



EFFECTIVELY MANAGING TECH WORKERS

A NEW IMPERATIVE
IN THE DIGITAL AGE

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I. INTRODUCTION

Everywhere you look, business models are being transformed by technology. Auto companies are digital mobility companies; banks are online financial management companies; and retailers use technology to predict, recommend, and deliver products at home. Regardless of the industry, as *The Wall Street Journal* recently said, “every company is now a tech company.”

This means that every company needs to learn how to attract, manage, and retain technology workers. It’s not as easy as it seems. Tech workers are notoriously demanding: 47 percent of tech workers anticipate changing employers because they are looking for better working conditions, and only 21 percent believe their manager is “highly effective in their job as manager.”

In a world where tech workers are in tremendous demand and their skills and tools keep changing, we need a new model of management. This led us to study two critical questions:

- » Do organizations with higher levels of innovation and agility attract, retain, and manage tech workers differently from other segments of the workforce?
- » How well do organizations understand and address these differences?

The answer to the first question is yes. Just as organizations had to learn how to best manage scientists and engineers during the space age and other technology revolutions, there is a set of new and unique practices that drive success with today’s tech workforce. As far as their ability to adapt to these differences, some organizations are getting this, but many are not—and that is the purpose of this report. In the following pages, we explore these topics in more depth and provide answers to the study’s two critical questions mentioned above.



I. INTRODUCTION

ADDRESSING THE CRITICAL ISSUE OF MANAGING TECH WORKERS

This research is designed to be a practical guide to help organizations more effectively manage tech workers. We identify four areas organizations need to focus on. We also provide a maturity model, which will allow organizations to benchmark their practices and identify the specific actions that will help them move to the next level. Finally, we explain how HR and other (non-tech) workers perceive how tech workers are treated in their organizations, and we compare those to tech workers' perceptions. Throughout the report, we share examples from our literature review and our interviews with HR practitioners and tech workers.

Before we dive in, let's define what we mean by "tech workers." The study included 792 respondents, each of whom answered questions about his or her employer's management practices and organizational culture. Among

these respondents, 18 percent told us their job function was in technology. As the following figure shows, their role descriptions fell into various categories. As such, we define tech workers as those who create, manage, or support information technology as engineers, designers, project managers, or technicians.

FOCUS ON INNOVATION AND AGILITY

Our goal was to consider how several management practices with various self-reported outcomes. As we studied the data, we found that high levels of innovation and agility are the most predictive measures of success; in fact, these characteristics are considered essential in today's digital age. Throughout this report, we describe "high-performing companies" as those that outperform their peers in these two areas.

Figure 1: Technology focus and descriptions of tech workers

| Category of Tech Workers | Description |
|--|---|
| Information Security Expert | Plans, implements, upgrades, or monitors security measures for the protection of computer networks and information. |
| Infrastructure Support Professional | Tests, implements, deploys, maintains, and administers the infrastructure hardware and software. This includes cloud engineering and various cloud-related roles that design, operate, and maintain cloud systems. |
| Project Manager / PMO | Develops and maintains a technology project plan, which outlines a project's tasks, milestone dates, status, and allocation of resources to stakeholders and other interested parties. |
| Software Application Developer / Architect | Develops computer applications that allow users to perform specific tasks on computers or other devices. They may also develop or customize existing systems that run devices or control networks. |
| Tech Lead | Responsible for overall planning, organizing, and execution of all IT functions. Develops and motivates staff, directs all IT operations to meet customer requirements as well as the support and maintenance of existing infrastructure, applications, and development of new technical solutions. |
| UX / UI Lead | Creates designs for end users that are attractive and functional, and accessible to the target population. Oversees the design process from the mockup stage to the final product. |
| Web / IOS Developer | Designs, creates and modifies websites. Analyzes user needs to implement website content, graphics, performance, and capacity. |

II. KEY FINDINGS

Organizations need to hire, manage, and engage tech workers differently from other worker populations because tech workers have different motivations, preferences, and expectations.

Four talent management areas are critical to driving organizational innovation and agility: manager practices, organizational culture, employee recognition, and compensation. Tech workers demand:

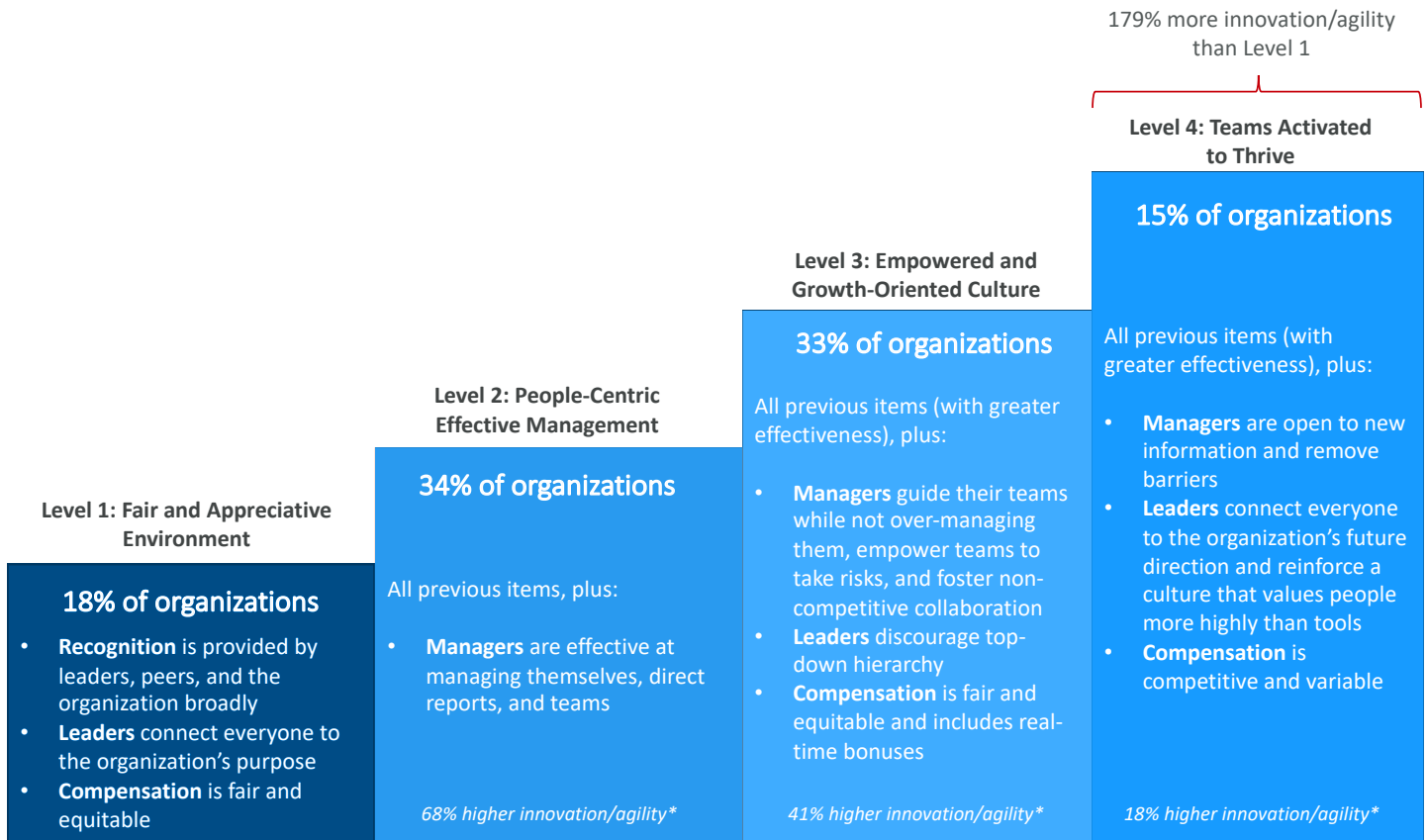
- » Managers who support autonomy and freedom to collaborate
- » An open and developmental but highly accountable culture
- » Recognition-rich interactions from the organization, leaders, and peers
- » Performance-driven, fair, and equitable compensation

These talent management practices fall into four levels that range from least mature (Level 1) to most mature (Level 4), labeled as follows (see Figure 2):

- » **Level 1:** Fair and Appreciative Environment
- » **Level 2:** People-Centric Effective Management
- » **Level 3:** Empowered and Growth-Oriented Culture
- » **Level 4:** Teams Activated to Thrive

Organizations that successfully implement practices at increasing levels of maturity reap the benefits of higher levels of innovation and agility: Organizations in Level 4 are 179 percent more innovative and agile than those in Level 1.

Figure 2: Maturity model for managing tech workers



*compared to previous level

III. MANAGING TECH WORKERS: WHAT MATTERS MOST

We often hear that tech workers are “entitled” or need “careful attention” because of their unique, rare, and particularly deep skills. But people are people—are tech workers really different from other workers? To understand the issue, we used three research sources:

- » A literature review of academic and popular business press
- » Interviews with 20 HR and technical leaders
- » Our survey of 792 individuals, including approximately 120 tech workers

The analysis reinforced what many believe: The most innovative and agile companies manage tech workers differently. These differences fall into four categories:

- » Manager practices (what managers do)
- » Organizational culture (how feedback and accountability are established)
- » Employee recognition (how appreciation and open thanks are shared)
- » Compensation (how pay is competitive and fair)

In the next section, we explain each of these different dimensions and how the relative importance of them varies by employee population. After that, we will dive into a maturity model for leaders who are trying to use the practices to more effectively manage tech talent and reap the benefits of higher innovation and agility.



Figure 3: The four differentiating dimensions for managing tech workers

| | Manager Practices | Organizational Culture | Employee Recognition | Compensation |
|---|--|--|--|---|
| Themes | <ul style="list-style-type: none"> • Manages self • Manages individuals • Manages teams | <ul style="list-style-type: none"> • Openness • Development-focus • Shared responsibility | <ul style="list-style-type: none"> • Recognition-rich interactions • Peer and organizational recognition | <ul style="list-style-type: none"> • Fairness • Pay for performance • Transparency in reward variation |
| Effective organizations' likelihood of having higher levels of innovation and agility | 47% | 11% | 11% | 4% |

III. MANAGING TECH WORKERS: WHAT MATTERS MOST

MANAGER PRACTICES

When companies think about the success of their technology teams, they often focus on technical skills. The research shows, however, that management behaviors have an enormous effect.

