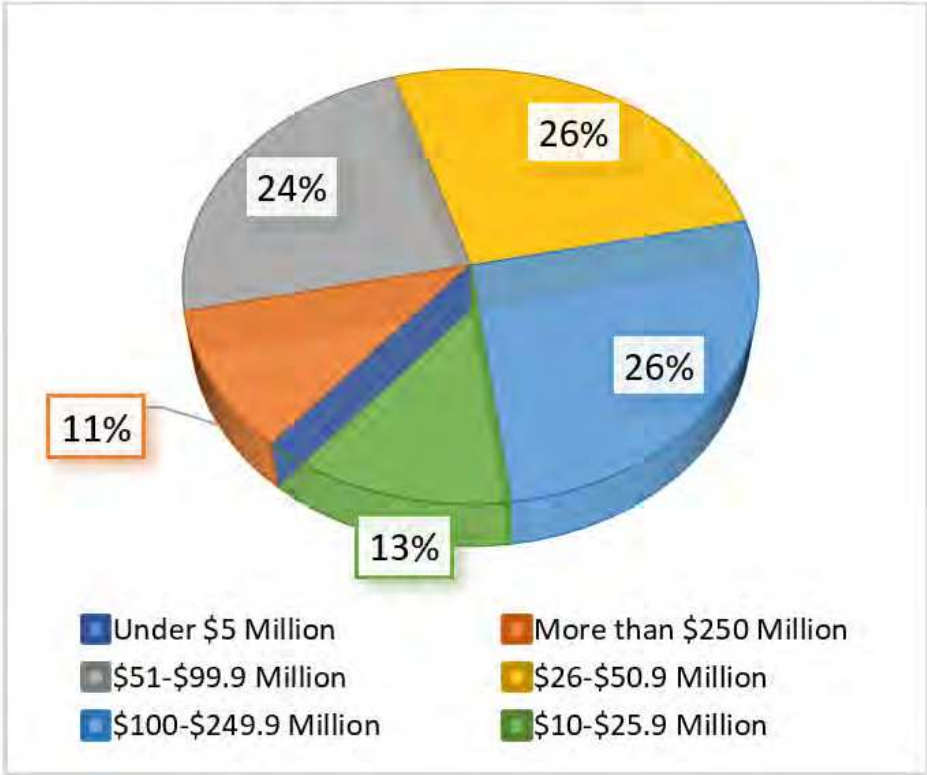
Survey Participant Background

- Survey participation has decreased from the 2021 report by 11 companies to 85

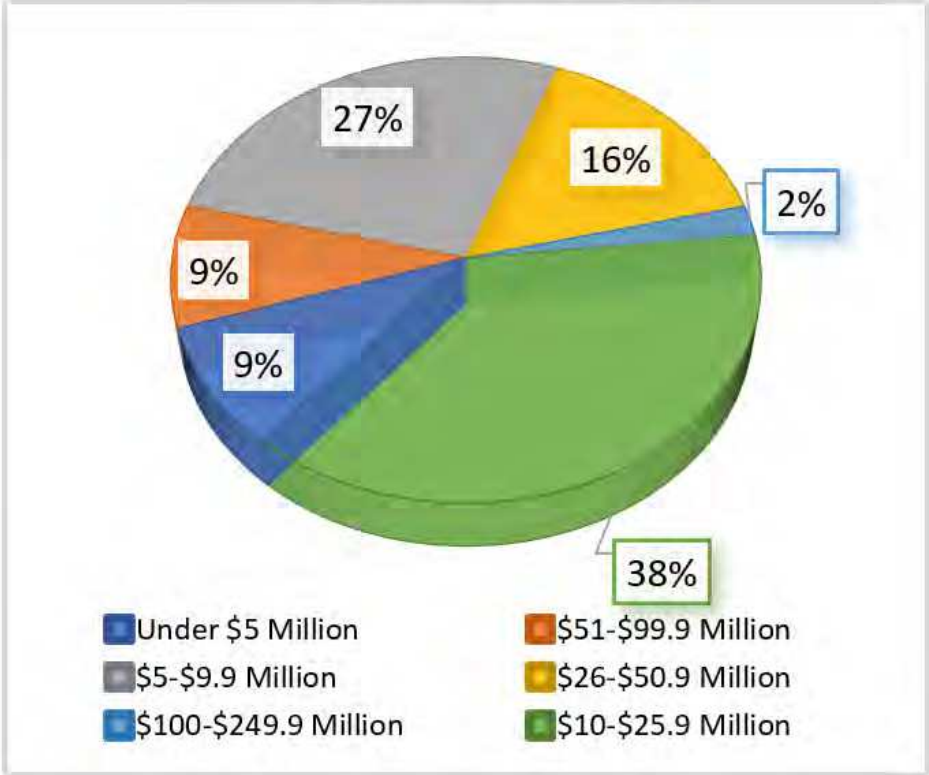


Survey Participant Background

**Annual Sales – Companies
Over 100 Employees**

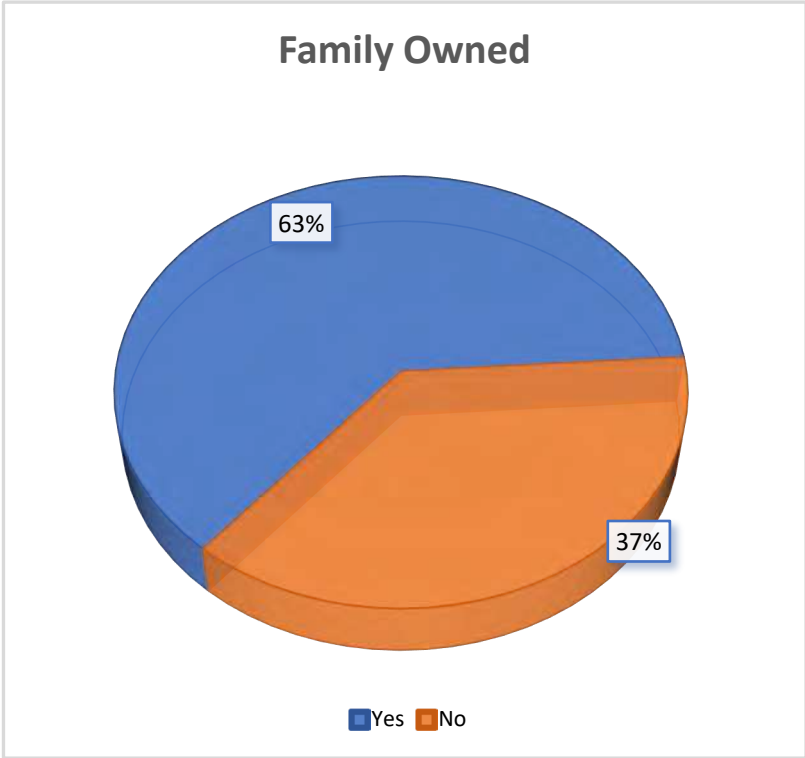
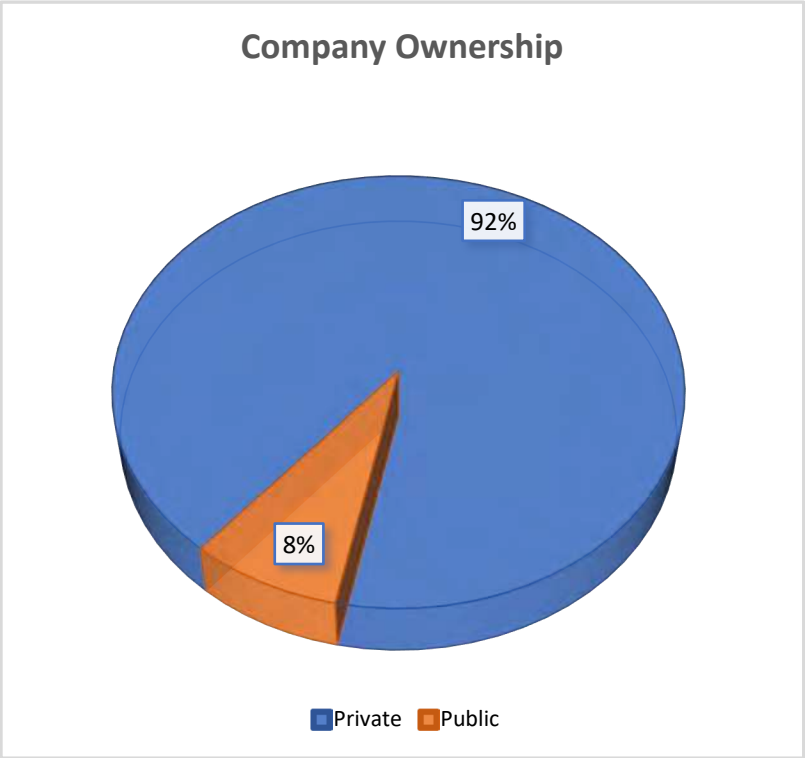


