

Transformation **Blueprint**

Future of Industrial Work

Future-proofing Your Operations

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Future of Industrial Work

Future-proofing Your Operations

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Section 1

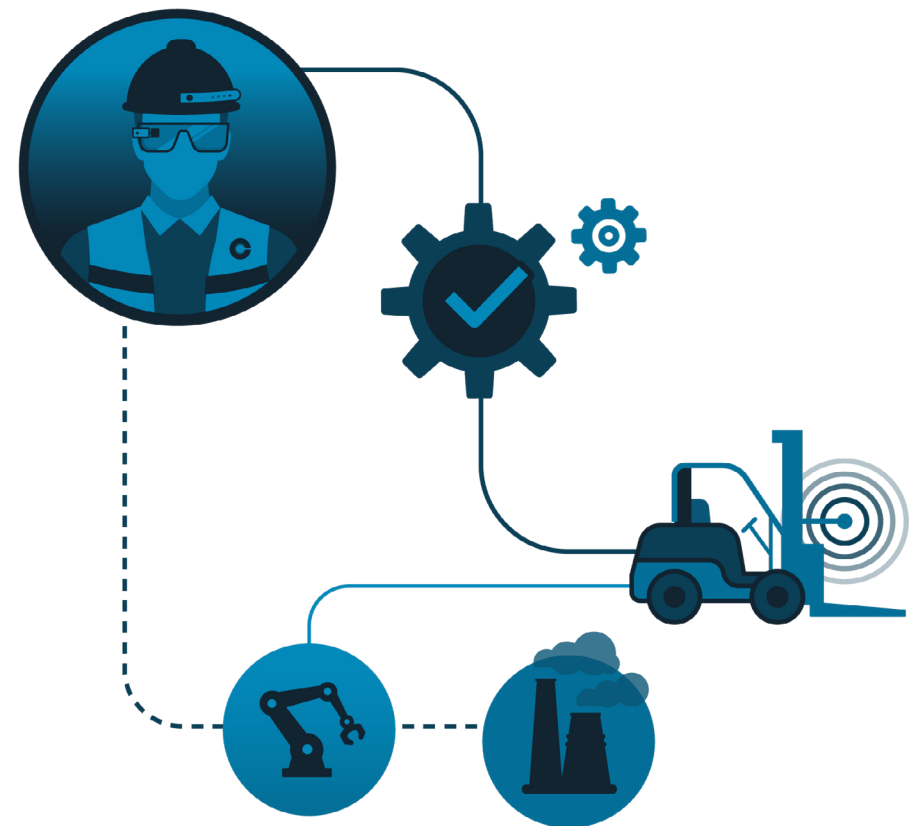
Introduction

Introduction

Manufacturers across the globe are facing failure. Unfortunately, most don't even see it coming or won't face the glaringly obvious facts. With years of great margins, being oversold, and happy shareholders, "The Great Goodbye," among other things, has allowed the workforce crisis to steadily sneak up on manufacturing leaders.

Maintaining operations, reshoring, and nearshoring efforts are all in jeopardy as a shrunken labor pool shows little interest in industry, with over 7 million manufacturing jobs lost since 1980. A career in manufacturing, once highly coveted, has experienced a new reality emerge as the labor force dynamics continue to change – where labor force participation and manufacturing desirability are declining. Failing to understand the gravity of workforce shortages or refusing to believe operations are being threatened will place companies in a situation where errors are realized too late.

This LNS Research Transformational Blueprint provides Global Operations Vice Presidents with a template for executing workforce initiatives that win the war for talent. In the ***Future of Industrial Work (FOIW): Developing a Sustainable Workforce Strategy eBook***, LNS Research reveals best practices across people, process, and technology, along with the strategic imperatives found driving the success of FOIW Leaders. This report dives deeper into FOIW strategies that significantly improve frontline hiring, training, and retention.



Introduction (Cont.)

Industrial organizations will be better prepared to build a future-proof workforce and operations with FOIW best practices and insights into:

- Why current manufacturing practices fail next-gen workforce expectations
- What strategic FOIW imperatives are driving step change improvements across hiring, training, and retention
- How to overcome workforce challenges with proven best practices
- Which pitfalls manufacturers face most, and how to avoid obstacles to success

Manufacturing leaders must decide on the path to take: act now or the workforce crisis rapidly gains momentum across the industrial landscape or wait and see if the ways of the past return. History provides strong warnings of choosing the wrong path, with examples that include throttling existing facilities, having another entity assume operations, or worse yet, shuttering facilities and creating a rippling effect across the globe.

Section 2

Research Demographics

Research Demographics

More information on research demographics can be found in the FOIW: Developing a Sustainable Workforce Strategy eBook.



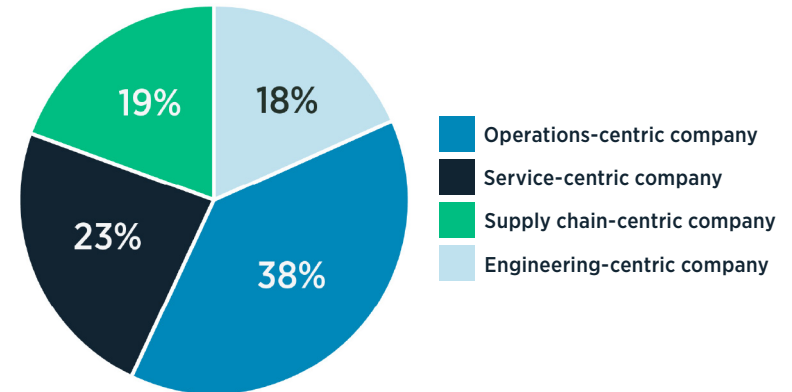
LNS Research executed a global survey on the state of Future of Industrial Work (FOIW) programs to address workforce challenges in November 2022. LNS Research qualified 332 of the 385 responses received to assess FOIW market maturity. Respondents' demographics provide critical insights into workforce initiatives.

Nearly 40% of respondents were from operations-focused companies with a culture driven by systems, procedures, and the bottom line. The majority have financial objectives to grow revenue and/or operating margins.

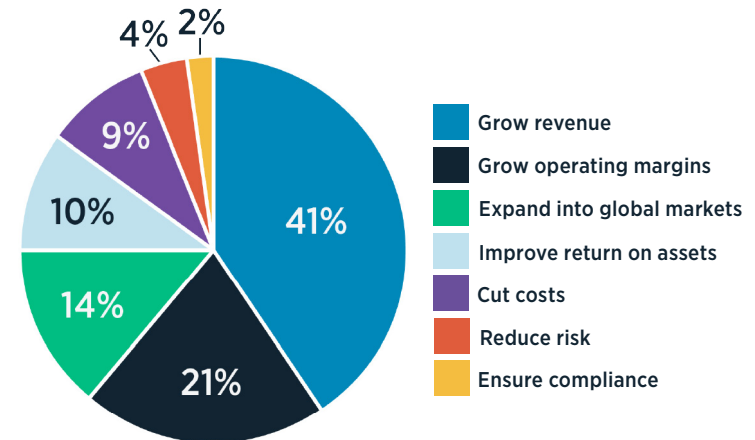
FOIW survey questions collected workforce initiatives strategies, actions, and technologies used, and collected information focused on the following key topics:

- Company metrics programs
- Industrial Transformation (IX)
- Frontline leadership, organization, and management
- Workforce process capabilities
- Employee lifecycle model
- Technology capabilities
- Workplace amenities and facility management

Corporate Mission



Top Financial Objective for the Company



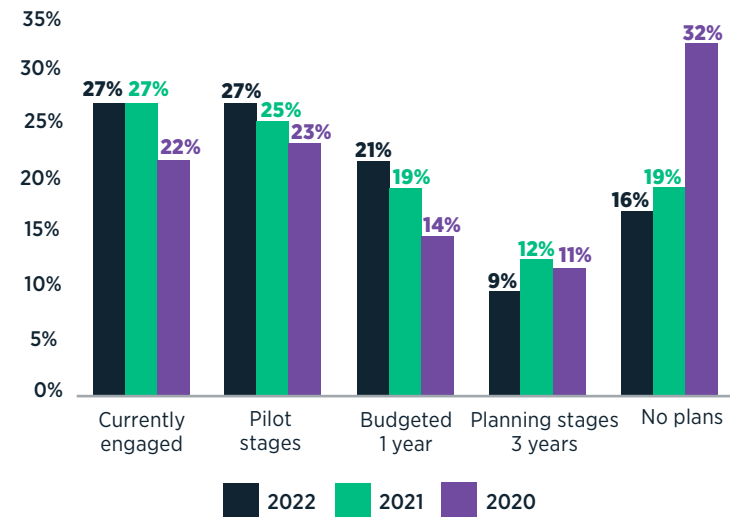
Research Demographics (Cont.)

As human-centric technology is a key enabler to support and retain the frontline workforce, the approach companies take to adopt new technology is essential. Connected Frontline Workforce (CFW) technology is proven to increase workforce engagement, level up operational performance, and increase business value.

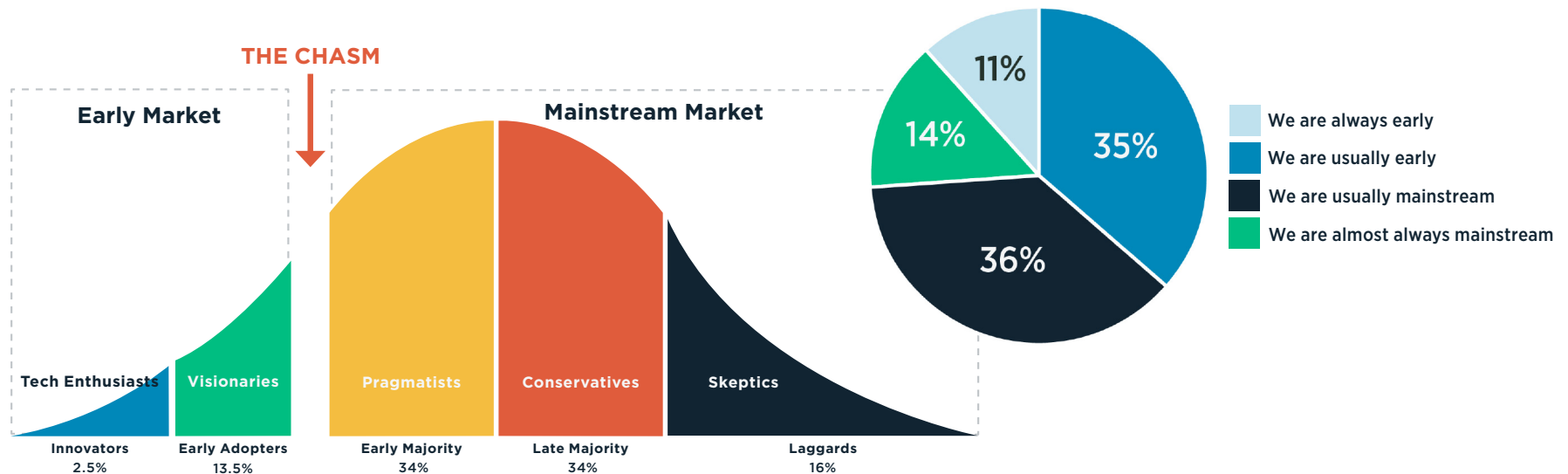
Therefore, we specifically asked surveyees where their companies are at in deploying CFW Applications to enable the workforce digitally and whether that was a strategic component of their IX program. Our research shows:

- 50% adopt new technology when mainstream
- 72% of CFW initiatives are beyond the definitional and/or early adoption phase

Connected Frontline Worker Initiatives as a Part of the IX Program



Traditional Approach to Adopt New Technology Based on Geoffrey Moore's *Crossing The Chasm* Framework



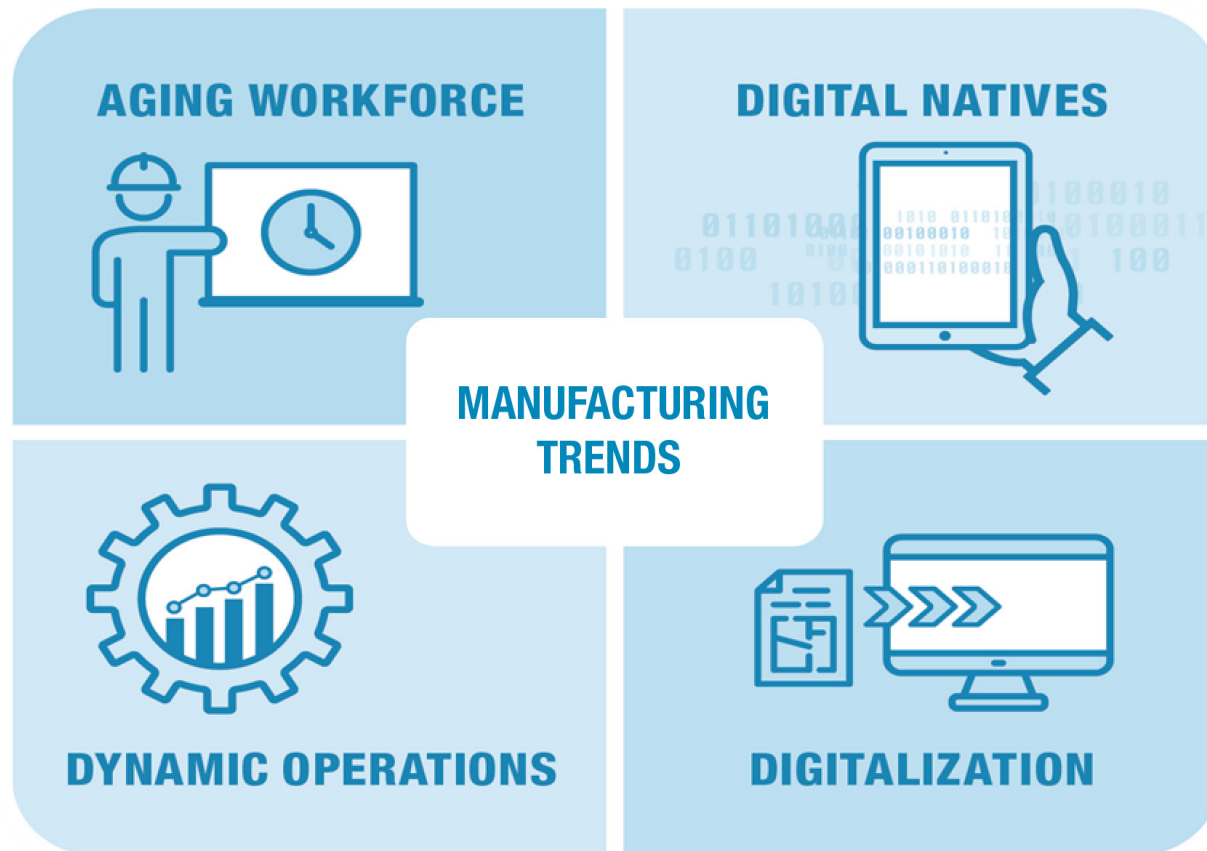
Section 3

Manufacturing Workforce Dynamics: A New Reality

Manufacturing Workforce Dynamics: A New Reality

Operations has always "found a way to make it happen." The "can-do" attitude is a deeply rooted concept that runs through the heart of manufacturing and represents both strength and weakness. It is essential that industry recognize the catastrophic nature of "The Great Goodbye" colliding with existing manufacturing trends. Workforce dynamics have completely changed, and a new reality exists, yet most have not made the transformational changes needed to attract, train, and retain the next-gen worker.

Industrial organizations are facing never-before-seen struggles to hire and retain frontline employees. Quit rates hit an 11-month high in May 2023 for the sector, according to the US Bureau of Labor Statistics. Seventy-two percent of FOIW survey respondents reported experiencing negative operational performance impacts due to workforce challenges. So why are manufacturers holding on to the status quo hiring, training, and retention methods as if the tried-and-true has been working?



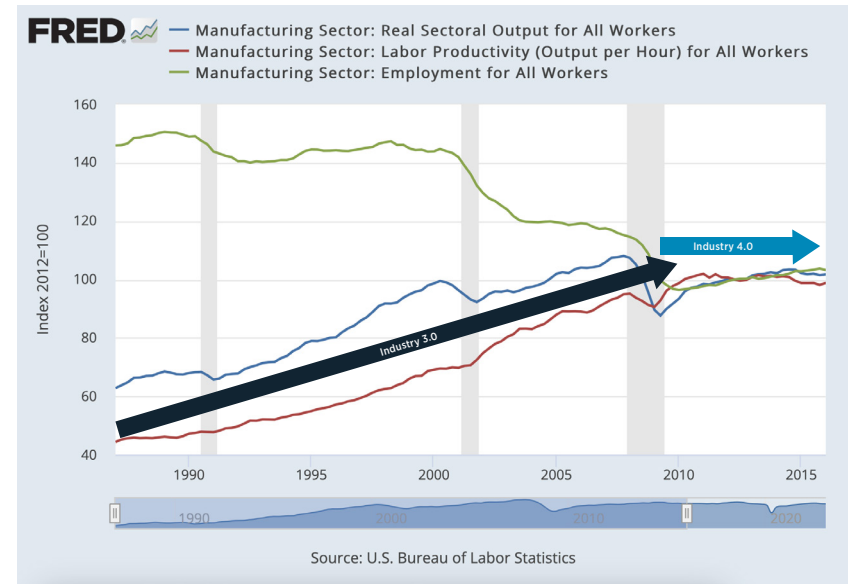
Manufacturing Workforce Dynamics: A New Reality (Cont.)

For years, manufacturers have told themselves and honestly believed that workforce issues will recede, and industry will become king again. The paradox manufacturers face today is the continued, decade-plus plateau in output, productivity, and employment. Available data shows workforce challenges have been long-standing and are worsening. No amount of contract or contingent labor will be able to staunch the hemorrhage.

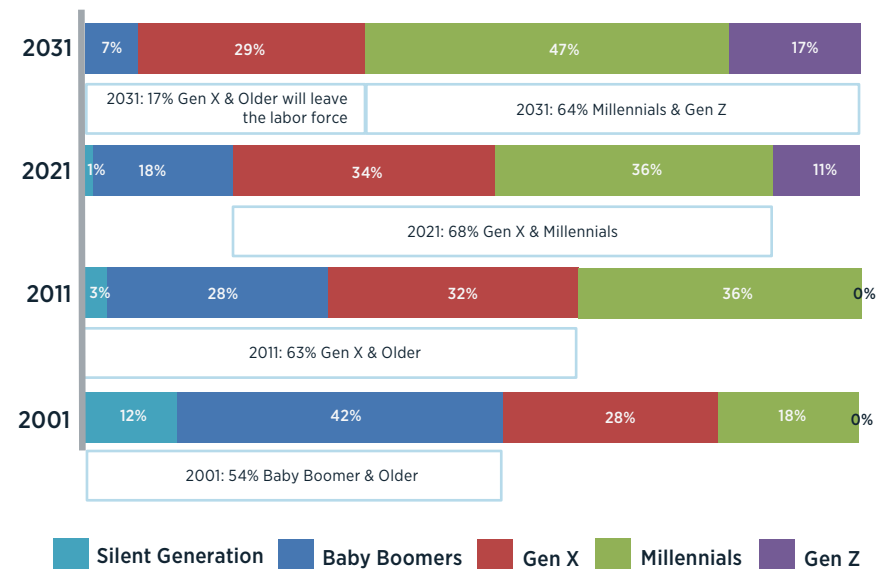
With around 10% of the workforce set to retire in the next three to five years, manufacturers must fundamentally evolve from the failing traditional approaches. Industry 3.0 improvements created a false impression that technology-led transformation is sustainable and will prove manufacturing a career worth investing in. Millennials and Gen Z, who will make up 64% of the workforce by 2031, have already shown accelerated workforce turnover. Increased workforce mobility, the availability of flexible roles across other business sectors, and the increased pace of change are the new normal.

Believing negative operational performance impacts are temporary and failing to take the right action, at best, will force unpleasant consequences upon industrial organizations. This mindset will prove catastrophic for the company and individual manufacturing leaders when there is no longer any semblance of business continuity. The threat to operations and resiliency is very real, and new workforce dynamics will continue to create more pain across industry.

U.S. Manufacturing Sector Output, Productivity, and Employment



Shift of Generations in the Labor Force



Manufacturing Workforce Dynamics: A New Reality (Cont.)

Manufacturers must redefine the nature of work for both frontline and corporate jobs. LNS Research analysis shows that to compete and retain a talented workforce, Global Operations Vice Presidents must align with Human Resources executive leadership to develop a strong, human-centric manufacturing strategy. A future-proof frontline and operations will be achieved by those who can accelerate initiatives that:

1. Better capture and transfer knowledge
2. Attract qualified job applicants
3. Upskill the frontline workforce
4. Embed workforce performance metrics
5. Implement robust change management processes



Global Operations Vice Presidents must align with Human Resources executive leadership to develop a strong, human-centric manufacturing strategy.