Our research identified three categories of managerial strength that differentiate high-performing companies from lower-performing organizations:

- » **Managers take their role seriously**—Managers continually improve their people management skills, they have exceptional management and technical skills, they are motivated by their work, they use data effectively, and they are truthful and transparent.
- » **Managers empower and engage individuals**—Managers provide individuals with autonomy, support learning through experimentation, manage difficult conversations effectively, are open to new information, and remove barriers to getting work done.

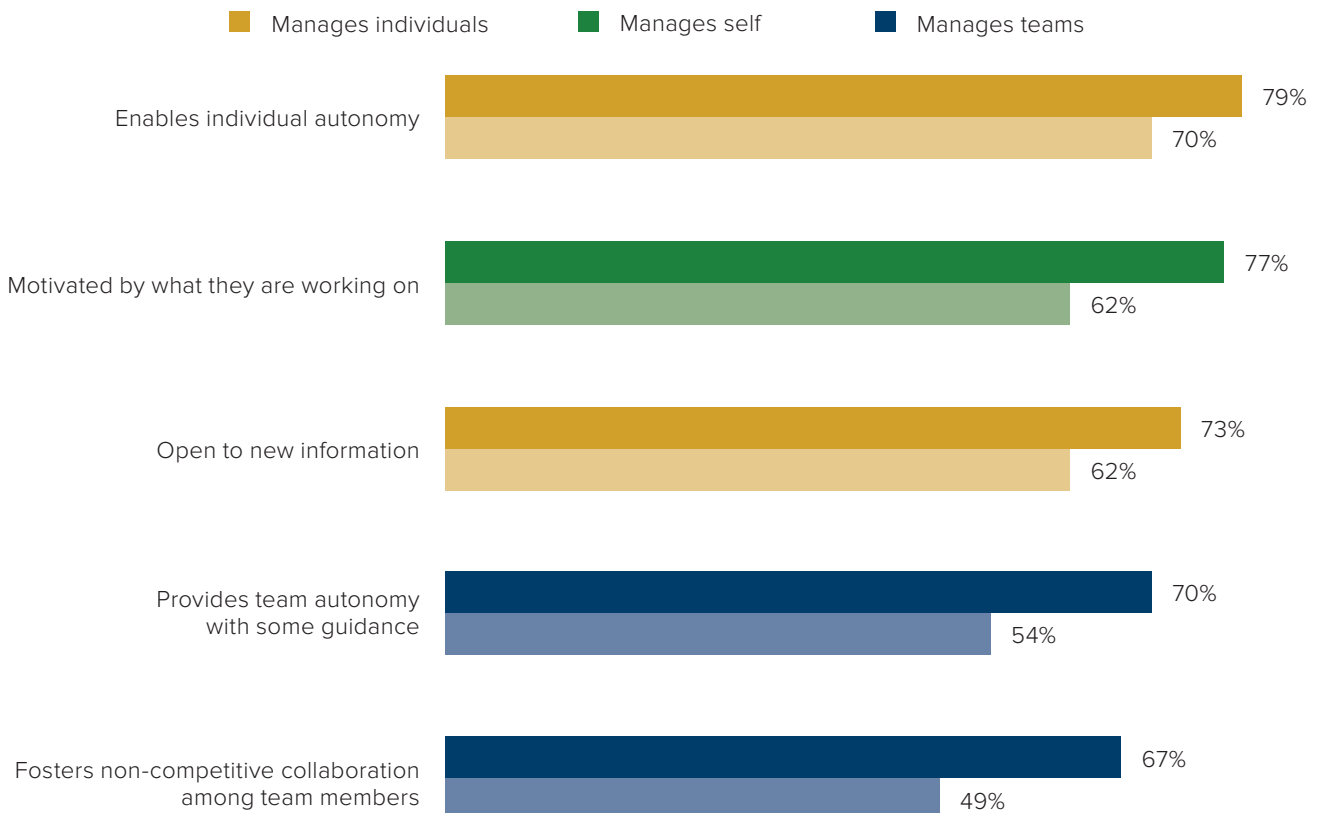
- » **Managers activate teams**—Managers communicate the organization’s goals clearly to their teams, coach teams to leverage team members’ different strengths, guide teams to learn quickly from mistakes, foster non-competitive collaboration, and enable team autonomy.

The concept of autonomy—both of individuals and teams—is a strong and differentiating theme. Since many tech workers are motivated by their ability to create and build things, empowerment is core to their motivation. The data also shows that high-performing managers are themselves motivated as well, generating inspiration, energy, and passion for projects and work.

These practices pay off. Organizations whose managers use these practices effectively are 47 percent more likely to be highly innovative and agile. These are the highest-impact practices we discovered.