**Annual Sales - Companies
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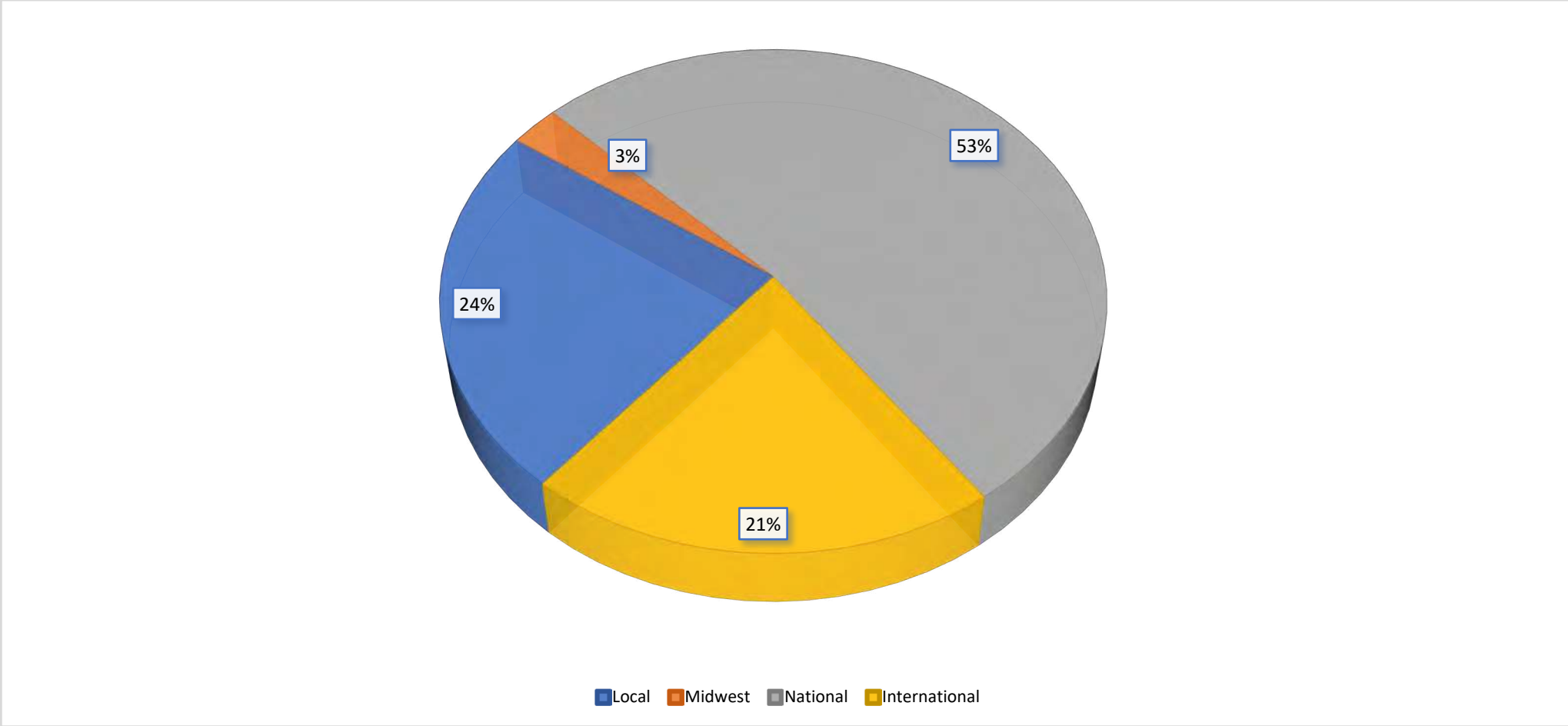


Survey Participant Background

- Only 3 companies or 8% are union shops
- Mostly privately owned



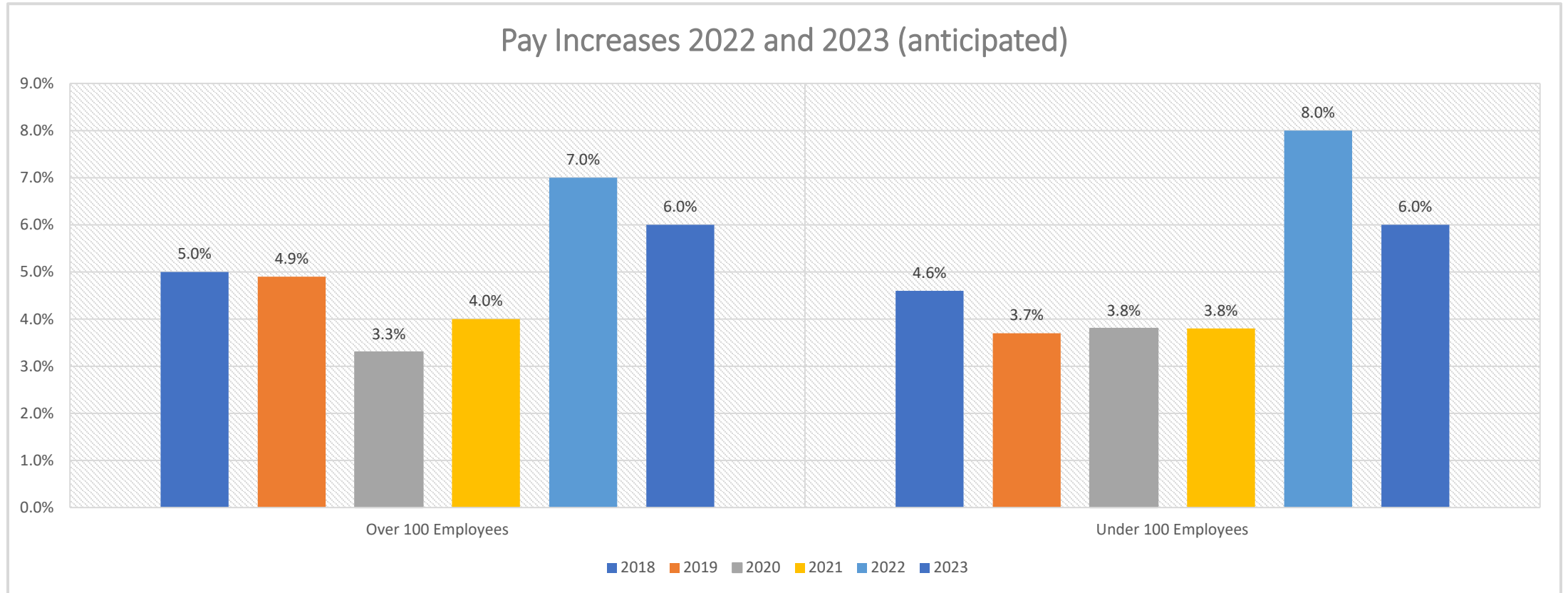
Company's Primary Market



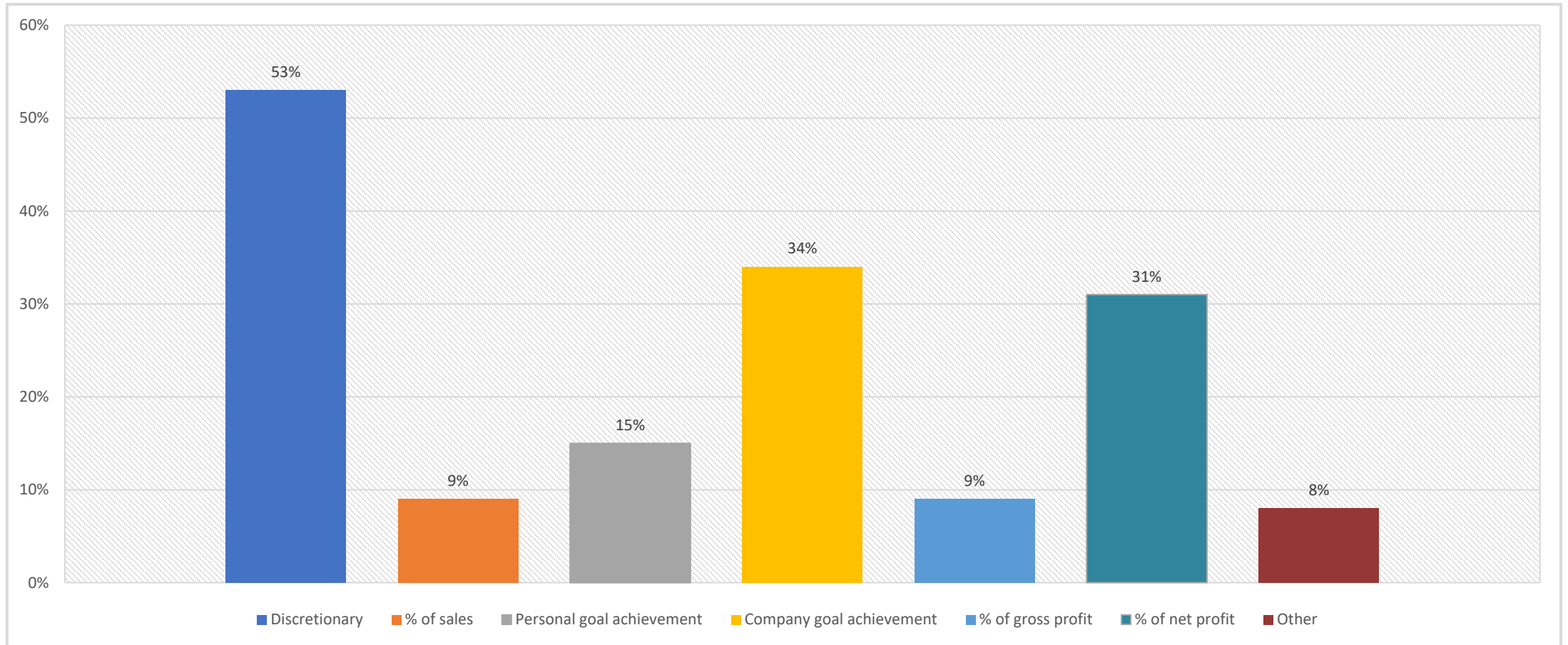


Compensation Trends

Pay Increases



Bonus Calculation Criteria



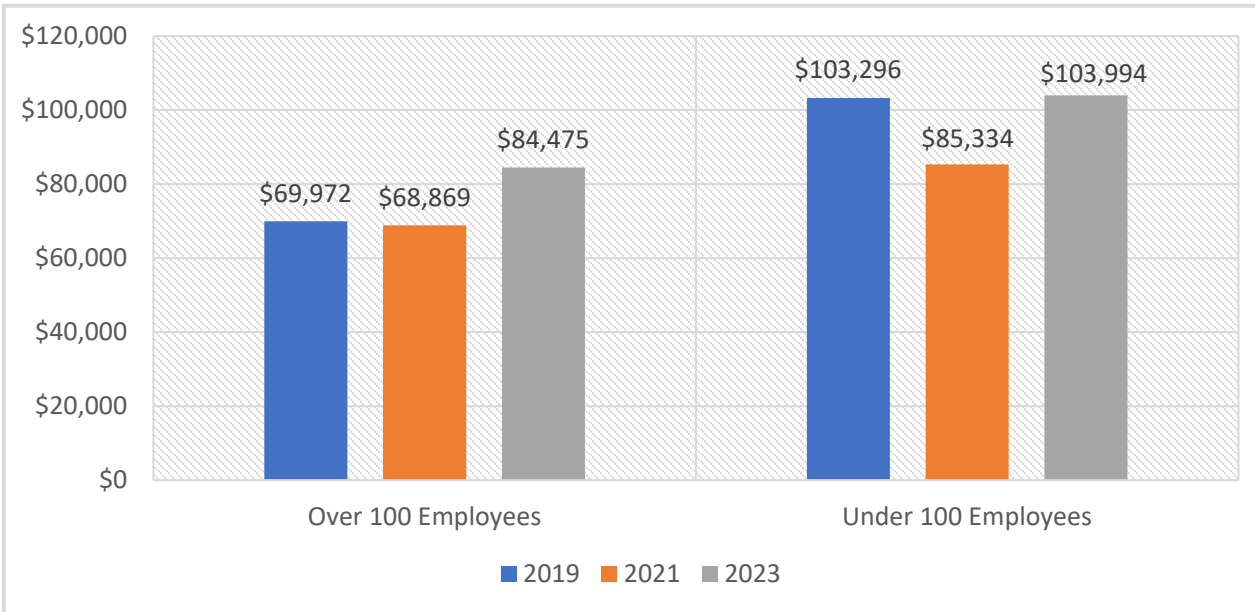