Section 4

Win the War for Talent:

How to Future-proof Frontlines and Operations

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Win the War for Talent: How to Future-proof Frontline and Operations

Our research shows that FOIW Leaders are drastically outperforming FOIW Followers when analyzing frontline workforce and operational key performance indicators (KPIs). In fact, as FOIW programs increase the number of best practices adopted, Leaders perform 55% better across operational KPIs, leaving no doubt about the business criticality of workforce initiatives. While disruptive technology is a good thing, and significant strides were made with Industry 3.0, research proves that manufacturers must use the right approach for sustainable Industrial Transformation (IX).

Future of Industrial Work Framework



LNS Research has definitively identified best practices for winning FOIW strategy and incorporating workforce initiatives into the overall manufacturing strategy. FOIW Leaders employ three strategic imperatives to redefine the nature of work for both frontline and corporate jobs:

1. Reimagine the employee lifecycle to support and serve the frontlines.
2. Meet employees where they are. Prioritize leadership and culture of the frontlines.
3. Deploy human-centric technology designed for and used by the frontlines.



Future of Industrial Work (FOIW) is a proactive, comprehensive, and lifecycle-based approach to building an empowered future-ready frontline workforce.

Leaders are the top **+ 20%** of companies with real success or significant progress.

Followers are not planning proactive initiatives and/or are not seeing value from the efforts.

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Win the War for Talent: How to Future-proof Frontline and Operations (Cont.)

The Future of Industrial Work Framework provides a visual representation of how industrial organizations can achieve the same success. Adopting and maturing capabilities across people, process, and technology enable manufacturers to meet today's problems and overcome tomorrow's challenges. A proactive, comprehensive, and lifecycle-based approach proven by Leaders is essential for success.

Global Operations Vice Presidents can use the LNS Research FOIW Framework as a template to develop and execute initiatives for future-proofing the frontlines and operations by building an empowered workforce, today. In the next sections, we will dive deeper into each strategic imperative that Leaders leverage for success and why most are failing to use Industry 4.0 practices as a competitive advantage.

92%

of industrials organizations
report actions are being taken to
overcome workforce challenges.



Section 5

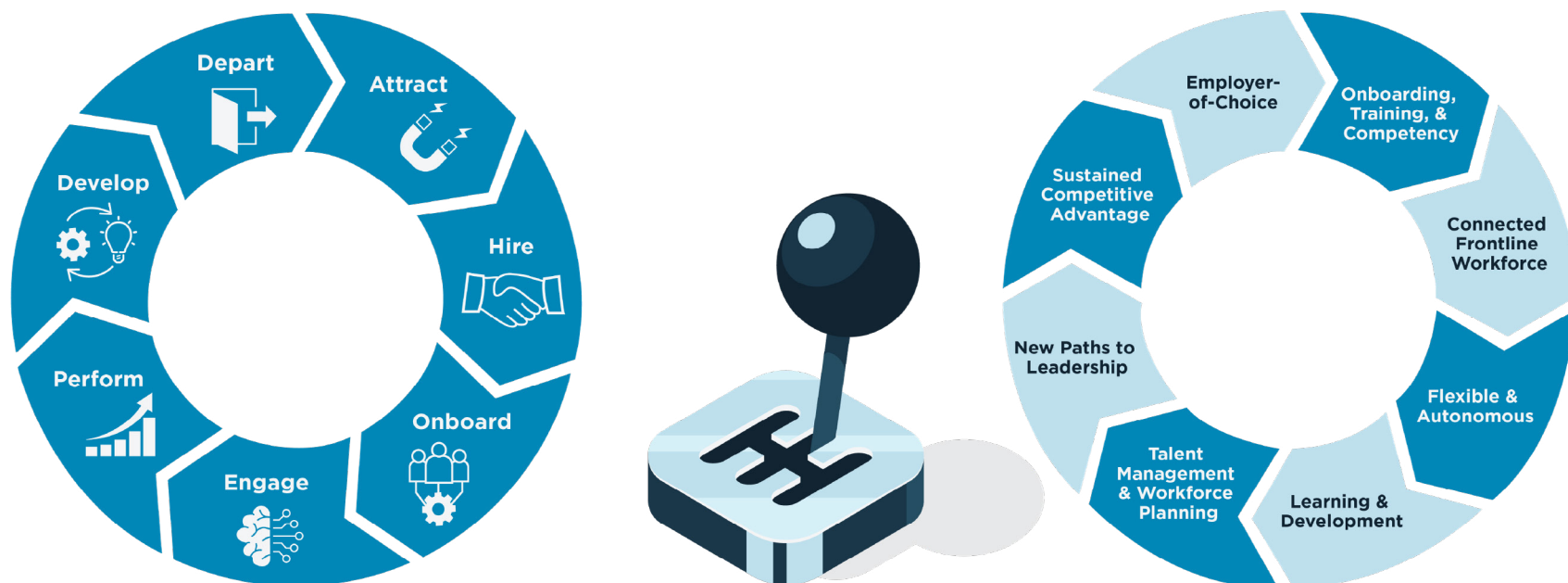
Shifting to the Total Employee Experience

Shifting to the Total Employee Experience

Next-gen workforce expectations demand employers provide the Total Employee Experience (TEE), an employee-centric view of how a person perceives their employment experience. FOIW Leaders were found three times more likely to fund TEE efforts to significantly shift the tried-and-true employee lifecycle to an employee-centric lifecycle. The reimagined employee lifecycle, visualized below, better enables an Employer of Choice brand and seeks to improve the workforce response to each of these questions:

- Do I want to work for this company?
- Do I want to do this job?
- Will I be successful?
- Will I be treated fairly?
- How will this job affect my quality of life?
- Will I have a future here?
- Would I recommend this employer to others?

Visualizing the Shift to an Employee-centric Lifecycle

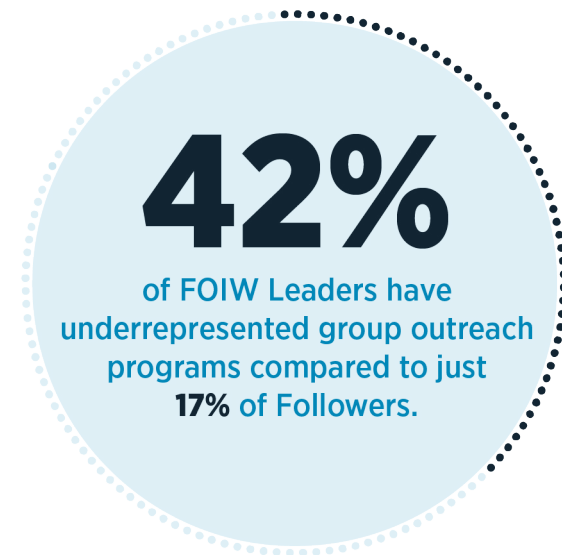


Shifting to the Total Employee Experience (Cont.)

Focus Begins Before Day 1

Global Operations VPs can learn from the actions of FOIW Leaders to improve and accelerate the shift to the TEE in order to compete for qualified workers in a shrinking labor pool. Employer of Choice branding initiatives are the top tactic FOIW Leaders use to attract, hire, and onboard applicants. Building the image is achieved through a variety of methods, including:

- Maintaining a local presence at events and volunteer opportunities
- Partnering with local high schools, community colleges, and vocational schools
- Creating outreach programs to reach underrepresented groups, including women, minorities, and veterans
- Building a pool of qualified workers more directly through apprenticeships, internships, and other workforce development opportunities



Shifting to the Total Employee Experience (Cont.)

Cross-functional Teams

Forty percent of FOIW Leaders engage nine functional areas to plan and execute frontline workforce programs. Followers typically only include Operations and, to a slightly lesser extent, Human Resources.

Consider engaging more, or better yet all, of the following functions FOIW Leaders use to increase workforce initiative success:

- Operations
- Human Resources
- Sustainability/ESG
- Information Technology
- Environmental, Health, and Safety (EHS)
- Compliance
- Quality
- Engineering (process, project, plant/facilities)
- Learning & Development

Leaders typically engage in

9

functional areas when
planning and executing FOIW
workforce initiatives.

Meaningful Work and Transferable Skills

Steady pay isn't enough to entice next-gen workers to come to, or stay with, manufacturing. Employees expect meaningful work in which improvements are made to eliminate the dull, dirty, and especially dangerous aspects of the job. Recognize the importance of providing opportunities beyond the accepted role and the ability to develop transferable skills.

The ultimate goal is to retain talent within the corporation and improve the steady drop in tenure. That said, when someone elects to move on, it is critical for organizations to recognize employees at every level for their contributions and publicly celebrate career advancement. This creates a lasting impression that improves attraction and retention, keeping the bridge open for the employee to return with even more experience and perspective.

Shifting to the Total Employee Experience (Cont.)

Job Flexibility

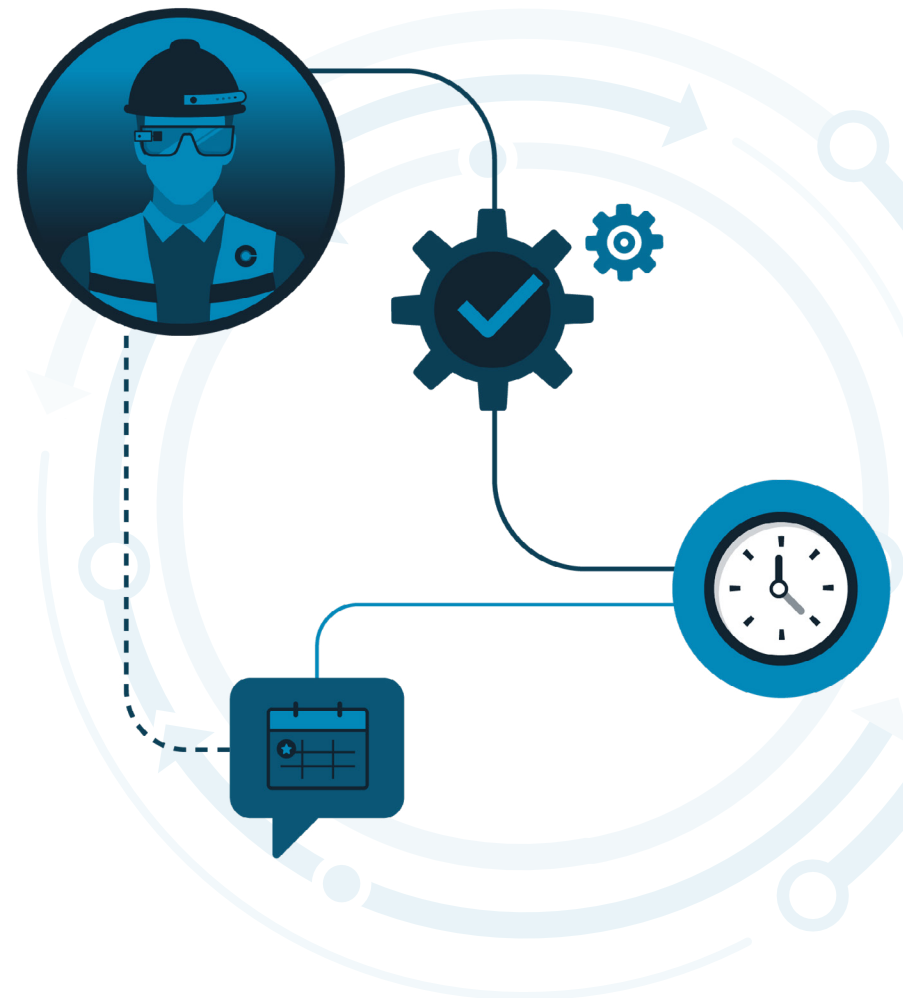
The COVID-19 pandemic revolutionized the way we both live and work. Employers found that employees who were required to be on location for certain tasks and activities could perform the same work from any location, in some cases with better accuracy and productivity. Manufacturers especially learned who was absolutely essential and how to remove the distractions to ensure business continuity.