Figure 4: Top 5 manager practices, according to tech workers—comparison of organizations with high levels of innovation and agility vs. organizations with average levels

Highly Innovative and Agile Companies (top) vs. Average Companies (bottom)



Note: Numbers reflect the percentage of tech workers responding “to a significant extent (4)” or “to a very great extent (5)” (on a 5-point scale) that each practice is present in their organization.

III. MANAGING TECH WORKERS: WHAT MATTERS MOST

Perspectives from HR and non-tech workers

How do perceptions of these practices compare among tech, non-tech, and HR teams? The data shows that tech workers demand much more empowerment. They consider themselves deep practitioners, and they want the opportunity to create, learn, and showcase their craft. The three most differentiating based on the extent to which highly innovative and agile organizations apply these practices include:

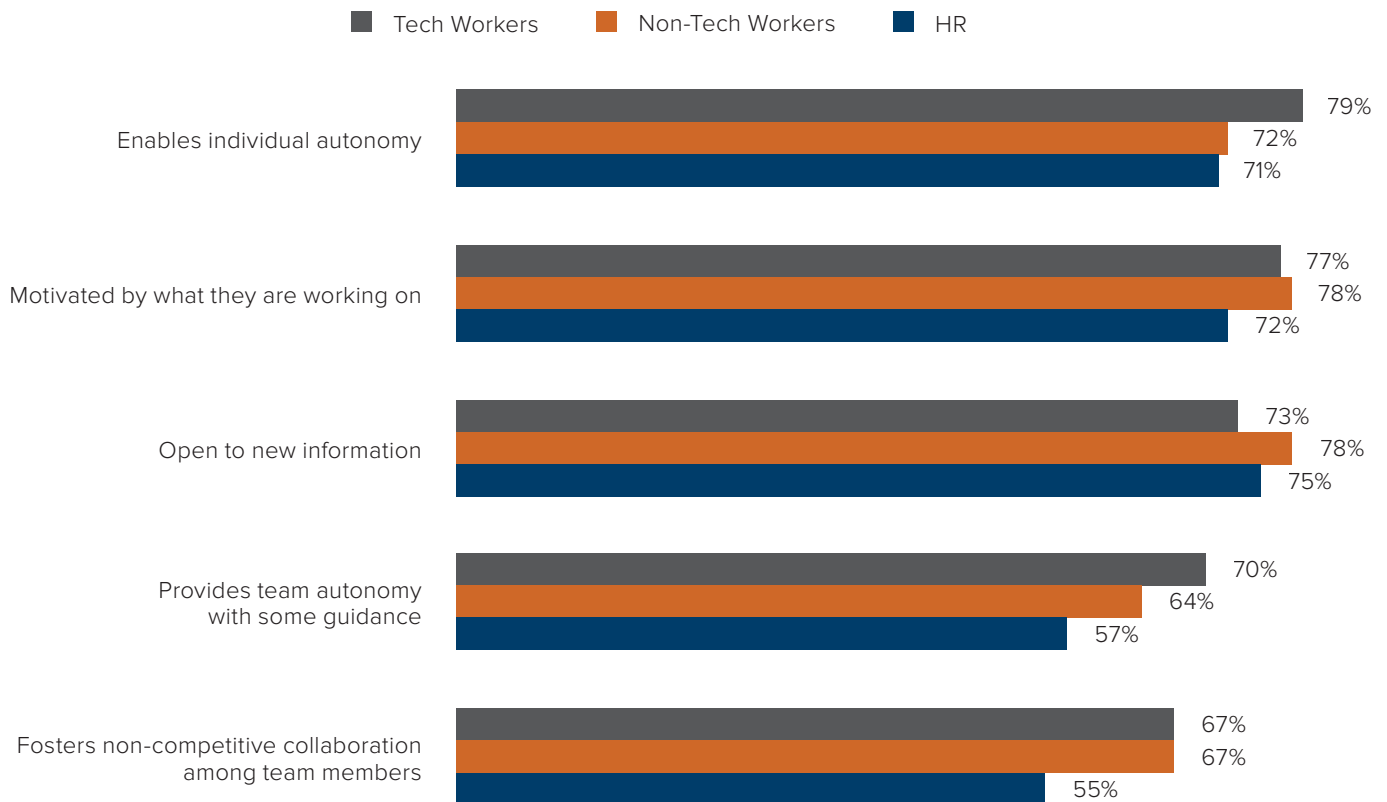
- » Manager enables individual autonomy
- » Manager provides team autonomy with some guidance
- » Manager empowers the team to take risks

This research underscores the importance of trust, a topic identified in Google’s studies of high-performing teams. Managers can only empower their teams when there is a high degree of trust.

The research also speaks to the need for tech managers to understand team dynamics, relationships, and individual needs—so they can deftly get the most from the team. As you can see from the data below, high-performing managers encourage collaboration, not competition. This is often because technical skills are spread across team members and they must rely on one another to complete a successful project.