CPE Poll Question



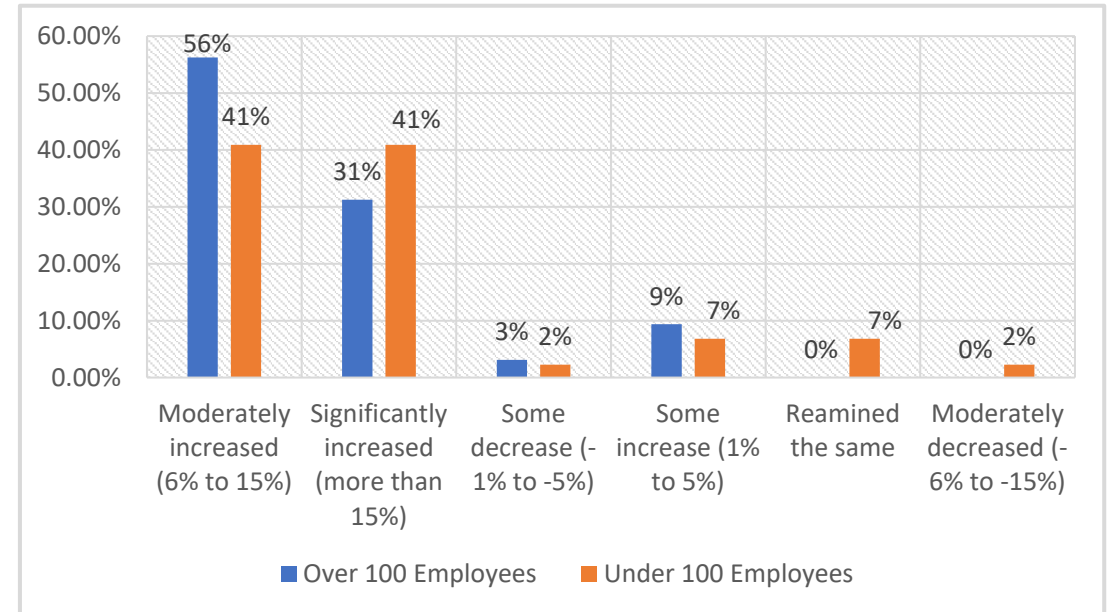
Company Operations

GM per FTE and Raw Material Prices

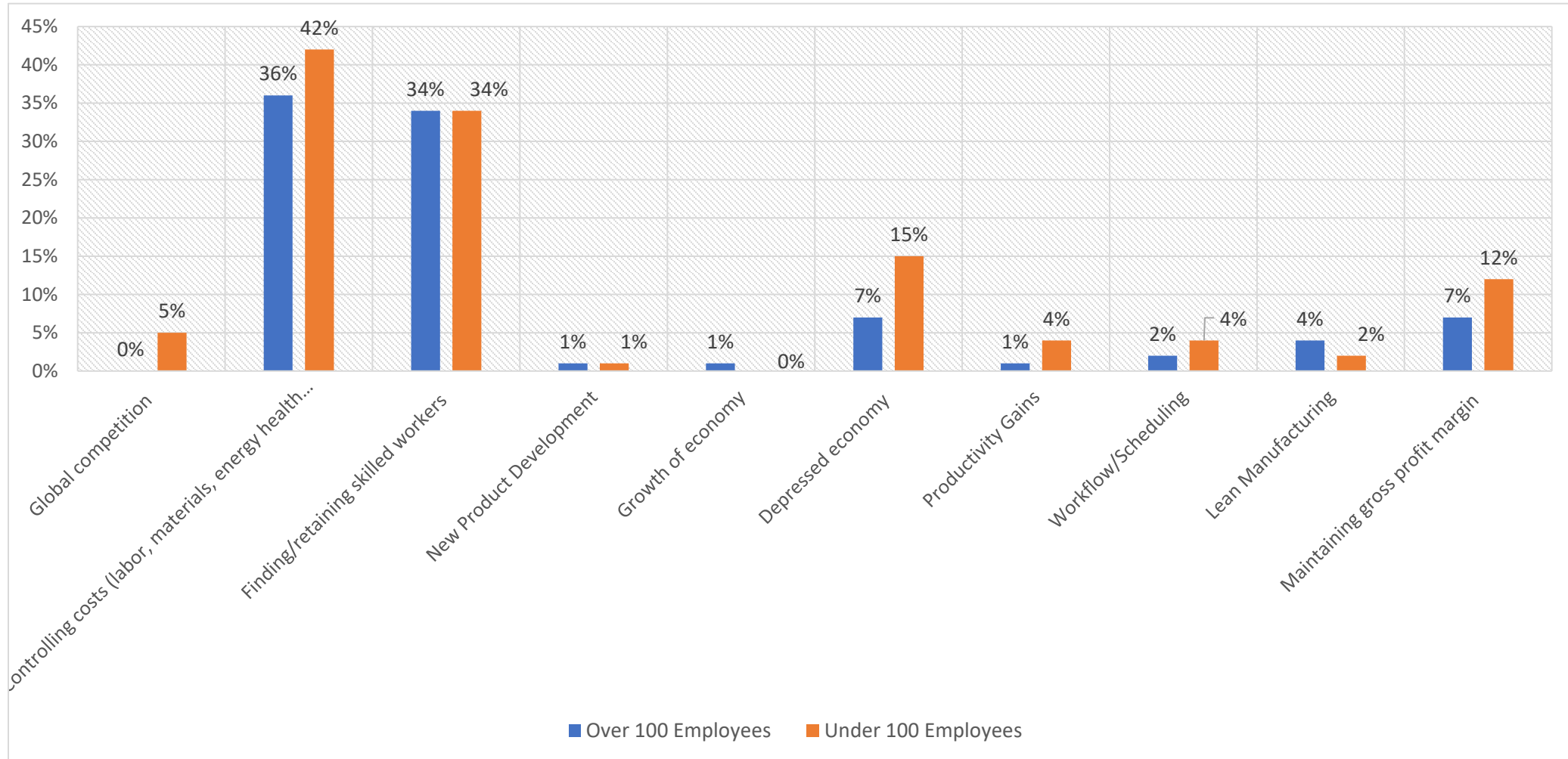
Gross Margin per FTE



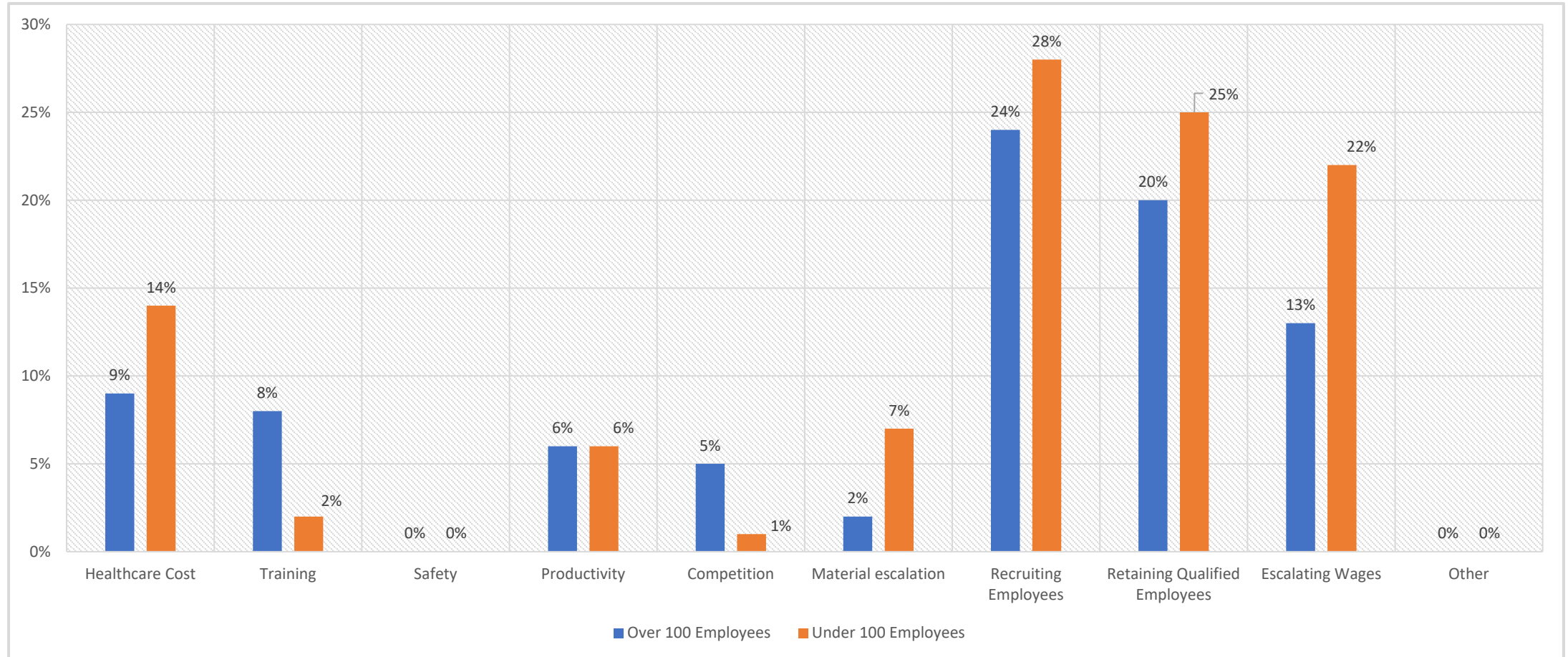
Raw Materials Prices



Top Operational Issues



Top Personnel Issues



CPE Poll Question



Employee Benefits



Andy Reed

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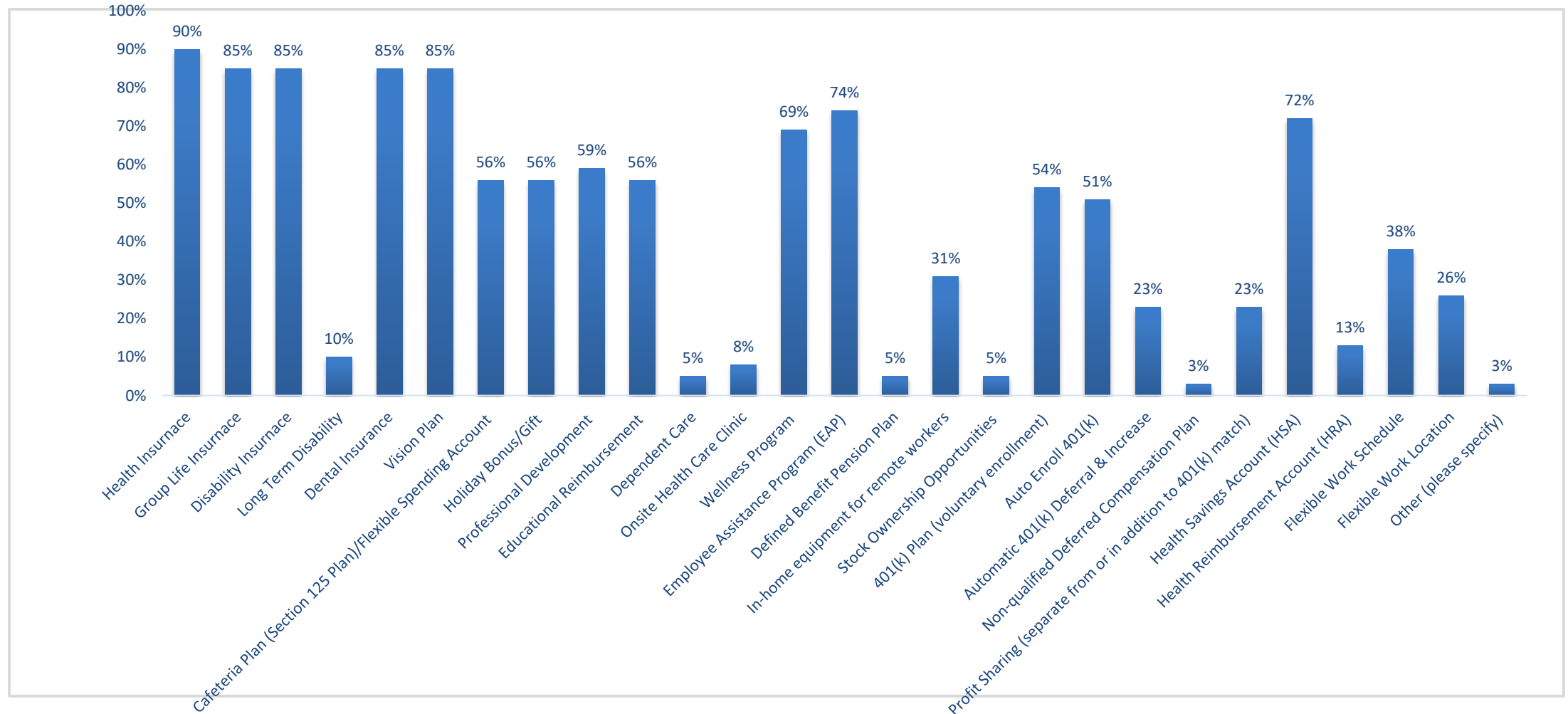