No amount of technology will ever replace the need for human presence in manufacturing. What industrial organizations must understand is that technology and systems can facilitate more options for the workforce. FOIW Leaders can design processes to provide drastically more options and substantially increase the number of candidates by targeting a larger labor pool.

Managing the Employee-centric Lifecycle

FOIW Leaders are more than twice as likely to actively pursue an employee-centric lifecycle. The most successful companies collect feedback proactively to improve the employee lifecycle. Leaders enable employees and management to engage and further accelerate the shift to an employee-centric lifecycle by documenting the process of submitting ideas, identifying opportunities, tracking efforts, and capturing the value of the lifecycle.

Organizations don't have the luxury of wasted time, money, and/or resources. Applying the PDCA (Plan, Do, Check, Act) approach ensures initiatives achieve the desired outcome. Corporate and business unit TEE funding is two times more likely from FOIW Leaders than Followers. Leaders don't do more with more but are nearly five times more likely to tightly align and integrate business strategy across initiatives.



Shifting to the Total Employee Experience (Cont.)

Tactics Proven to Accelerate the Total Employee Experience (TEE) Shift

Provide new employees with mentors during onboarding. Formal and informal mentors can provide a supportive system while creating connections across the workforce.

- » Assess the soft skills of the workforce to identify those with the ability to provide mentorship that engages and retains new employees
- » Implement 360 feedback programs to identify potential mentors and opportunities within the onboarding system
- » Capture the value that lost candidates provide to understand why other employment was chosen before, during, and after onboarding

Communicate the status of initiatives and improvement actions. The workforce should know what changes are planned (and what it means to them), what success was found, why priorities changed, and yes, even where barriers were encountered.

- » Share new work policies that increase flexibility, community support provided by the company, and Sustainability progress
- » Use a variety of communication methods, such as the intranet, email blasts, digital displays, and mailed newsletters

- » Recognize individuals, groups, and teams for specific efforts that redefine the way work is being done to support the workforce
- » Provide a way for employees to submit "homegrown" success stories that can be scaled directly from the shop floor to across the enterprise

Create new paths for leadership across the workforce. Leverage experience and create new opportunities for employees by creating dedicated roles to support the facility, business, region, and enterprise

- » Identify ways to engage the workforce individually in identifying, planning, and executing workforce initiatives across the corporation
- » Create roles within Learning & Development, Human Resources, transformation teams, and Sustainability programs for unique insights into workforce nuances
- » Use peer recognition, idea submission systems, and bonus programs to identify candidates with both the competency and capability to lead

Section 6

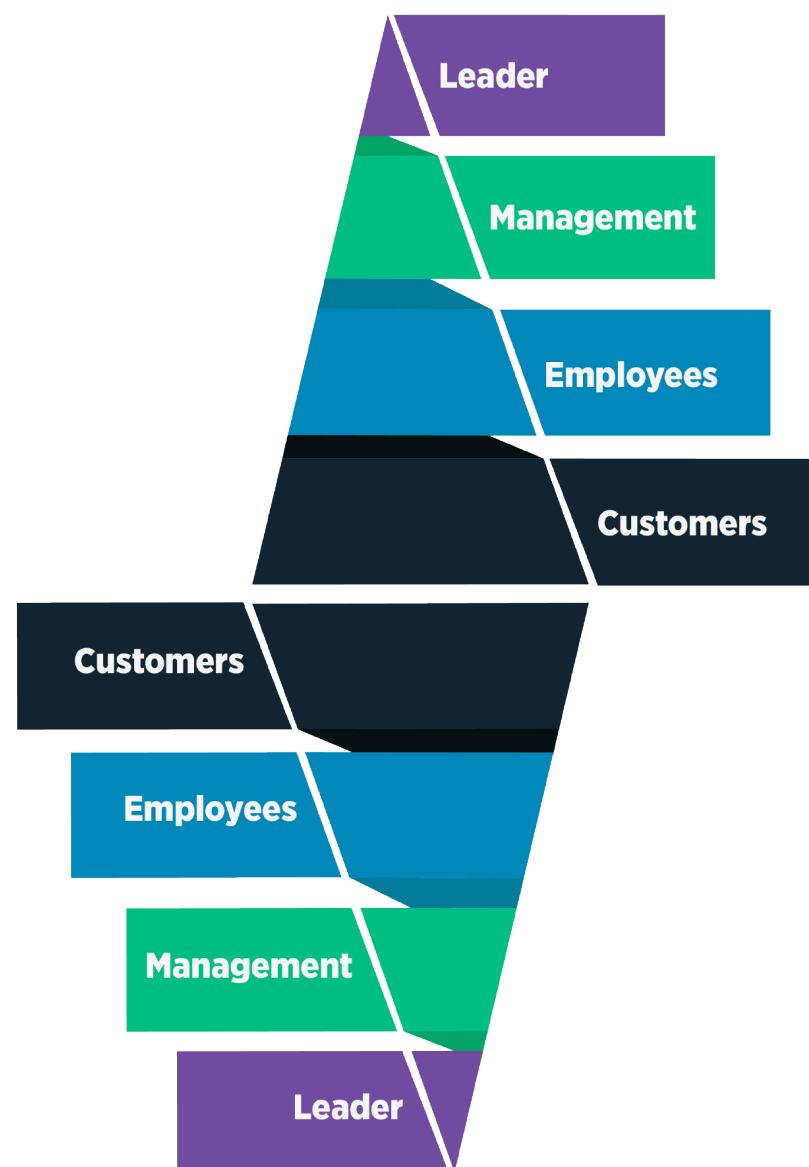
Building a Servant Leadership Culture

Building a Servant Leadership Culture

In LNS Research's *Developing a Sustainable Workforce Strategy* FOIW eBook, we discussed the critical role of leadership and culture for successful workforce initiatives. In the next three to eight years, the workforce will lose not just 10% of people to retirement but also a significant amount of skill and knowledge. Leaders have accepted this new reality and are taking dramatic actions to prioritize leadership and culture across the frontlines.

Supporting employee success and facilitating career advancement, whether within the company or elsewhere, has been a strategic focus for FOIW Leaders. The tactics that build a positive culture and improve retention enable the archaic command and control leadership approach to make way for servant leadership. This transformed style of leading the workforce resonates with next-gen workers and accelerates the employee-centric lifecycle.

Traditional Command and Control Leadership



Transformed Servant Leadership Approach

Building a Servant Leadership Culture (Cont.)

Pivot the Pyramid from Control to Serve

The need for autonomy and flexibility is high among newer generations looking for work, and non-manufacturing roles currently cater to those needs significantly more. Leaders are seizing the opportunity and gaining a competitive advantage by pivoting leadership tactics. Servant leadership engages the entire workforce and focuses efforts on growing the people along with the business.

Manufacturing leaders can prioritize servant leadership principles to flip the leadership model successfully. FOIW Leaders empower the workforce by moving from the command and control status quo to one that seeks to listen and understand the workforce's needs. The top tactics Leaders use to attract and retain a competent and qualified workforce to achieve business objectives include:

- **Commitment to the growth of people.** Frontline supervisors and team leaders are selected by identifying the capacity for servant leadership, with Leaders 70% more likely to have employee development programs for career advancement.
- **Listening.** FOIW Leaders are two times more likely to provide frontline supervision with regular training to ensure workforce feedback is addressed properly, and 1.5 times more likely to set individual goals and objectives to focus on employee desires.
- **Empathy.** Recruitment efforts are nearly twice as likely to include messaging around employee wellness and an inclusive team environment.
- **Awareness.** Regular communication is over 50% more likely to be provided through numerous outlets, including social media platforms, local television, billboards, and other news/information media.



Building a Servant Leadership Culture (Cont.)

Empower the Employee

FOIW Leaders more than triple the tactics to attract, retain, and uplift the frontline workforce. The focus is not just on capturing and transferring operational knowledge from experienced workers but on breaking away from traditional methods of organizing and managing the frontline workforce. A servant leadership culture consistently differentiates Leaders from Followers, with more than 50% of Leaders having transitioned to one of the following models:

- Individual team members who identify tasks and complete work to meet goals and objectives for an operational period
- Self-managed teams that internally assign work and specific tasks to achieve production targets
- A mix of self-managed teams and supervisor/team leader workforce teams that work to meet production demands

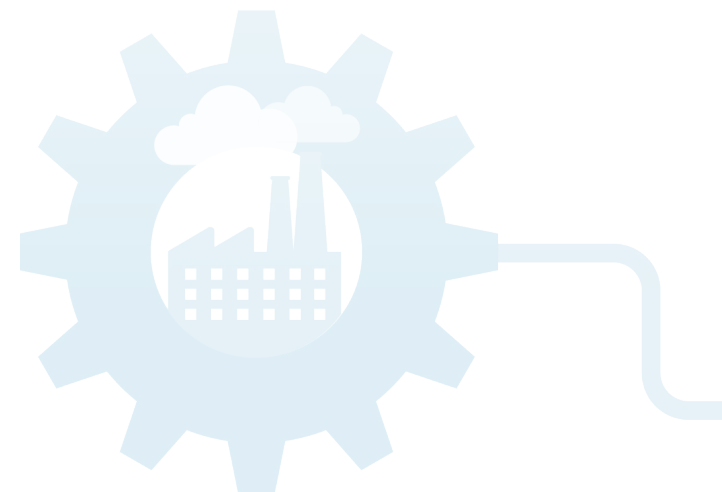


Building a Servant Leadership Culture (Cont.)