The other notable insight from this graph is the large difference between HR and tech workers’ perceptions of good management. HR respondents are less comfortable with almost all of these elements, which suggests that HR managers may have more-traditional views of the management role.

Figure 5: Top manager practices in organizations with high levels of innovation and agility—comparison by employee population



Tech Workers: n = 107
Non-Tech Workers: n = 161
HR: n = 352

III. MANAGING TECH WORKERS: WHAT MATTERS MOST

ORGANIZATIONAL CULTURE

We all know that organizational culture matters and plays an exceptionally important role in motivating tech workers. For example, a study of 9,000 tech workers found that an overly output-oriented culture created extremely high levels of burnout. The recent Boeing 737 Max 8 story is a good example: While safety and quality were always hallmarks at Boeing, as soon as the team felt the focus shift toward production and long hours, quality clearly suffered.

Our research found that high-performing companies outperform their peers in three cultural areas:

- » **Openness**—Leaders are open to different, and potentially negative, information.
- » **Development focus**—The organizational culture values people more than processes, supports career

advancement, and implements and responds to feedback in a timely manner.

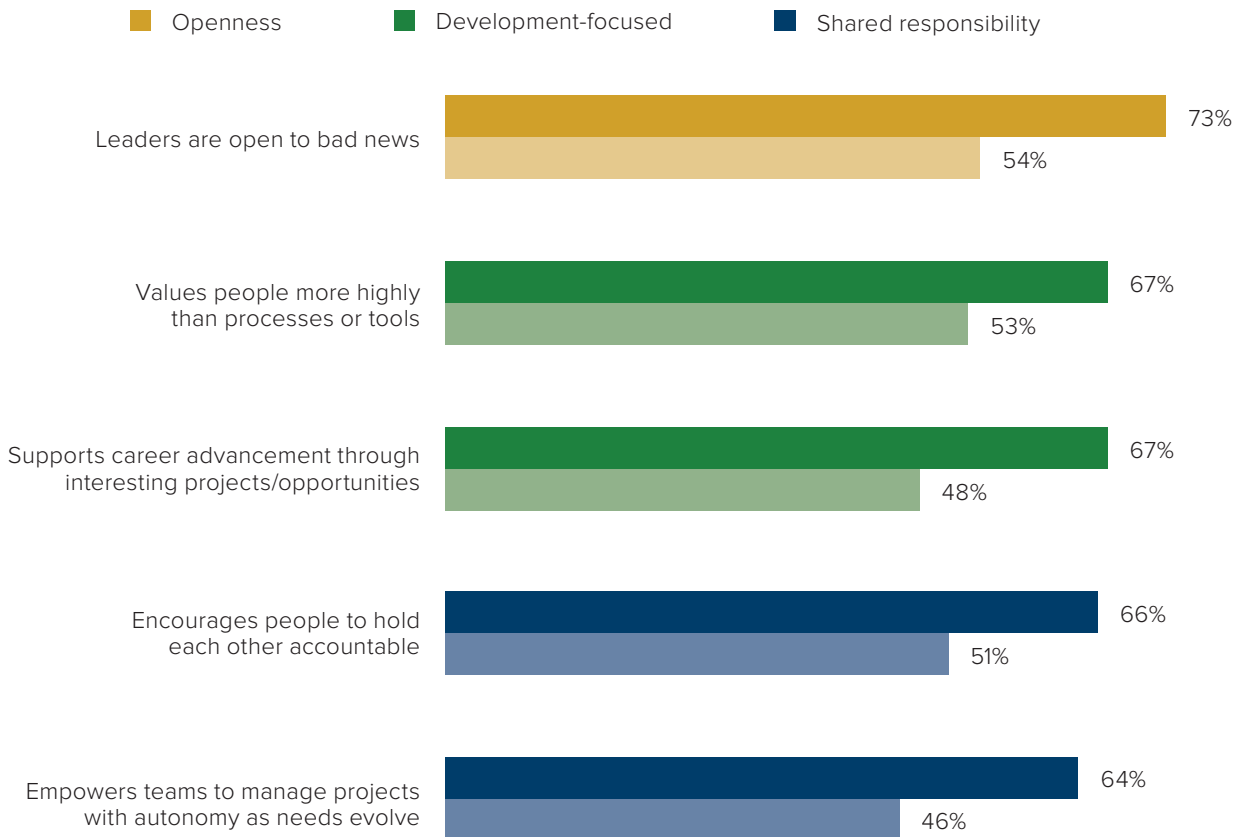
- » **Shared responsibility**—Leaders provide everyone with opportunities to contribute to the organization’s future direction, people are encouraged to hold one another accountable, and teams are enabled to manage projects autonomously.

We want to point out the tremendous importance of openness, or creating a culture where leaders are open to bad news (the most predictive cultural practice we found). This characteristic was also the most highly predictive practice in Bersin by Deloitte’s High-Impact Learning Culture research.

These cultural practices drive results: Our research shows that companies that focus on these areas are 11 percent more likely to fall into the high-performing category.