Tressa Johnson

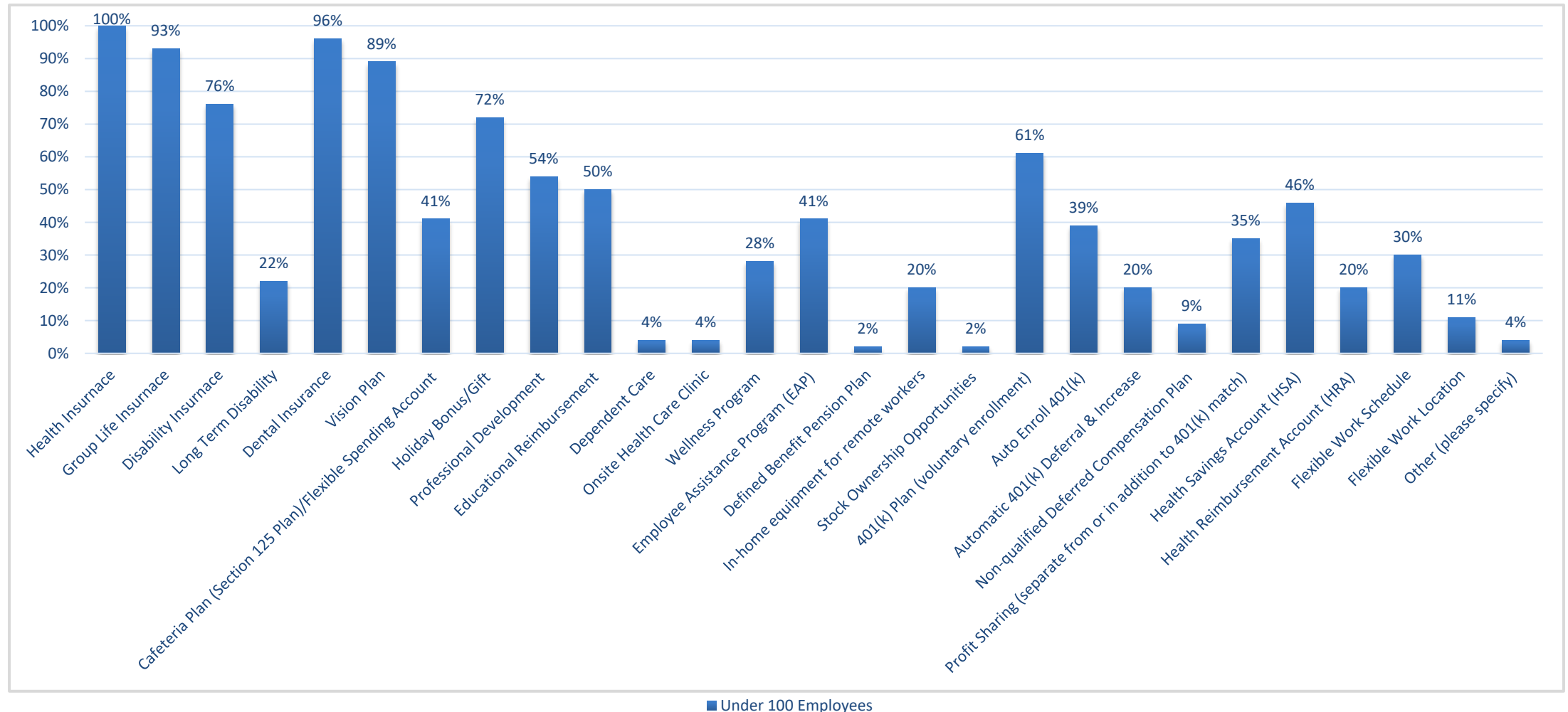
**Vice President
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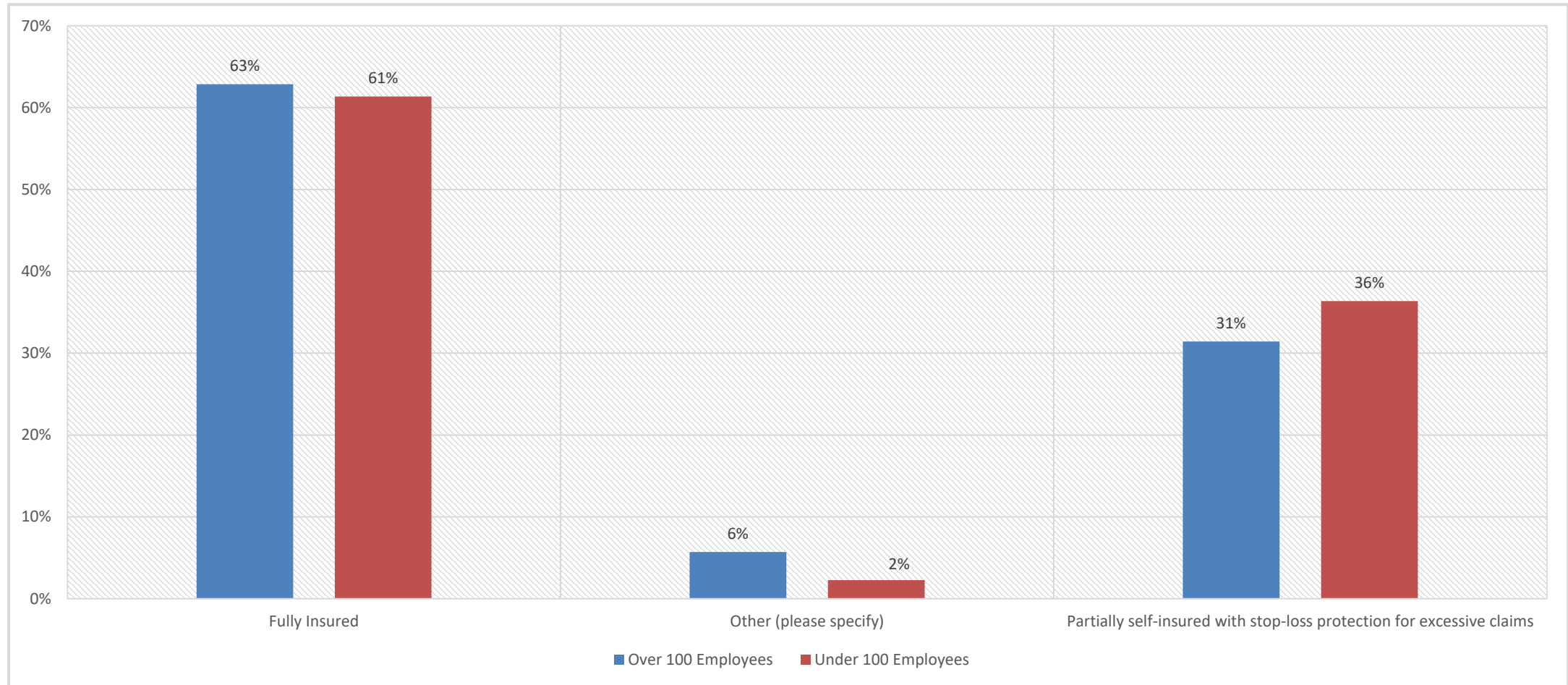
Benefits Offered by Participating Companies over 100 Employees



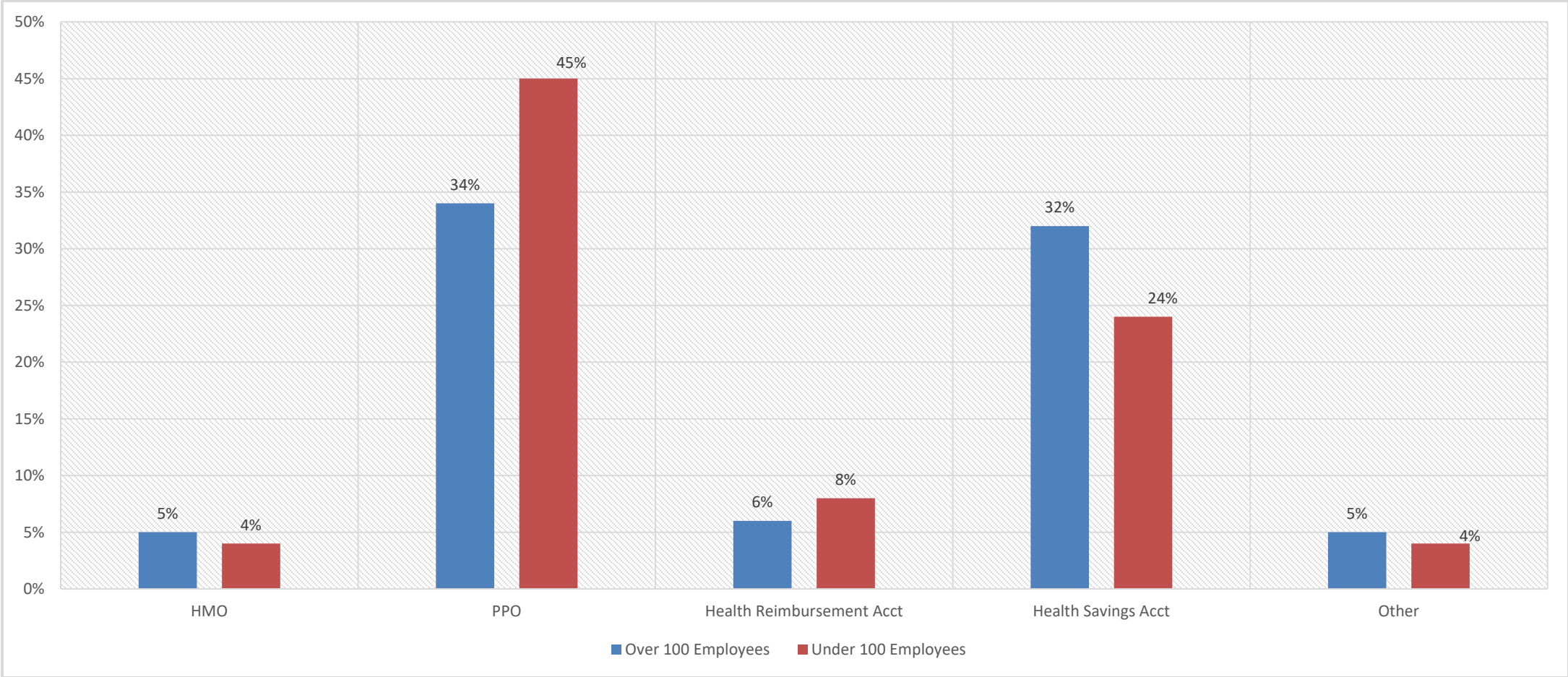
Benefits Offered by Participating Companies under 100 Employees