Culture Through Consistency

Work performance and career development tactics are critical to enabling and empowering the workforce. A crucial component for employees is understanding the business to better meet customers' needs. Over half of all FOIW Leaders help employees succeed and advance in their careers with consistent efforts in:

- Providing organizational structure and key stakeholder awareness
- Documenting roles and responsibilities and ensuring adequate training is in place
- Setting clear employee expectations that include when to escalate issues to leadership
- Increasing the level of support given to improve work performance
- Including peers in qualification assessments and re-qualification reviews
- Developing cross-training opportunities and continuous learning for employee advancement



Consistency is **Key**

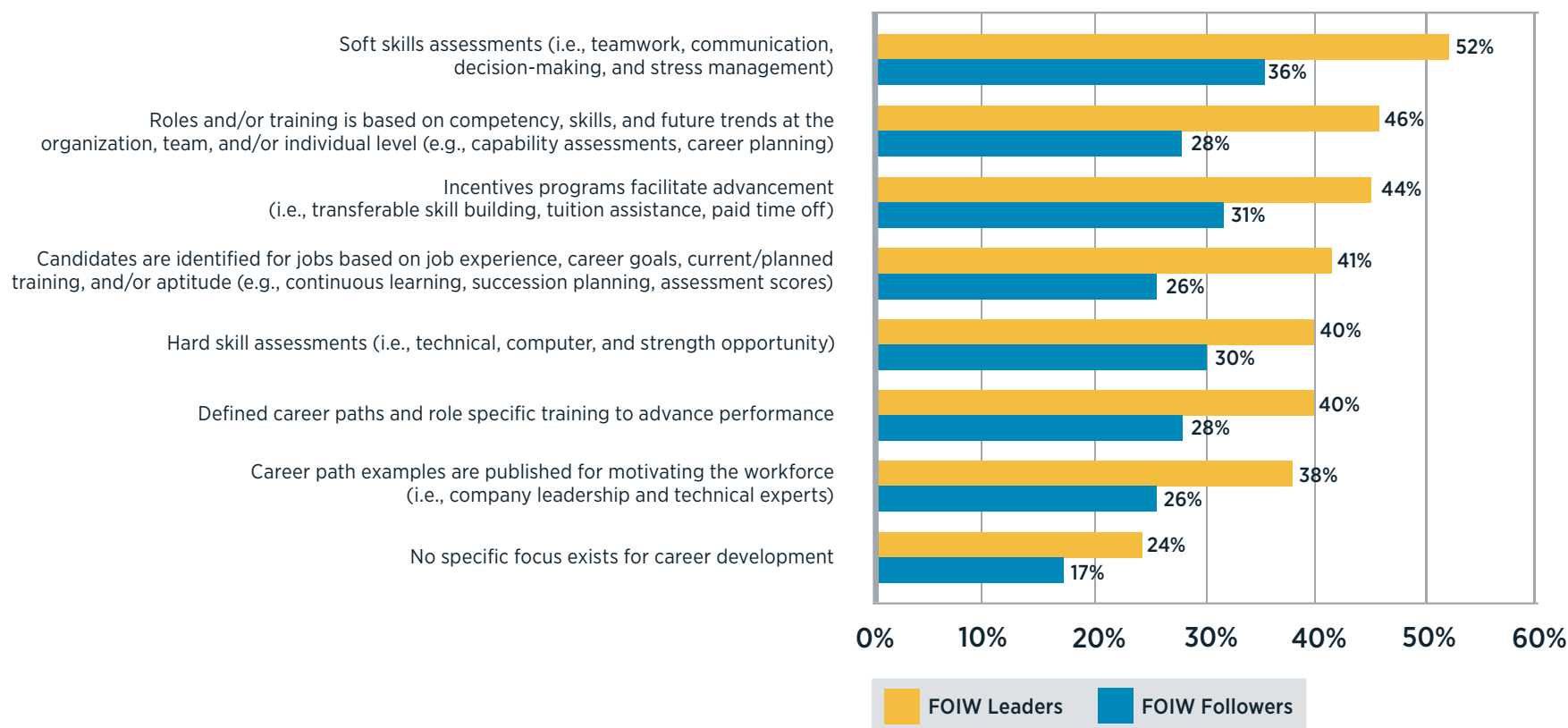
Over half of all FOIW Leaders help employees succeed and advance in their careers with consistent efforts.

Building a Servant Leadership Culture (Cont.)

Strategy of Succession

A barrier many manufacturers must overcome is convincing employees that digital transformation is not to replace the workforce but to enable the worker. Leaders know that knowledge transfer from experienced workers to next-gen employees will be essential to survival. Formalized training and development programs will also be supplemented with succession planning to ensure the pipeline has the talent needed when workers retire, get promoted, or find a new position outside the company.

Career Advancement Practices Consistently Applied for Frontline Workforce Employees



Building a Servant Leadership Culture (Cont.)

Strategy that Inspires Servant Leadership

Meet regularly with and listen to the workforce. In-person listening sessions and focus groups provide leadership with a way to engage both personally and professionally to increase communication, transparency, and trust.

- » Tours shouldn't be reserved for customers and guests only but also for organizational leaders, allowing them to better focus on connecting and listening to the workers
- » Overcommunicate the need for employees to be open about what challenges them most and what they like about the work they do - flip the focus with top leaders "listening more" rather than "talking to" employees
- » Close the loop on the information the workforce provides to increase the level of trust and the ability to truly assess the impact of initiatives

Provide feedback regularly to employees. Ensure the workforce is involved in setting goals and objectives at the individual level.

- » Embed workforce performance metrics across processes with documented management systems

- » Review and discuss the progress made toward, as well as the barriers to, success
- » Highlight the advancement of internal talent supported by internal programs

Recognize the dire need for flexible work options across industrial operations. The manufacturing workforce at the frontline level has an opportunity to tap into previously underutilized labor pools to attract qualified workers to industry

- » Focus on eliminating bias from job postings, the hiring process, and within the manufacturing environment
- » Recognize the skills, training, and capabilities of military service candidates
- » Provide flexible schedules and childcare benefits to allow parents to meet the demands at home and at work

FOIW Leaders are upping the game by being nearly **1.5 times** more likely to have consistent career advancement practices for the frontline workforce to build a pool of qualified workers from within.

Section 7

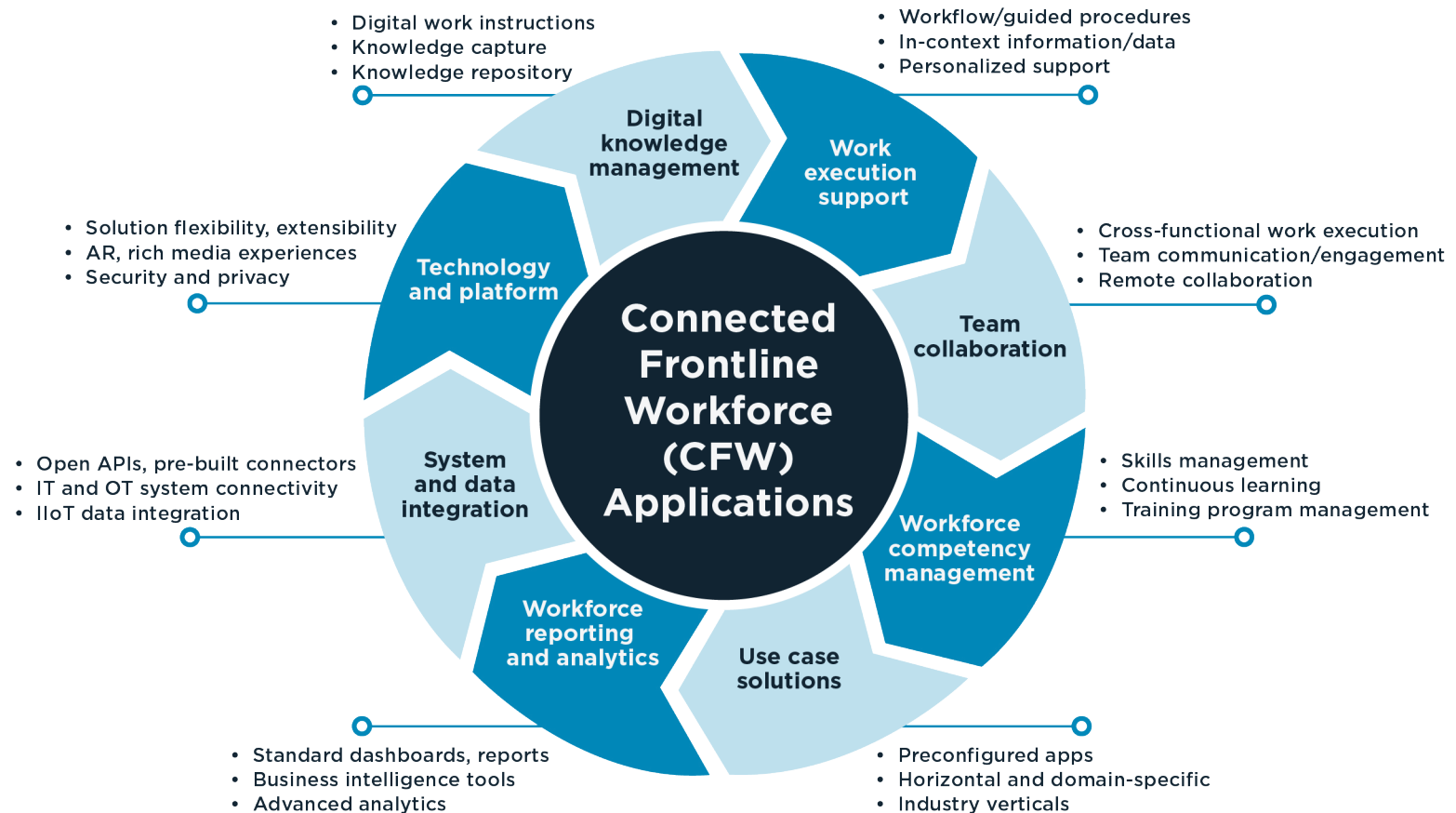
Enabling the Workforce:

Connected Frontline Workforce (CFW) Applications

Enabling the Workforce: Connected Frontline Workforce (CFW) Applications

Manufacturers are facing a new generation that lacks the fundamental skills and competencies for the frontline and considerable challenges in capturing and transferring knowledge from experienced workers. Connected Frontline Workforce (CFW) initiatives have since emerged as an essential means to achieving operational goals through the support, engagement, and empowerment of frontline teams. These proven results provide valuable best practices and benefits of incorporating CFW Applications into the organization's FOIW strategy.