Figure 6: Top 5 cultural practices, according to tech workers—comparison of organizations with high levels of innovation and agility vs. organizations with average levels

Highly Innovative and Agile Companies (top) vs. Average Companies (bottom)



Note: Numbers reflect the percentage of tech workers responding “to a significant extent (4)” or “to a very great extent (5)” (on a 5-point scale) that each practice is present in their organization.

III. MANAGING TECH WORKERS: WHAT MATTERS MOST

Perspectives from HR and non-tech workers

How do these cultural practices vary among tech workers vs. non-tech workers? We found some significant differences (see Figure 7).

First—and most critically among cultural practices in organizations,—the practice “leaders are open to bad news” is the most important management topic among tech workers at highly innovative and agile organizations. Among non-tech and HR professionals, however, it was the lowest rated practice because they do not see it happening to a significant extent for tech workers in their organizations. This tells us that the whole management practice of continuous improvement, transparency, and open discussion of problems is a big opportunity for improvement.

As an engineer myself, I (Josh) have always favored “what’s the best solution” vs. “who has the best answer,” rooted in my many years of studying science and engineering. Organizations need to encourage this focus on “the work” and not “the person” in their rewards, culture, storytelling, and selection and development of leaders.

Second, it’s interesting that non-tech workers rate their organizations on the extent to which their organization has a culture that values “people over process” much higher than tech workers (even though this is a principle of the Agile Manifesto). This tells us that tech workers, while often committed to the best solution, want more when it comes to people issues. In all the focus on technical skills and engineering

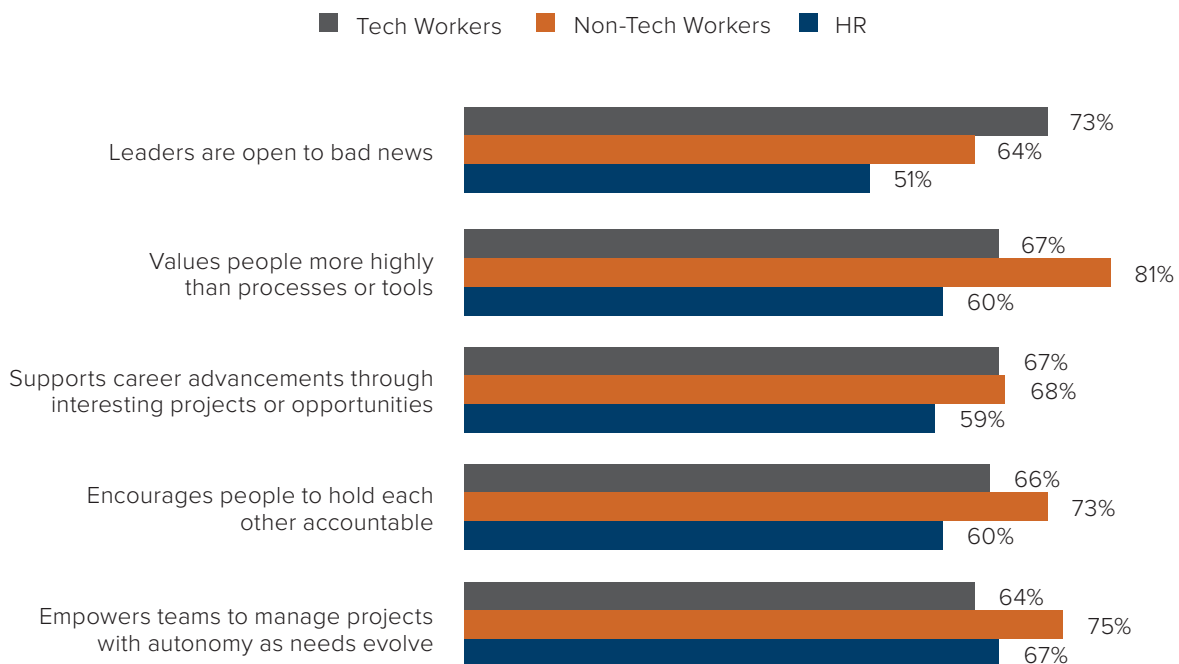
expertise, it’s important to train and role model a culture of “people first,” even in the tech team.

From the standpoint of HR, these findings tell us that management development, values, and reward systems for tech workers should, in addition to recognizing the best solution to a problem, focus on people development. For tech workers and those who manage them, effectively dealing with people is likely to be a development opportunity.

Third, the research shows that both tech and non-tech workers equally value “career advancement through developmental experiences such as interesting projects or opportunities.” Many of our studies have proved this over the years. In the case of tech workers, this means managers should give employees opportunities to work on challenging projects because they represent an opportunity to learn.

Finally, it’s interesting to note that HR professionals rate their organizations lower on cultural practices than tech and non-tech workers in almost every one of these high-impact areas. They are generally more critical of the organization in encouraging discussion of mistakes. They are also less likely to see that the organization values people over process or that it encourages autonomy and accountability. This tells us that many HR professionals see a greater opportunity to improve in these areas than other workers. Thus, we encourage leaders to think deeply about these practices to prioritize and implement them in their respective organizations.