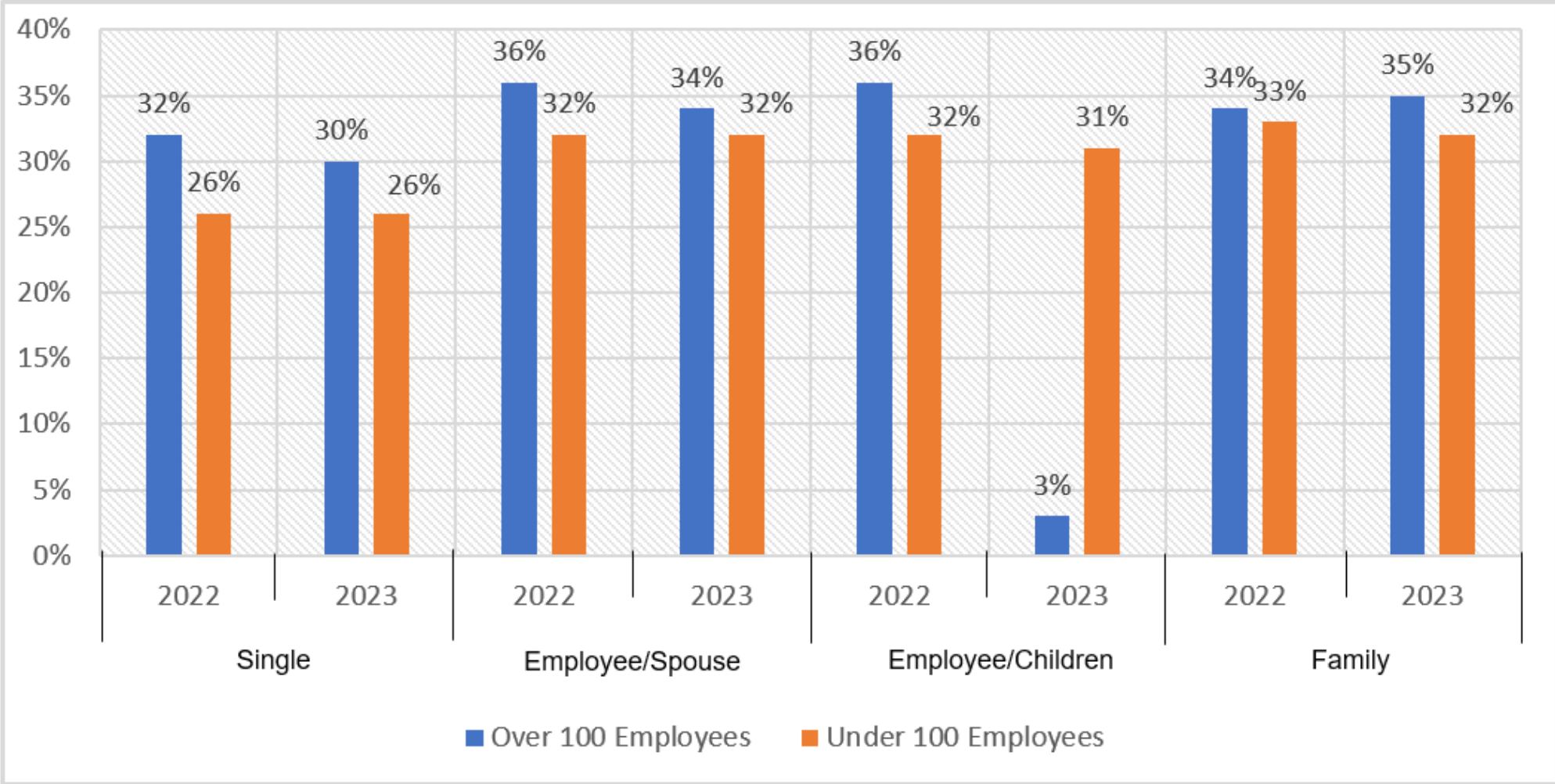
Funding a Health Insurance Plan



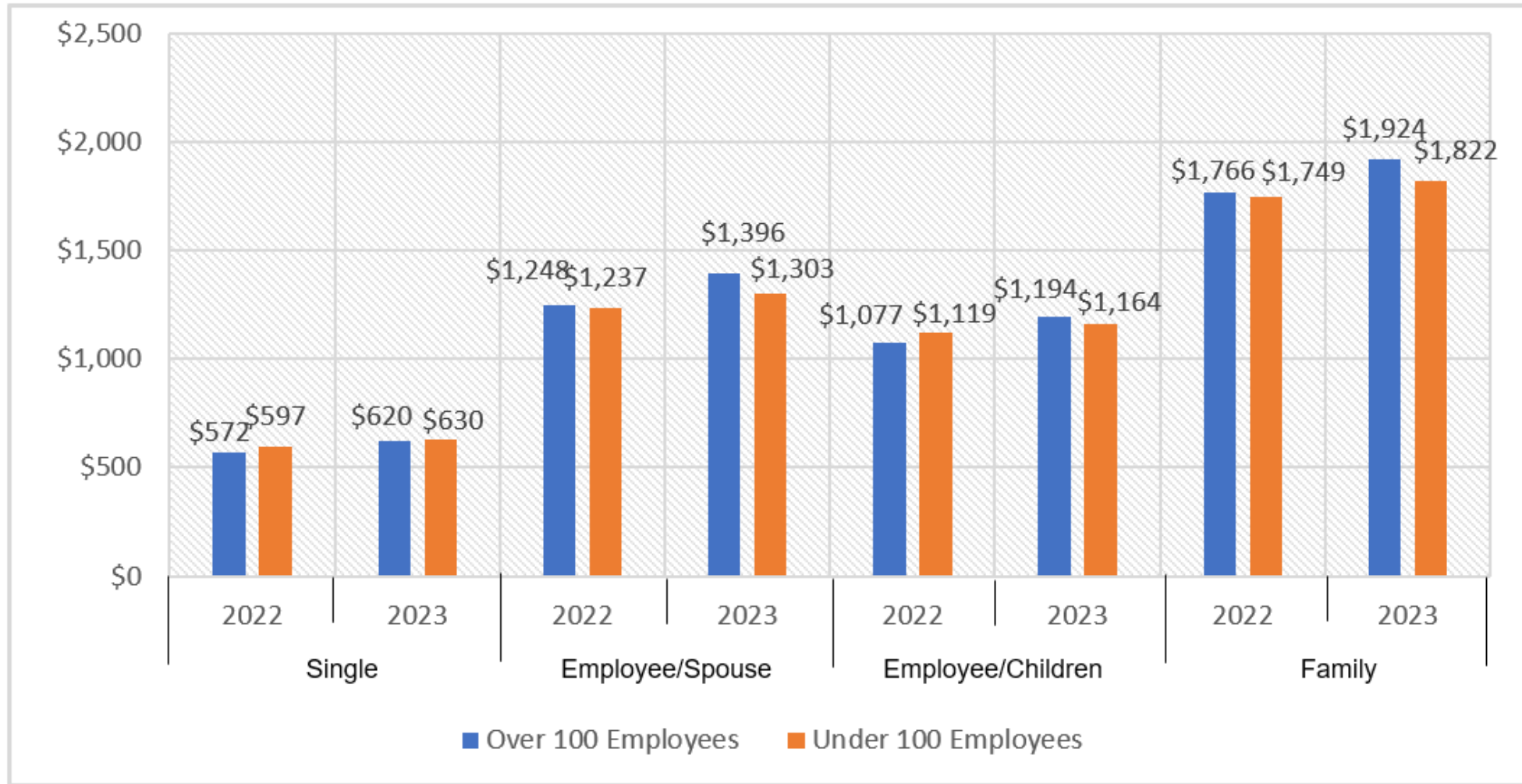
Health Plans Offered



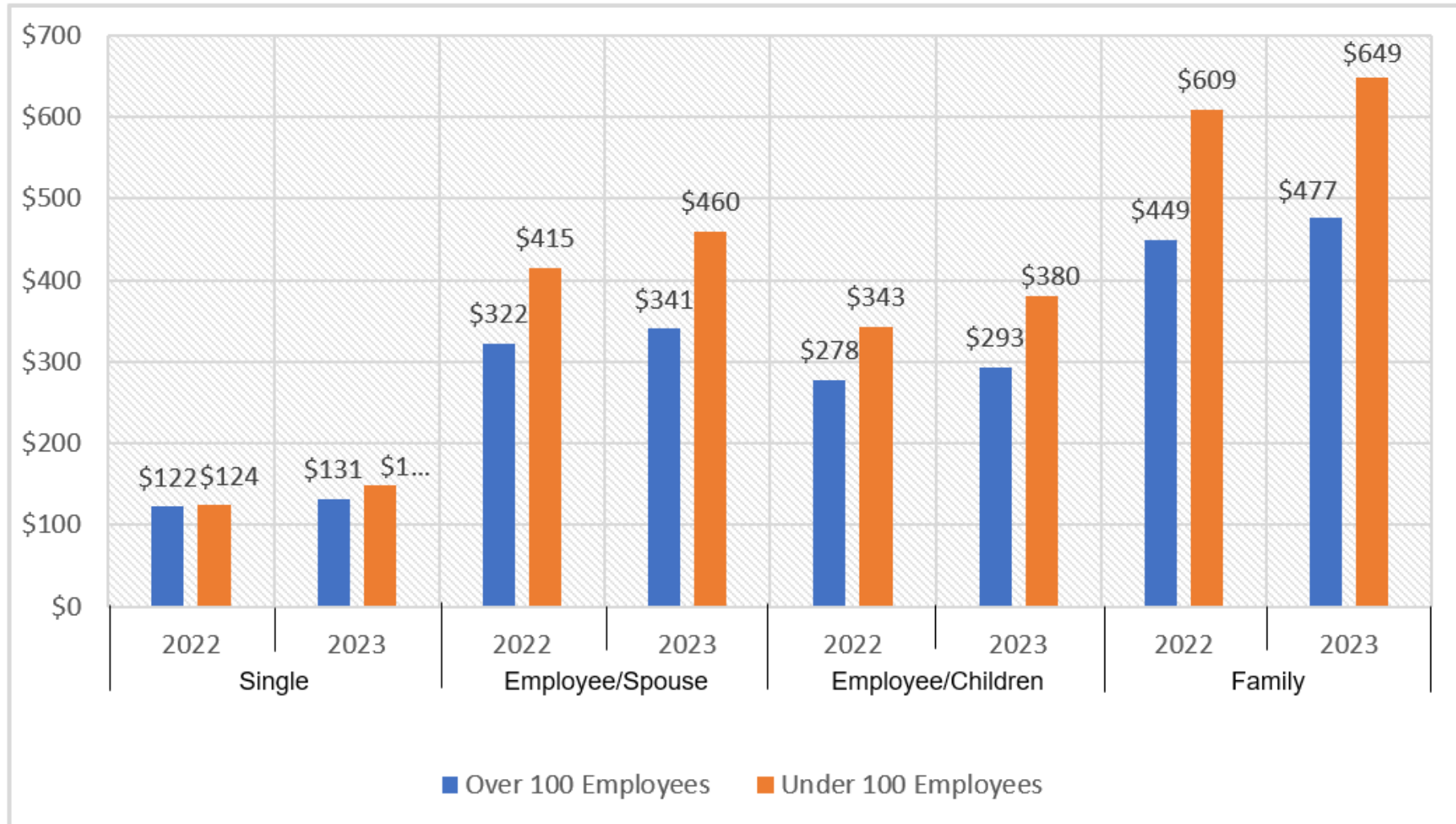
% of Premium Paid by Employee



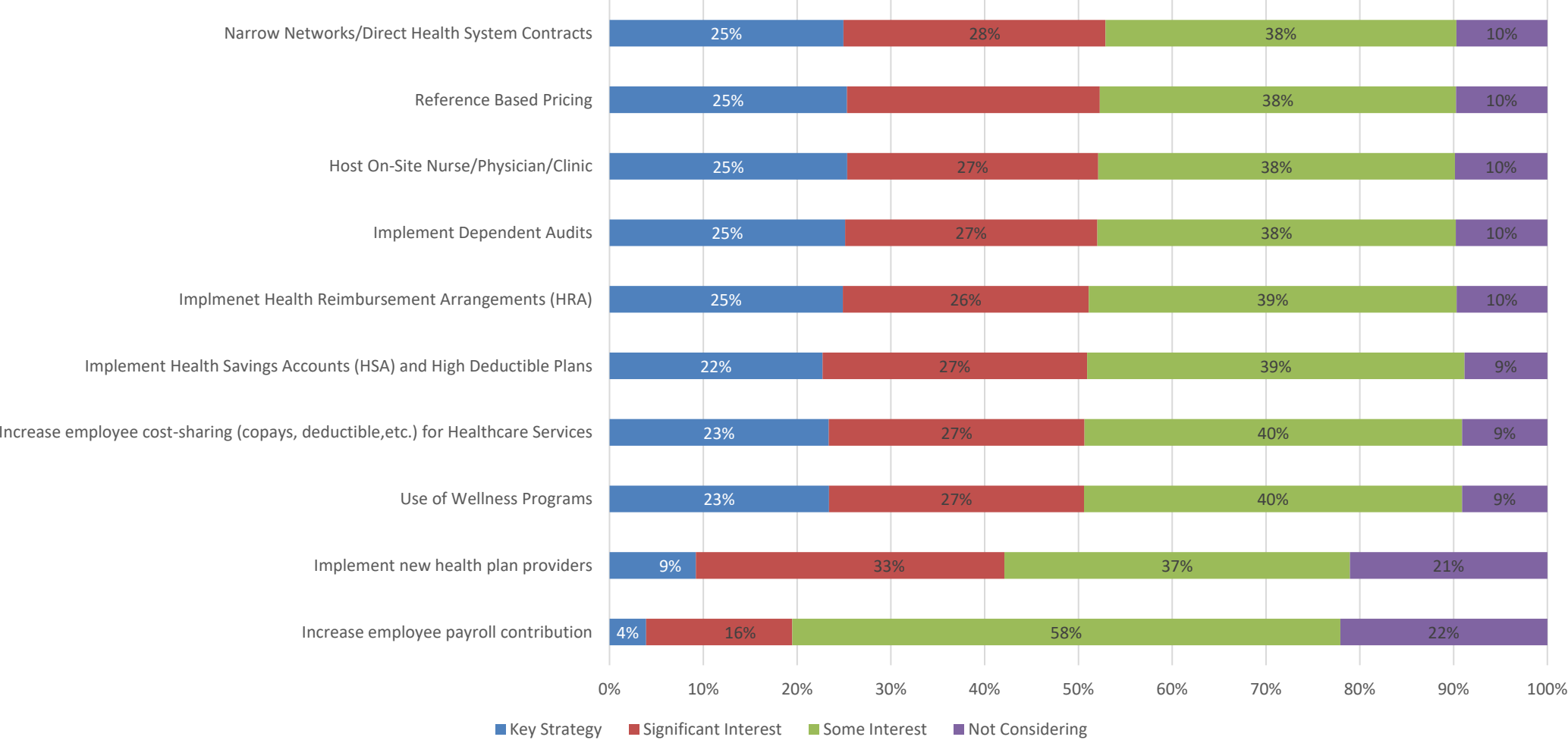
Gross Premium Per Month



Employee Contribution Per Month



Future Strategies for Controlling Healthcare Costs





Employee Benefit Hot Topics

- Health Plan Funding
- Value Based Care / Provider Network Management
- Prescription Benefit Management
- Employee Retention and Attraction

Health Plan Funding

- Traditional Fully Insured Contract
- Level Funding
- Traditional Partially Self-Insured Contracts
- Stop Loss Captives

Provider Network Management

1. Someone had to graduate last in their medical school class, right?!\\
2. How can employers benefit from steering employees to the most cost-effective physicians in hospitals?
 - High Performance Networks – est. 5% - 10% savings
 - UHC Surest – est. 10% - 20% savings
 - Garner – est. 10% - 20% savings
 - Reference Based Pricing – est. 15% - 25% savings
 - Sidecar / ICHRA

CMP Poll Question

Prescription Drug Management / Specialty Drugs

1. High Specialty Drug Costs are averaging 48% of total spend for large employers and range between 40-60% for smaller employers. **Average annual cost of this drug class exceeds \$38,000 per medication.**
2. Currently > 8,000 New Drug Applications in the FDA Pipeline with > 5,000 being classified as specialty drugs (with > 100,000 new drug molecules being researched).
3. Genetic therapies on the rise – ranging in cost **from \$250,000 to \$3.5 million** per claimant.
4. Management solutions:
 - Partner with a transparent/pass through PBM
 - Foundation programs
 - Gene therapy pools
 - Management of specialty drug access
 - Exclusions

Employee Retention and Attraction

1. Create a strategic communication plan to improve the perception of the benefits
2. Benchmark plan design and employee payroll contributions
3. Consider benefits based on tenure
4. Identify opportunities to create custom benefits (Back up care, Financial Wellness, Virtual Care, etc.)
5. Align benefit offerings with needs of a multigenerational workforce.
 - Explore Healthcare Preferences
 - Inclusive and Flexible Benefit Options & Policies
 - Flexible Time Off and Caregiver Assistance
 - Communication & Engagement Preferences / Platforms
 - Financial Wellness and Planning
 - Compensation Expectations
 - Lifestyle Benefits

How Employees Feel About Having a Wide Range of Benefit Offerings

73% say it would make them **stay at their employer longer**

75% say it would help **reduce stress and improve financial wellness**

Source: MetLife, 20th Annual U.S. Employee Benefit Trends Study 2022

CPE Poll Question

Manufacturing Advocate

- 20+ years in manufacturing automation technology: sensors, networks, robotics, IIoT, quality, controls, testing & more.
- BS in Mechanical Engineering from Purdue University