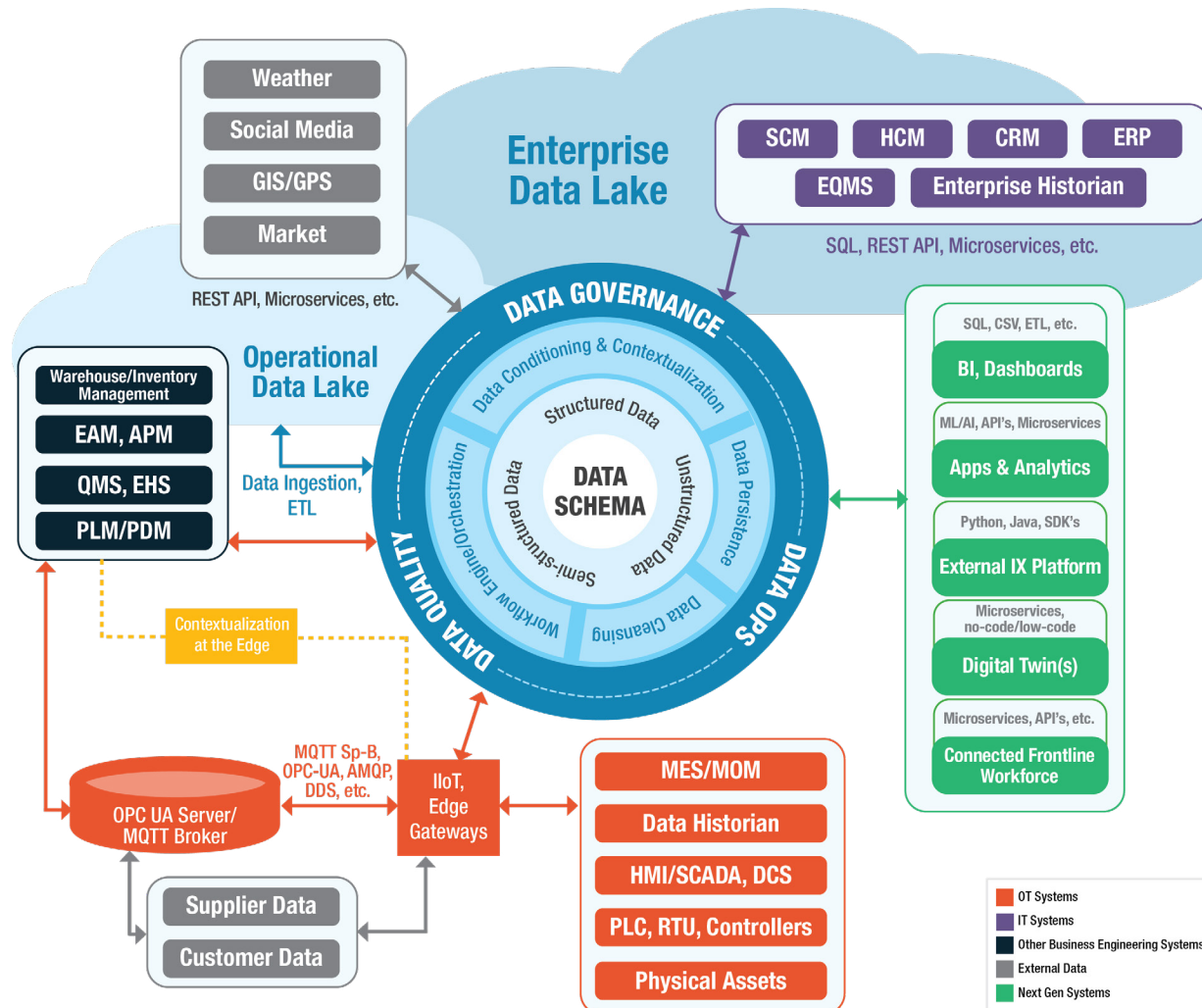
CFW Applications are an outstanding manufacturing app closing the gap and pivoting from the age-old practice of technology being done "to the worker" to providing technology "for the worker." CFW-enabling technologies address next-gen workforce expectations and hold the promise of helping companies meet frontline workforce challenges. LNS Research found that FOIW Leaders are over nine times more likely than Followers to scale CFW solutions and key capabilities across the enterprise.



Enabling the Workforce: Connected Frontline Workforce (CFW) Applications (Cont.)

Applications and Architecture

Historically, systems and applications have been very business-centric. Employees have had to adapt to the technology provided and navigate complex silos of data across disconnected systems. It is critical for Operations to work hand in hand with IT and OT organizations to overcome this hurdle for next-gen practices.

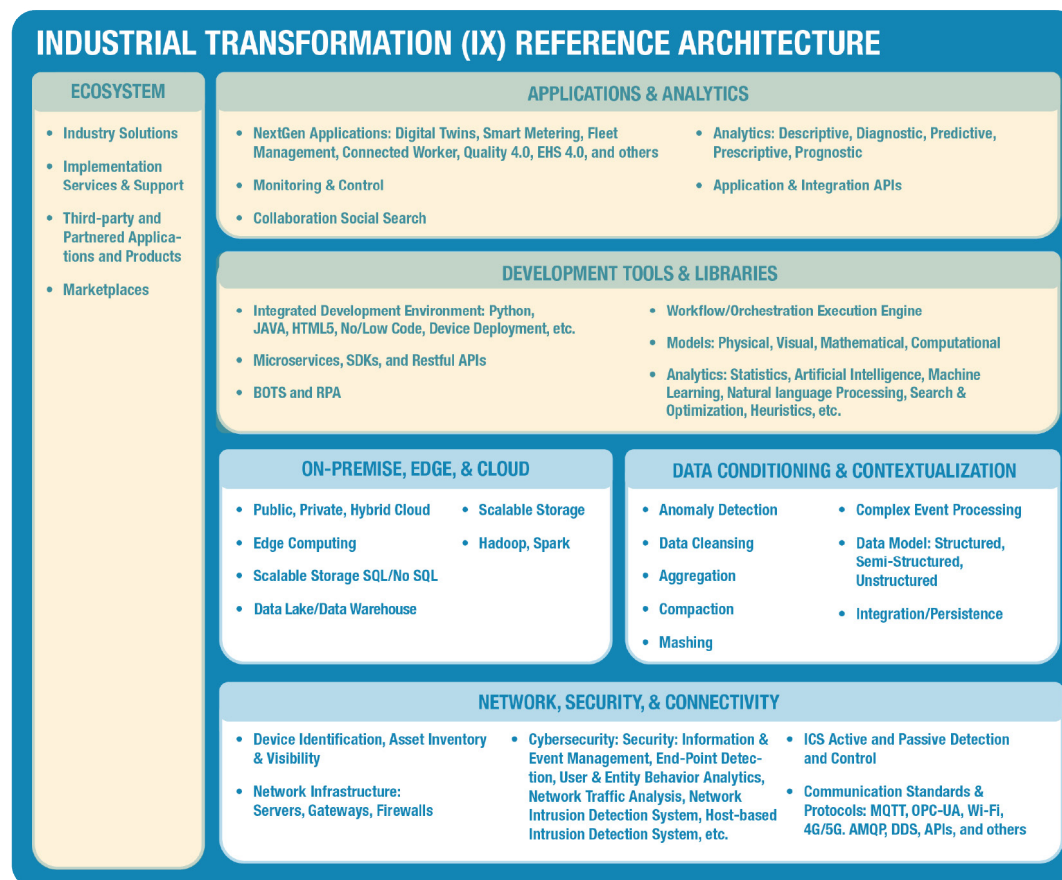


Enabling the Workforce: Connected Frontline Workforce (CFW) Applications (Cont.)

Manufacturers must see solution selection not as an “us versus them” but as an “us alongside them” opportunity to create the architecture that centers around the worker. Nearly 60% of FOIW Leaders have improved data management regarding the frontline. The ideal solution will be based on the use case, operating environment, and technology landscape.

Industrial organizations must recognize that while the essential components of a CFW Application are core enablers for a total CFW solution (see IX Reference Architecture pictured below), the overall operational architecture must be in place to enable digital tools that support the workforce. Eighty-six percent of IX Leaders have already implemented or are in the pilot stages of developing an industrial data hub (a centralized repository that natively connects to multiple data sources) compared to less than 50% of Followers.

CFW Application Core Components and the IX Reference Architecture



Enabling the Workforce: Connected Frontline Workforce (CFW) Applications (Cont.)

Digital Management Matters

Providing real-time data for decision support at the point of work accelerates new employee learning to that of an experienced hire. LNS Research finds it's better to start with solid data governance and architecture. The importance of data management is critical in eliminating the silos that exist between data and processes. Advanced digital technologies and enhanced mobile capabilities allow true worker connectivity to and interaction with the overall operational management system and the work environment.



59%

of FOIW Leaders have improved
data management regarding
the frontline compared
to only **25%** of Followers.