Figure 7: Top 5 cultural practices in organizations with high levels of innovation and agility—comparison by employee population



Tech Workers: n = 127
 Non-Tech Workers: n = 190
 HR: n = 402

Note: Numbers reflect the percentage of tech workers, non-tech workers, or HR responding “to a significant extent (4)” or “to a very great extent (5)” (on a 5-point scale) that each practice is present in their organization.

III. MANAGING TECH WORKERS: WHAT MATTERS MOST

EMPLOYEE RECOGNITION

The third management practice that emerged from the study was the importance of recognition. Our 2012 research on this topic found that companies with effective recognition practices are 12 times more likely to have strong business results than those with ineffective practices, so we were not surprised to find recognition to be so important.

Other studies that focused on tech workers have also emphasized the importance of recognition. A 2019 study on how to satisfy top tech talent found that 36 percent of tech professionals attribute burnout to a lack of recognition. Another study found that 66 percent of tech employees say they would leave their job if they did not feel appreciated.

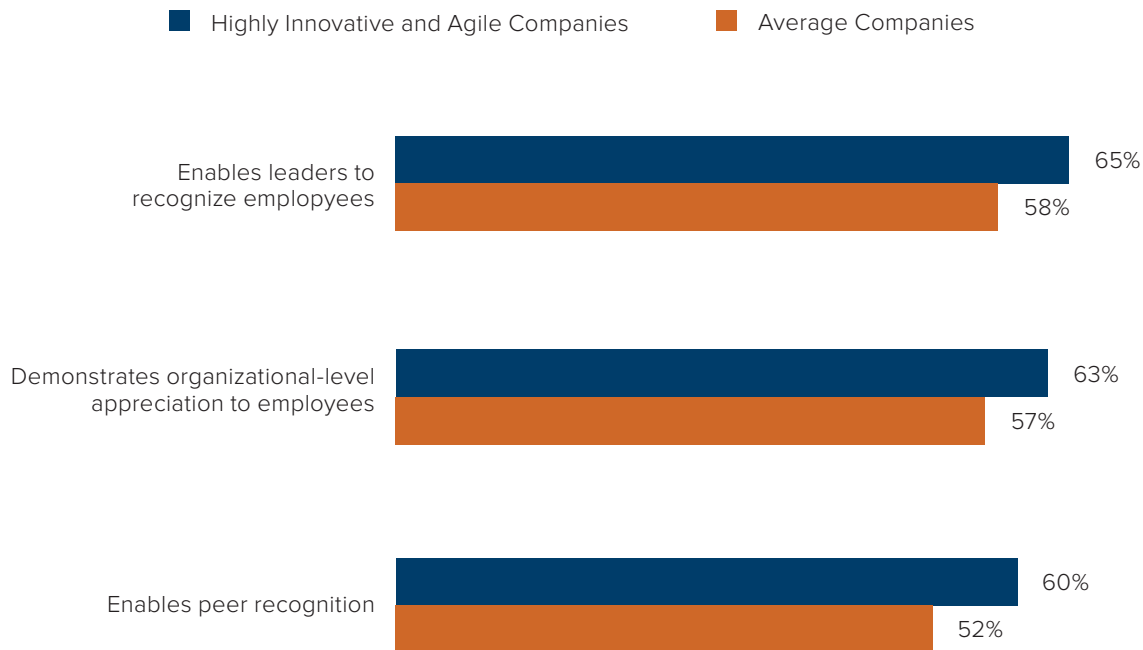
To determine whether particular types of recognition matter more than others, we identified three different types that organizations could implement:

- » Leadership recognition
- » Broad organizational appreciation of employees
- » Peer recognition

When we looked at these different practices, we found that they each contributed to higher innovation and agility (see Figure 8).

In the aggregate, the research shows that when organizations are highly effective at recognizing employees, they are 11 percent more likely to be highly innovative and agile, revealing that an effective employee recognition program has positive implications for both individuals and the organization.

Figure 8: Top recognition practices, according to tech workers—comparison of organizations with high levels of innovation and agility vs. organizations with average levels



Note: Numbers reflect the percentage of tech workers responding “to a significant extent (4)” or “to a very great extent (5)” (on a 5-point scale) that each practice is present in their organization.