- Content Creator & Keynote Speaker: @WILLAUTOMATE
- Founding Board Member of the tri-state workforce association Advanced Manufacturing Industry Partnership (AMIP) in Cincinnati.



Vision & Mission

Our manufacturing jobs are sought after by career seekers, students, veterans, second act, second chance and others.

Facilitate activities to fill the talent pipeline for manufacturers in Greater Cincinnati Region.



advvmfgip.org

FOUR FOCUS AREAS



INDUSTRY



AWARENESS



**STRATEGIC SCHOOL
PARTNERSHIP**



**STRATEGIC COMMUNITY BASED
ORGANIZATION PARTNERSHIPS**

A Manufacturer's Agile Path to Competitive Advantage – Tapping into Tech

Manufacturing Technologies that Empower Your HR Strategies

7 June 2023

Will Healy III
Global Segment Manager – Universal Robots / Teradyne
Founding Board Member – AMIP Cincinnati



What are your company goals?



Grow top line sales revenue & reduce production costs?



Reduce scrap rates, lower rework & improve quality?



Improve OEE, asset utilization & worker productivity?



Find, sign & retain great workers at all levels of the plant?



Improving Worker Safety & Mitigating Risk?

01 But We have Some Challenges...



Strange Economic Movements



Boomers Are For Real Retiring!



**New Generations Have
New Expectations!**

Wendy's



Workforce Shortages Everywhere

HIRING

**CREW
& MGRS.**

401K • TUITION

REIMBURSEMENT

• INSURANCE

TEXT MUY T 25000
**FREE MEALS
PAID
TIME OFF**



**Your Talent Pipeline is
Negatively Impacting Your
Business!**

How Can We Possibly Overcome All of this HR Headwind?

**I've Got A Brilliant &
New Idea!**

Let's Solve This...

**With NEW
Technology!**



Tapping into Technology Investments

What is your technology status quo? Be honest with yourself!



World War II Era

80 years!



1970s Era

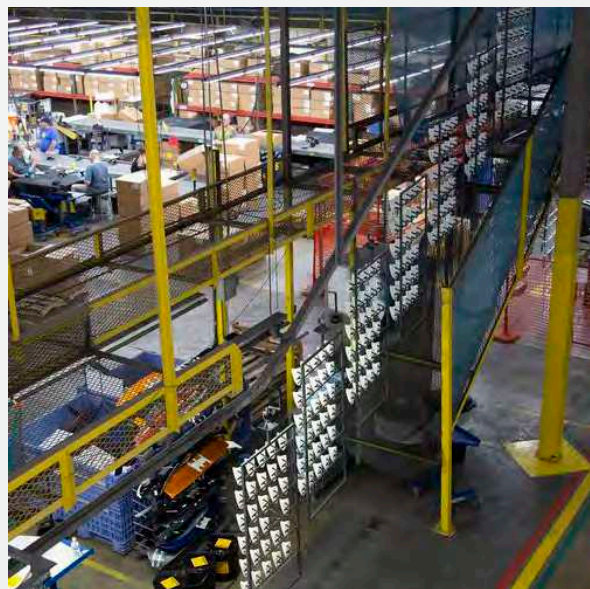
50 years!



1990s Era

30 years!

What challenges are OLD technology causing?



Productivity



Quality



Labor

What does Your Digital Presence Look Like?





**What is Your Sustainability
Play?**

A photograph of three men in an industrial setting, possibly a factory or plant. The man on the left is wearing a dark jacket over a light-colored shirt. The man in the middle is wearing a dark jacket. The man on the right is wearing a dark polo shirt and safety glasses. They are standing in front of a large piece of machinery, which is partially red and blue. The background shows industrial equipment and a white wall with a yellow sign that has the letter 'B' on it. The text 'What is Your Plant Tour Communicating?' is overlaid in white, bold, sans-serif font in the center of the image.

What is Your Plant Tour Communicating?

Wasn't This Supposed to be About Manufacturing Technology....

People-Centric Technology Investments



**Obligatory
“You should
add automation!”**

03

People-Centric Technology Investments

A welder in a dark industrial setting, wearing protective gear and using a welding torch, with bright sparks flying from the work area.