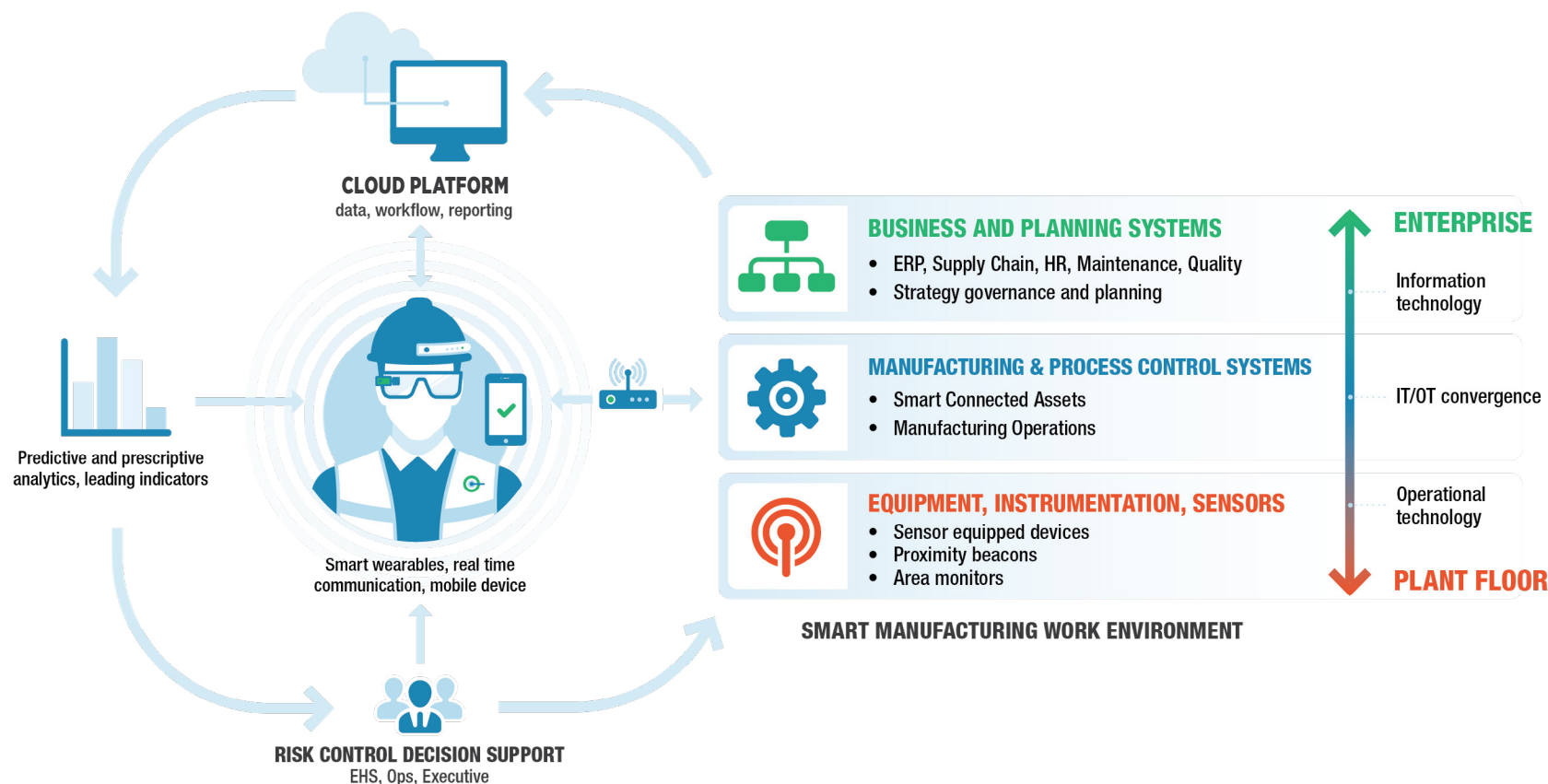
Enabling the Workforce: Connected Frontline Workforce (CFW) Applications (Cont.)

Digital Management Matters (Cont.)

CFW Applications provide flexible platforms with no-code/low-code functionality, making it easier for a worker at any level to automate workflows and information delivery, capture important data, and enable autonomous actions through advanced analytics. Applying analytics capabilities, such as Artificial Intelligence (AI), which is being deployed by FOIW Leaders two times more than Followers, is being matured to scale by one of the following overall approaches:

1. Applying analytics sophistication where resources and capabilities are most available
2. Adding analytics sophistication, beginning with the most advanced plants
3. Bringing all plants to a common layer of sophistication before maturing analytics sophistication

THE CONNECTED WORKER: SMART RISK MANAGEMENT



Enabling the Workforce: Connected Frontline Workforce (CFW) Applications (Cont.)

Individualized Industrial Support

Industry has seen "digital natives" come to work with a basic expectation of technology. With new technology becoming available to the general public, manufacturing is seeing more and more pressure from employees of all generations to transform digitally. Workers today are confused by the level of technology enabling shopping experiences, healthcare choices, and troubleshooting support on the homefront compared to the lack of technology and capabilities across industrial organizations.

The world we live in allows us to visualize life in 3D, connect to people easily no matter the time and place, as well as access the type of information needed on demand. Choosing the right CFW solution(s) for the organization provides a level of for-

mal and individualized training, guided work procedures, and workgroup integration that can differentiate manufacturers across industry verticals. Leaders are significantly increasing their ability to achieve engaged employees, a competent workforce, and expected Sustainability/ESG goals by scaling CFW Applications, focusing on key capabilities that:

1. Are designed for the frontline workforce and used across industrial operations to include production and maintenance employees.
2. Augment human capabilities by enabling the multi-directional flow of data, digital content, information, insights, and actions to, from, and among workers and teams.
3. Provide frontline operations with information to support better, faster decisions, real-time feedback and actions, and improved communication and collaboration.
4. Deliver actionable insights for systematic improvement of how work is done and to optimize operational performance.

Manufacturers must prioritize user experience and the user interface when selecting digital technology to support and enable the workforce to attract and retain next-gen employees.



Enabling the Workforce: Connected Frontline Workforce (CFW) Applications (Cont.)

How to Upskill the Factory Floor with CFW Applications

Digital technology requires an operational architecture to adequately support the workforce. The best approach is to engage a cross-functional group to best identify the must-haves, needs, and wants for a long-term strategy.

- » Document the details of the approach to digitally enable the workforce
- » Ensure the right people are engaged to adequately identify the current state
- » Use an agile development process with a strong focus on user experience, functionality, and future flexibility

CFW solution selection must test vendor strengths against the organization's current state and long-term vision. The **LNS Research CFW Solution Selection Matrix** provides the team with best practices to create a shortlist of suppliers.

- » Evaluate CFW offerings against the functional capabilities needed and the platform technology features desired
- » Understand each vendor's potential to further grow product capabilities, provide industry-specific solutions, and expand the CFW solution footprint

- » Assess the vendor's capability to provide CFW technology and proven implementation within the organization's industry and across geographies

Accept that everyone has their own journey for change. Introducing workforce-enabling technology requires time, effort, and patience.

- » Overcommunicate the focus on upskilling and enabling individuals across the enterprise
- » Realize that the workforce doesn't know what "good" looks like - they have been conditioned to accept what has and has not been offered
- » Formal change management should be a fundamental aspect of workforce management

Section 8

Avoiding Manufacturing's Most Common Pitfalls

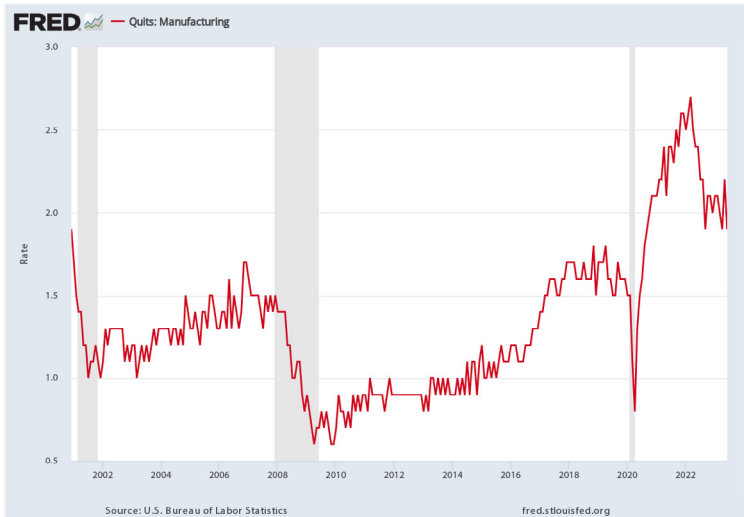
Avoiding Manufacturing's Most Common Pitfalls

Total manufacturing quits rose to an 11-month high in May 2023 as 293,000 left roles. With only 15,000 workers added to the manufacturing sector in the first six months of 2023, it is imperative that manufacturers understand why workforce initiatives are failing.

Let's explore why industrial organizations are failing to attract, hire, and retain a future-ready frontline.

Pitfall #1 Relying on Past Performance

Global Operations Vice Presidents and Heads of Operations who rely on past performance and ignore workforce trends are destined to seek new employment themselves. Most industrial organizations continue to ignore numerous warning signs, believing that past performance is an indicator of future success. Manufacturing has seen significant success in terms of revenue growth and margins. That said, the manufacturing productivity plateau and workforce challenges are just starting to impact the bottom line.



Manufacturing Quits According to the US Bureau of Labor Statistics

FOIW Leaders have accepted the need to act and are successfully building manufacturing talent through a proactive and coordinated approach. Competitive manufacturing requires Sustainable operations. The time is now to develop a FOIW strategy that adapts and transforms frontline workforce operations to empower the workforce.

Research shows FOIW Leaders have not only begun incorporating initiatives into the overall IX program but rapidly maturing by focusing on people, process, and technology capabilities. Moreover, C-Suite executives for FOIW Leaders are directly responsible for programs nearly 2.5 times as much as Followers.

33%

of FOIW Leaders C-Suite executives are directly responsible for workforce initiatives compared to only 12% of Followers.

Levels of Maturity	
EMBED Ability to define markets, transform business models, and disrupt incumbents.	5
SCALE Ability to meet and exceed current market demands. Fast follower as markets transform.	4
PROVE Ability to meet and exceed current market demands. Potential to meet future market demands.	3
INCUBATE Ability to meet current market demands. Inability to meet future market demands.	2
AD HOC Inability to meet current or future market demands.	1

Avoiding Manufacturing's Most Common Pitfalls (Cont.)

Pitfall #2: Reactive Rather Than Proactive

One thing that manufacturing cannot do is slow down time. Due to many reasons, the global population as a whole is coming of age – the age of retirement, that is. Japan expects 40% of the workforce to be 55 and older by 2031. In China, the number of people 65 and older is expected to double by 2050.

Half of the EU population was over 44 years old in 2022, with a median age of 47 expected by 2050. The median age in the US reached a record high in 2022 at just under 40 years and is expected to climb to 40.5 years by 2030. FOIW Followers are least likely to focus on appealing to the next-generation workforce despite increased baby boomers and Gen X retirements. What's worse, millennials and Gen Z, known as “digital natives,” will make up over 60% of the global workforce by 2031.

FOIW Followers are already behind the curve in adapting for millennials and Generation Z workers. In fact, the top business

Global aging is real
The median age of the workforce is expected to be **42.6 by 2031**, and the population is projected to be an average of age **36 by 2050**.

objective for 82% of these industries is focused on reactive measures, such as increasing frontline workforce safety, quality, productivity, and new hire retention.

64%

of the global workforce in 2031 will be digital natives (Millennials & Gen Z).

FOIW Leaders recognize preparing for this significant shift across the workforce is imperative. The top business objectives include digitally enabling the frontline workforce (an expectation of next-gen workers), upskilling employees for new ways of working, and improving onboarding speed and knowledge management processes.

Manufacturers focused on proactive rather than reactive business objectives are working to fix the root of the problem and, therefore, are significantly more likely to create a sustainable, future-ready frontline. Ninety percent of FOIW Leaders already see progress made from workforce initiatives intended to adapt and transform frontline operations compared to only 24% of FOIW Followers.

Only **9%**
of FOIW Followers anticipate performance impacts due to frontline hiring and retention compared to **44%** of Leaders.

Avoiding Manufacturing's Most Common Pitfalls (Cont.)