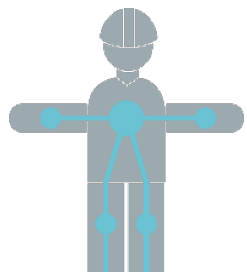
Dull. Dirty. Dangerous. Dark.

People-Centric Technologies

- Aliases: Collaborative Automation, Industry 5.0, Operator Guidance, etc.
- EU Committee – The Value of Industry 5.0 Solutions:
 - “This approach provides a vision of industry that aims **beyond efficiency and productivity** as the sole goals, and reinforces the **role and the contribution of industry to society.**” EU
 - “It places the **wellbeing of the worker at the center of the production process** & uses new technologies to provide prosperity beyond jobs and growth while respecting the production limits of the planet.” EU



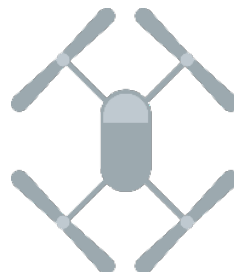
There are Many Ways to Create Value Thru Collaborative Automation Technology!



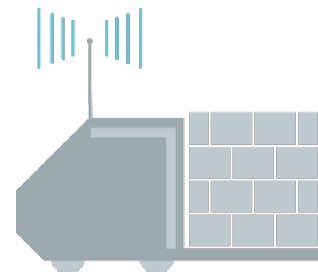
Wearables &
Exo-skeletons



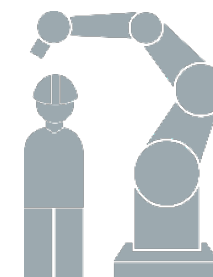
Operator Guidance with
Virtual Reality VR &
Augmented Reality AR
& Mixed Reality MR
& Projected AR
& Laser Templating



Teleoperation Robots
Drones & Quadrupeds



Material Handling
Mobile Robots
AMR / AIV / AGV



Collaborative Robots

People-Centric Technologies

Wearable Tech – For Hands & Arms

- Accelerate onboarding of new employees, enhance safety & situational awareness
- Create process & production consistency
- Improve ergonomics, prevent injuries & reduce worker compensation cases
- Create data for gamification & training
- **Proglove** – hands-free barcode scanning, optimize quality control & documentation.
- **Humatics** – provides position feedback of the worker and provides automation collaboration.
- **Bioservo IronHand** – grip assist gloves to reduce the occurrence of repetitive strain injuries.
- **Nexonar Assembly Scout** – tracking of tool positions or hands during picking/assembly





People-Centric Technologies

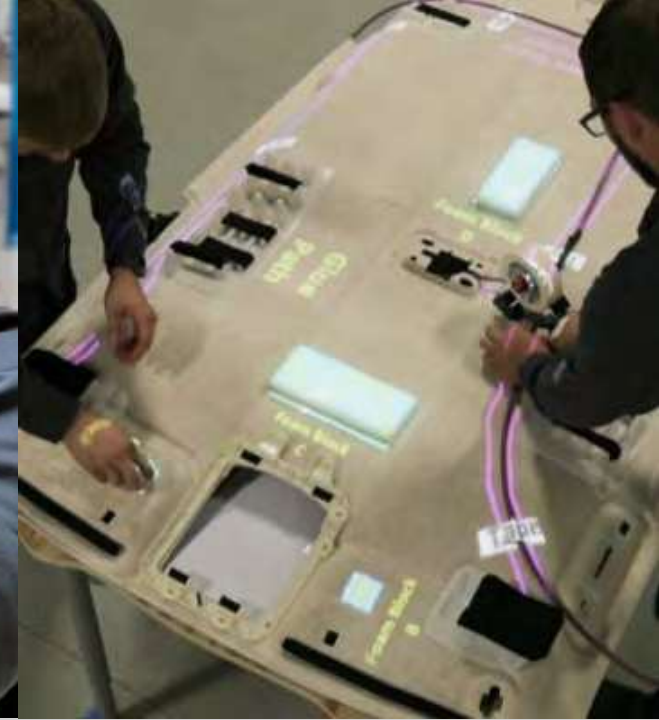
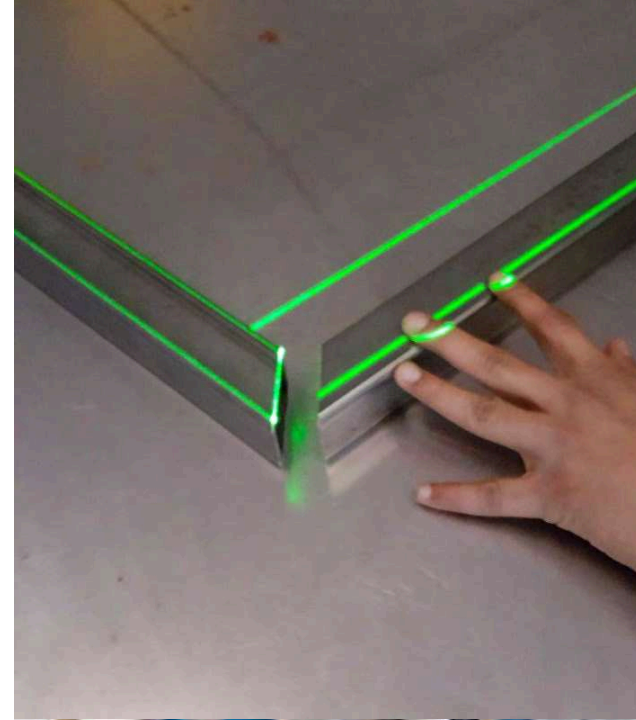
Wearable Tech - Exoskeletons

- Improve worker's safety & productivity
 - Consistent anti-gravitational assistance during manual, repetitive and strenuous tasks
 - **Lighten the workload**, improve ergonomics, & reduced injuries
 - Reduce the time to move heavy items
 - Improve the quality of the working hours
 - Enhanced consistency of quality & pace of work
- Real World Applications (Passive & Active)
 - **Bending** / kneeling / sitting assistance
 - **Lifting** / carry / form assistance
 - **Arm support** / overhead work / raised shoulders
 - **Powered suits** (Futuristic but coming!)

People-Centric Technologies

Operator Guidance – VR/MR/AR glasses,
Laser Templating & Projected AR

- **Raise Flexibility** – Uses technology to provide work instructions or training to the operator allowing for high mix, complex tasks & fast flexibility to be achievable.
- **Expedite on-the-job training** – with these tools manual process training can be done in minutes. It is typically faster, more flexible, & way less painful.
- Operator guidance applications include:
 - **Virtek vision** – laser templating – for welding or assembly actions based on the digital drawing
 - **SME ToolingU** – VR Skills Training – learn real world concepts in a controlled environment.
 - **New forge** – VR glasses & digital work instructions – in your field of view instruction & documentation
 - **Light guide systems** – Projected AR – provides videos, photos, text & more to the operator for assembly tasks.
 - **Kognitiv Spark** – Mixed Reality Maintenance – views into data & pin notes to physical places (not shown)

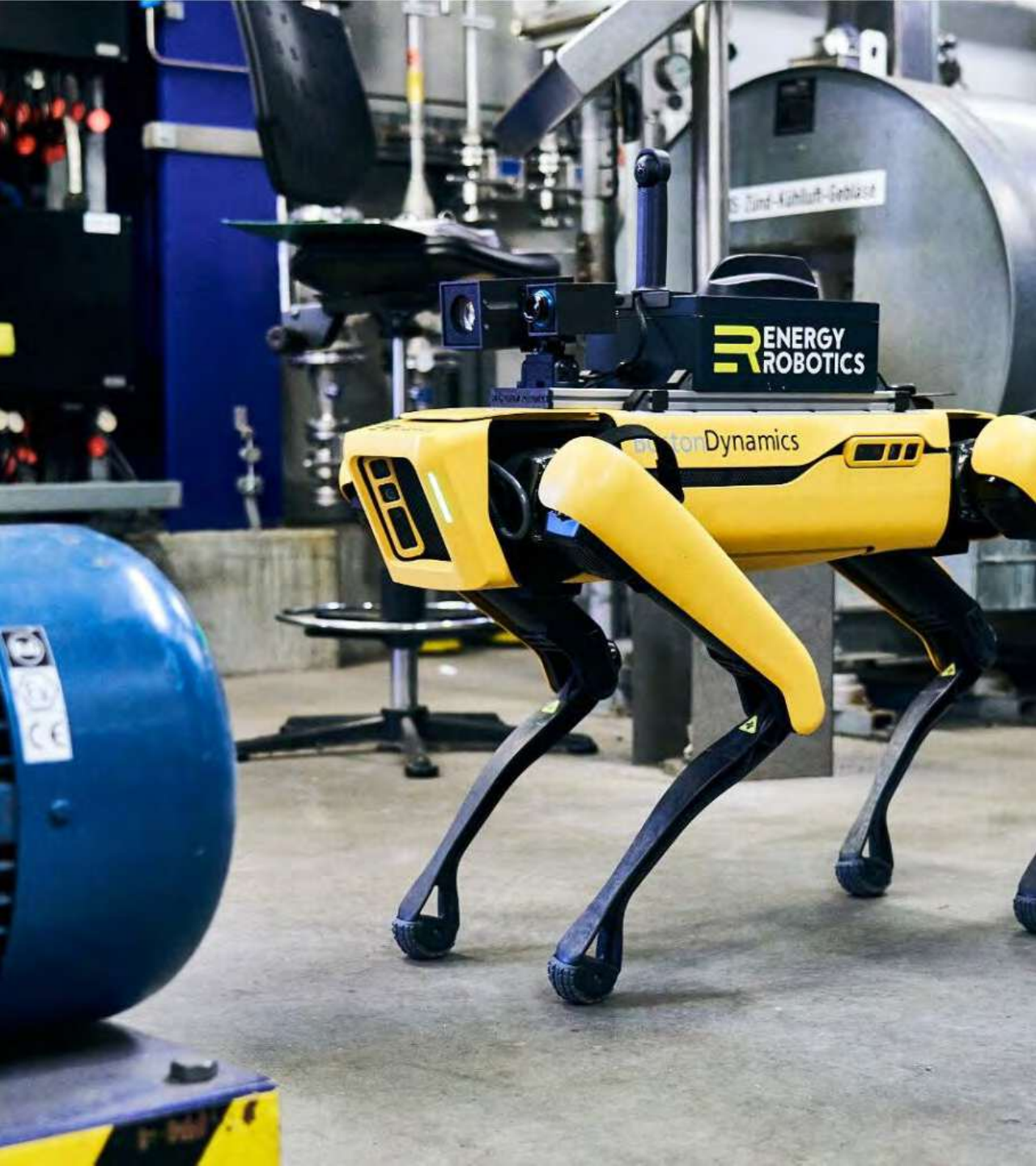


People-Centric Technologies

Teleoperation Robots – Quadrupeds

- Excels at traversing through **unstructured environments**, hazardous locations & rough terrain by climbing, stepping & crawling.
- Commonly remote control, **reducing the safety risks & physical stress** of certain tasks for workers.
- Customizable payloads augment capabilities with sensors, cameras, arms and more.
- Real world use cases in action:
 - **Inspection** of remote locations, confined spaces or areas with human hazards
 - **Mapping** / documenting / surveying
 - **Delivery** of materials, tools or equipment
 - **Monitoring** / security / patrolling

Source: https://www.robotics247.com/article/5_real_world_applications_of_quadruped_robots





People-Centric Technologies

Teleoperation Robots - Drones

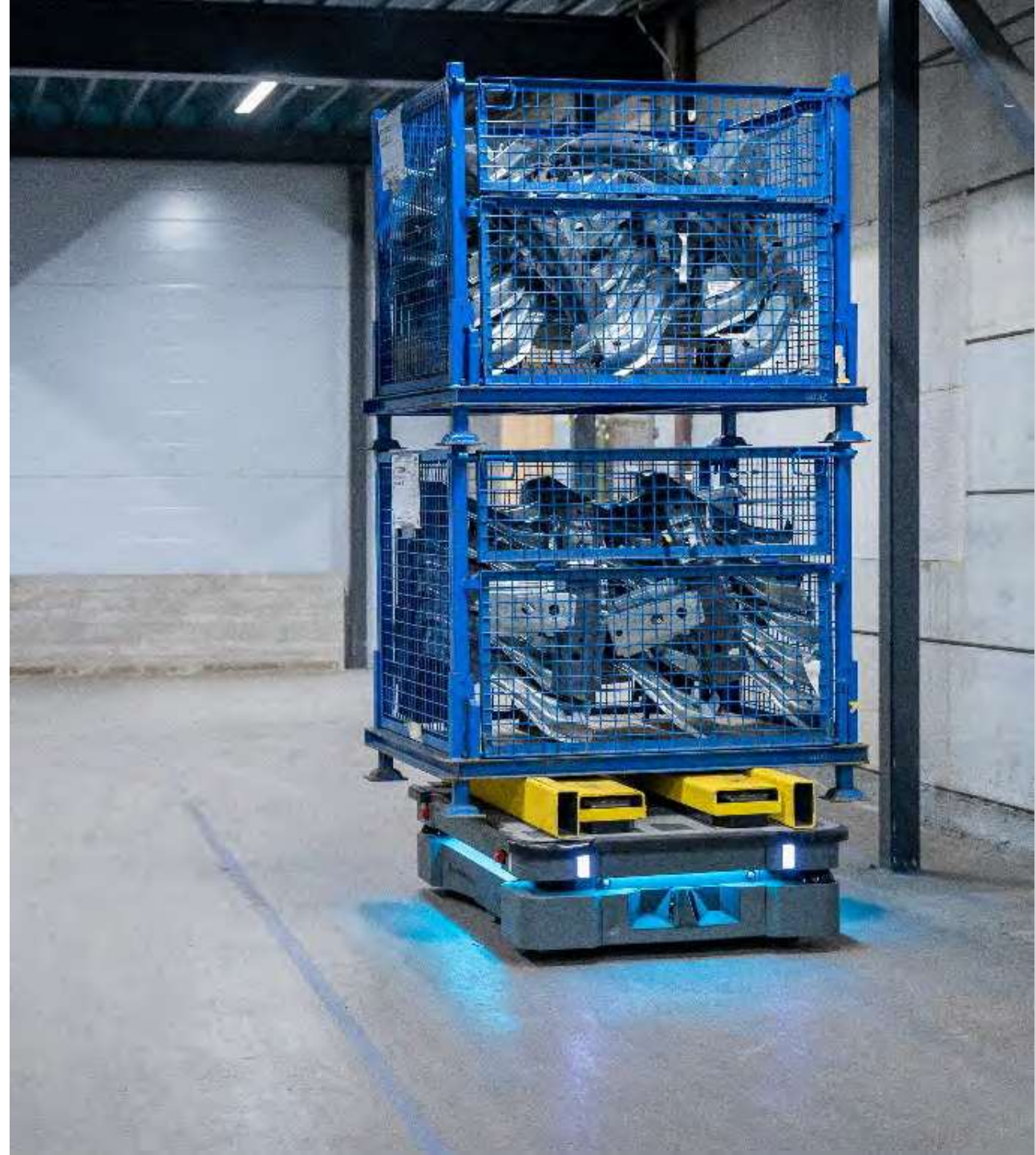
- DroneScan / GatherAI - **Inventory Management** - automate inventory location management & stop losing materials and misplacing assets.
- Ford Motor Company - **Condition Monitoring** - reduce risky inspections on factory equipment.
 - "Drones cut Ford plant inspections from 12 hours to 12 minutes."
 - "This has become an indispensable tool for the factory, with the drones greatly improving productivity and efficiency."
 - Store historical photo & video for comparison in the future to monitor any changes or patterns in the machine.

Source: <https://industryeurope.com/how-has-technology-improved-productivity-within-the-manufact/>

People-Centric Technologies

Autonomous Mobile Robots (AMR)

- Alias: AGVs, AGCs, automated forklift, etc.
- Applications:
 - **Material transfers** – bus routes, pull-calls, flexible WIPs.
 - **Automated inbound logistics** – long hauls, cross docking, odd sizes
 - **Waste disposal** – production scrap material or empty pallet removal
- Value Created:
 - **Save labor hours & increase safety**
 - Increase flexibility, save space & maximize throughput
 - Scalable & customizable
 - Reduce Material Handling Costs



People-Centric Technologies

Collaborative Robots “Cobots”

- Alias: Cobots, 6-axis collaborative robots
- **Drives employee engagement** by eliminating the tasks with physical strain & reducing boring parts of a worker’s tasks.
- **Works WITH the frontline worker** so they don’t have to work LIKE a robot.
- **Adds efficiency & flexibility** to production spaces allowing for changing customer demands & available workforce capacity.
- Human-robot collaboration is **85% more productive** than humans or robots alone according to MIT research data.



Ok... Wow...

But where do I even start?

Successful Collaboration Inside the Plant

Successful Collaboration Inside the Plant

04

Times are different.

40 applicants for 1 position is over.

40 positions for 1 applicant is the new normal.

You now must sell them on why to work here!

Is HR a strategic or tactical role?

“The Head of HR is the 2nd most important person in your company.”

They must be at the executive table to fix this labor problem.

HR is a strategic effort, but too many companies approach it as a tactic. Get them at your table!

How are you answering the question: “Are you going to invest in me?”

Are you investing in technology with people at the center?



Laurie Harbour, Harbour Results – March 2022

Start Here: Make sure you start in the right place!

People


- Talk to Your Frontline Workers!
- Find the Secret Stakeholders!

Process

- What do we actually do?
- What makes the process fail?

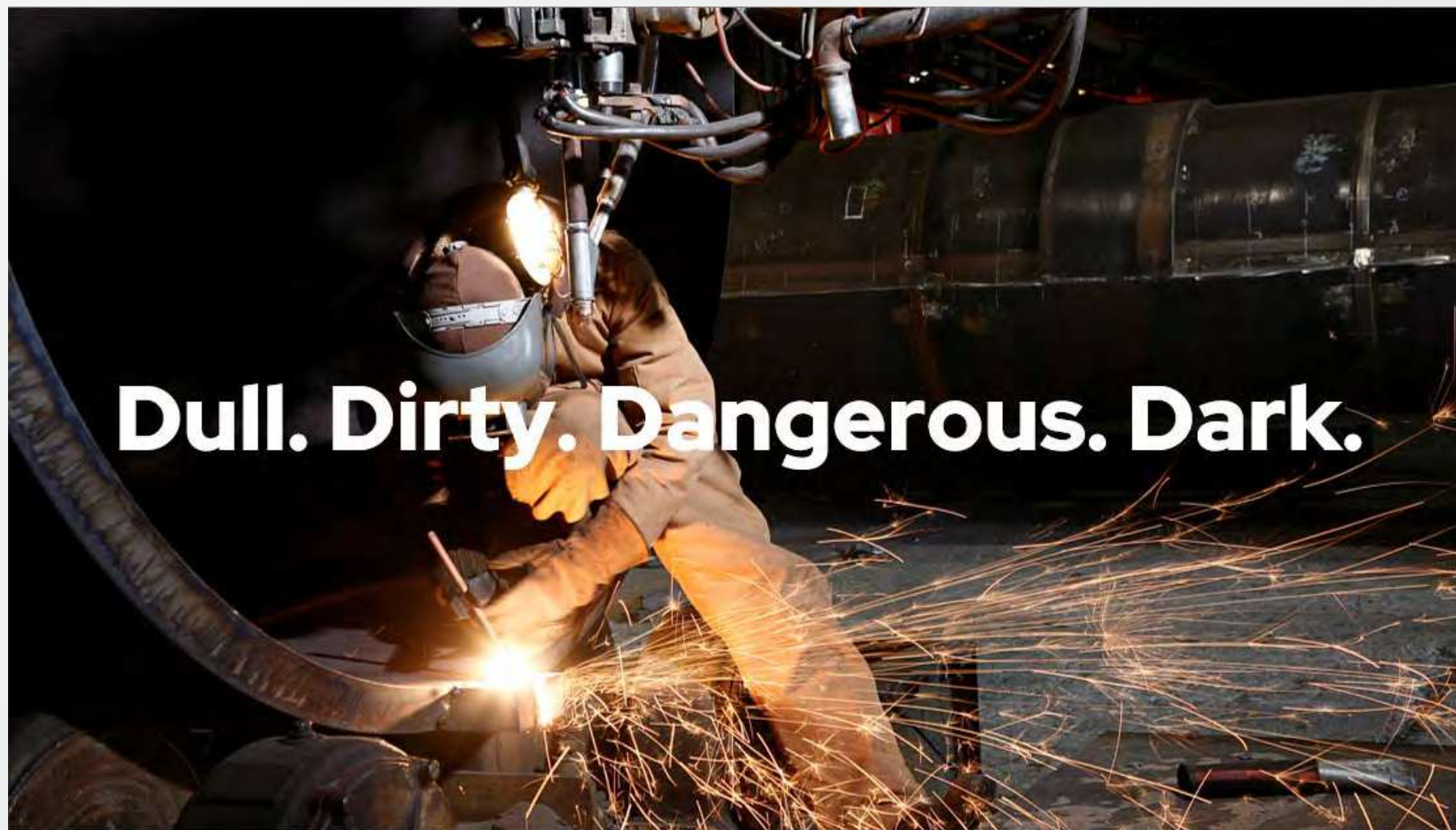
Product

- Start here at your peril! Last Step.
- What solves the people problems?

A welder in an orange safety suit and helmet is working on a large, dark metal structure. In the background, a robotic arm is visible, suggesting an industrial setting. The scene is dimly lit, with some sparks visible from the welding process. The text "Technology is a tool NOT a worker replacement" is overlaid in white on the image.

Technology is a tool
NOT a worker replacement

People First: Can you eliminate a 4D condition?



Know: How does our project tie into our company goals?



Grow top line sales revenue & reduce production costs?



Reduce scrap rates, lower rework & improve quality?



Improve OEE, asset utilization & worker productivity?



Find, sign & retain great workers at all levels of the plant?




Improving Worker Safety & Mitigating Risk?



Do Something! Identify a small project you can win!

- Something that is frustrating, a little visible and does have value to the org.
- Not the biggest problem in the plant.
- What was the problem costing the company in time or money?
- What did it save the company after?
- What value did it create for the worker?

Document the success!



Can you afford
not to invest?



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Questions?