Pitfall #3: Suffering Through the Skills Shortage

One of the top challenges industrial organizations face is the shortage of skilled labor. Yet only 19% of FOIW Followers see digital transformation as needing new programs to re-train/upskill the existing workforce. Adding to the problem, only 11% see technology competency as more important in hiring decisions.

The reality across manufacturing is that most are woefully behind in documenting the knowledge needed to sustain frontline operations. When comparing the integration of workforce initiatives with training programs for compliance and effectiveness, only 9% of FOIW Followers completely integrate the initiatives compared to 48% of Leaders.

The skilled labor shortage is a top challenge for industrial organizations.



FOIW Leaders are 73% more likely to attract and recruit frontline workforce candidates with meaningful work and the opportunity to gain valuable, transferable skills. Leaders are also 70% more likely to have employee development programs to help frontline workers succeed and advance in their careers.

Hiring decisions also see distinct differences, with FOIW Leaders more likely to hire the right person for the role:

- 52% leverage soft skill assessments
- 46% base roles on employee competency and skills
- 33% weigh technology competency higher

Only **20%**
of FOIW Followers promote
technology to support the
workforce compared to
39% of Leaders.

Avoiding Manufacturing's Most Common Pitfalls (Cont.)

Pitfall #4: Untapped Technology

Only 20% of FOIW Followers deploy digital technology to support and connect the frontline workforce. This isn't surprising, as only 22% believe digital technology will improve employee satisfaction. Worse, 23% of FOIW Followers expect automation, CFW applications, and other digital initiatives to impact the frontline workforce, but no initiatives are being planned.

Most FOIW Leaders see employee satisfaction improved through digital transformation, with 51% expecting technology integration to create more highly skilled roles across the frontline. This differentiation creates a competitive advantage regarding hiring and retaining next-gen workers.

The LNS Research **Connected Frontline Workforce (CFW) Applications Solution Selection Matrix** assists industrial organizations in developing human-centric technology initiatives that digitally enable the frontline workforce.



Only **20%**
of FOIW Followers promote
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39% of Leaders.

Pitfall #5: Mismanagement of Facilities and Amenities

The manufacturing workforce isn't the only thing aging. Industrial facilities, globally, have continued to age in a not-so-graceful way. Fixed assets are improved by newer Asset Performance Management (APM) practices, with far fewer facility and amenity investments for the frontline.

The frontline, typically 80% of the workforce, has witnessed significant spending on corporate headquarters and office space. A dismal 32% of FOIW Followers have a frontline workforce facility management approach for workplace features and amenities. On the contrary, 56% of FOIW Leaders promote improved workplace facilities to attract and retain frontline employees. Break and rest areas, along with Sustainability spaces, see the most focus.

Section 9

Recommendations to Develop a Sustainable Workforce Strategy

Recommendations for Developing a Sustainable Workforce Strategy

Winning the war for top talent will ultimately gain the competitive advantage not only to survive but thrive. The future of manufacturing can expect to see operational performance and Sustainability further strained by human capital.

Global Operations Vice Presidents have seen the direct impacts of workforce challenges firsthand but must recognize future operations require fundamental change. Manufacturing executives are either seeing the need to drive improvements through workforce initiatives or being motivated by performance payouts tied to human capital goals.

FOIW Leaders have accepted the need to act and are successfully building manufacturing talent through a proactive and coordinated approach. This Transformation Blueprint provides Heads of Global Operations with proven practices, providing a template for strategic initiatives that future-proof the frontline and operations.

Key Recommendations

1. **Focus on becoming an employer of choice to attract qualified job applicants.** The next-gen workforce requires focusing on the Total Employee Experience (TEE), servant leadership, and digital technology to connect and support employees. It's essential to not just focus on "digital natives" but also recognize how technology can transform and improve the way of work across the organization. Plant employee surveys conducted regularly can ensure workforce initiatives improve what counts across the workforce, such as which facility improvements to prioritize.

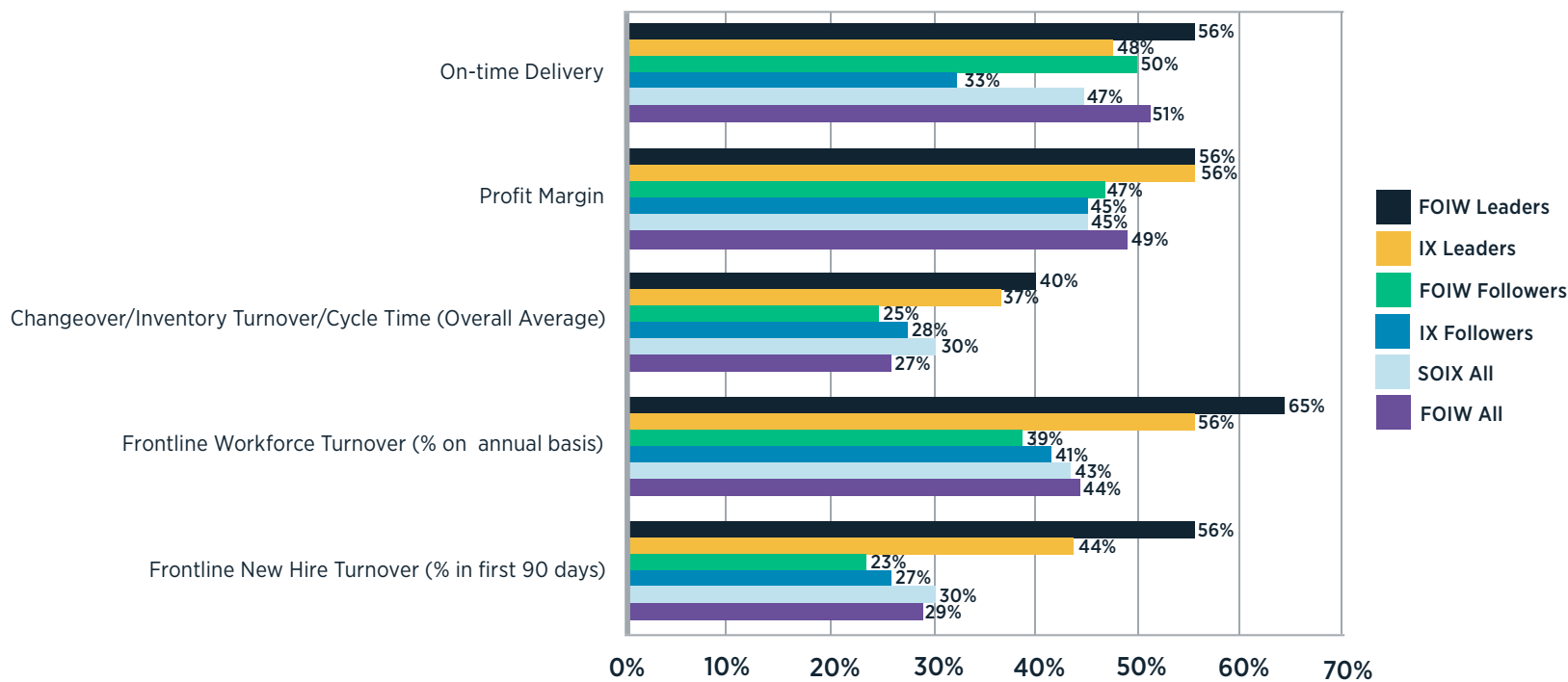
2. **Adopt formal change management to sustain improvements.** A formal change management process is an essential workforce management tool for a future-proof frontline and embeds FOIW best practices across the enterprise. Ensure capabilities are in place for changes to the organization, processes, and equipment. Intuitive systems and processes can support when and how changes are communicated to workers to improve effectiveness.
3. **Invest in frontline workforce competency.** Leverage proactive competency assessments to drive training and learning needs at the individual level. Include peers in qualification assessments and re-qualification reviews to provide newer employees with the mentorship of experienced workers. Regular meetings with leadership, including in-person listening sessions and focus groups, help identify opportunities to improve engagement and retention.
4. **Build capabilities that capture and transfer knowledge.** Adopt process capabilities that accelerate new hire skills to that of an experienced worker. Improving training using innovation and ensuring measures are in place to provide feedback on training material is an essential component of FOIW initiatives. Advanced training modules should be available to help support career advancement across the workforce.

Recommendations for Developing a Sustainable Workforce Strategy (Cont.)

5. **Deploy emerging technology to provide insights to improve workforce performance.** Corporate-level analytics initiatives can develop capabilities that provide data-driven decisions to improve frontline operations. Adding analytics sophistication where resources and capabilities are most available can incubate and prove before rolling out across the enterprise. Deploying Machine Learning (ML), Artificial Intelligence (AI), and Natural Language Processing (NLP) capabilities can provide personalized, real-time support to improve workforce performance. The end-user experience should be prioritized when selecting technology to enable the next-gen worker.

6. **Monitor workforce and operational metrics to understand weaknesses and if workforce initiatives are having the intended impact.** Two metrics are commonly tracked by 49% of manufacturers: on-time delivery and profit margin. Today's labor climate requires manufacturers to not only up their game on metrics but also track metrics that matter to understand workforce challenges. Moving forward, the metrics tracked will be critical for success, where tracking annual and new hire turnover will be just as important as tracking the usual suspects to identify crucial workforce shortages and top threats to operations.

Manufacturing Metrics Companies Track



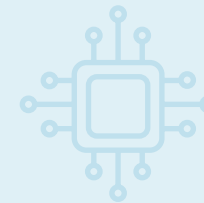
Recommendations for Developing a Sustainable Workforce Strategy (Cont.)

Final Thoughts

The time is now for Global Heads of Operations to develop an effective, sustainable workforce strategy that adapts and transforms frontline operations. Leaders are drastically improving both financial and workforce KPIs with mature FOIW programs that focus on empowering the workforce. Manufacturers who understand which best practices to implement – and when – will better prepare organizations to optimize operations, build resiliency, and ultimately create a competitive advantage.

To develop a sustainable workforce strategy, FOIW initiatives must be an essential component within the overall Industrial Transformation (IX) program. The LNS Research *Future of Industrial Work: Developing a Sustainable Workforce Strategy eBook* further explores the benefits of incorporating FOIW initiatives into the organization's overall manufacturing strategy, and provides best practices for developing a sustainable, future-proof frontline workforce strategy. Industrial organizations can overcome workforce challenges and attract, train, and retain the next-gen workforce by testing current strategies against the LNS Research FOIW Framework and strategic imperatives created from proven methods.

Future of Industrial Work Framework



The FOIW Framework provides the 3 Strategic Imperatives to Future-proof Frontline and Operations.

Transformation Blueprint

Future of Industrial Work
Future-proofing Your Operations

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