n = 110

III. MANAGING TECH WORKERS: WHAT MATTERS MOST

Perspectives from HR and non-tech workers

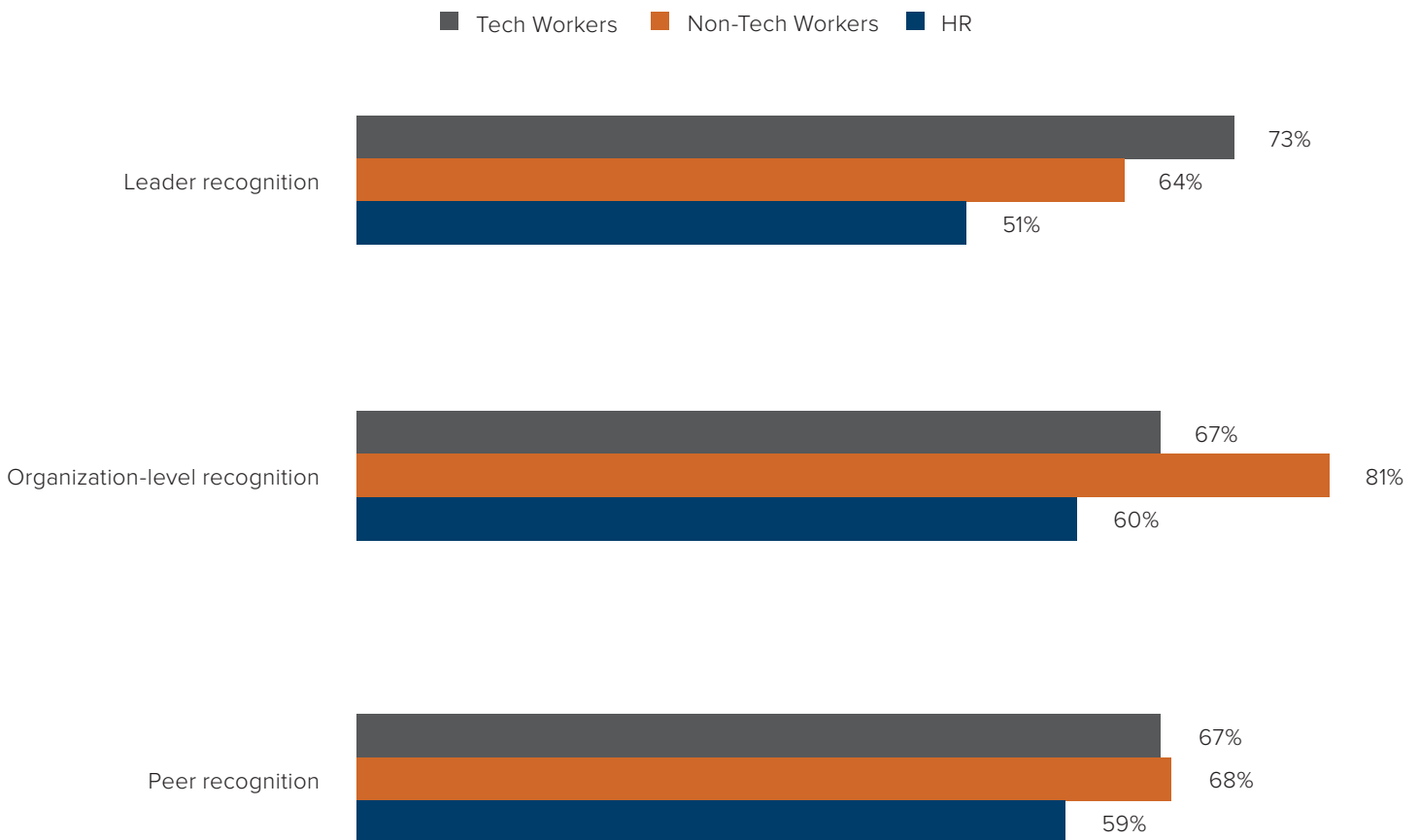
When we consider the perspectives of tech and non-tech workers, it's clear that tech workers do not believe their organization enables as much recognition as non-tech workers do. Tech workers may have a more critical perspective of recognition practices, perhaps because they are more privy to the idea that "seeing a great product" is a sufficient form of recognition for tech talent.

Consider, for example, how you may feel about fixing a broken appliance or building a new piece of furniture at home (for those of you who are handy). You may get real joy from finishing the job well, but you may also appreciate some recognition from your spouse, such as "Thank you,

I noticed you fixed the light!" Tech workers similarly need both the satisfaction of a job well done and the appreciation of those around them.

Respondents were asked how well their organization recognizes tech workers. The interesting finding here is that HR respondents seem far less convinced than others that their organizations does a good job recognizing tech workers. Thus, we see HR's point of view as an opportunity: Recognition, something that is both simple and profound, is an important human workplace behavior to model and promote. The good thing is that HR is in a unique position to implement programs and practices that could achieve this for tech workers.

Figure 9: Top recognition practices in organizations with high levels of innovation and agility—comparison by employee population



Tech Workers: n = 110
Non-Tech Workers: n = 165
HR: n = 356

Note: Numbers reflect the percentage of tech workers, non-tech workers, or HR responding "to a significant extent (4)" or "to a very great extent (5)" (on a 5-point scale) that each practice is present in their organization.

III. MANAGING TECH WORKERS: WHAT MATTERS MOST

COMPENSATION

In today’s hot marketplace for technical skills, compensation is an important driver. In a recent technology hiring and retention survey, 37 percent of tech workers said the most common reason for declining an employment offer was receipt of a better compensation package offered elsewhere. Inadequate pay in a technology-related industry or function costs upward of \$16 billion a year in turnover costs and is one of the most common reasons tech workers give for leaving an organization.

When we looked at the different compensation practices we measured, two themes emerged (see Figure 10 for the specific practices of highly innovative and agile organizations versus average organizations):

Fairness—Fair and equitable pay and pay transparency

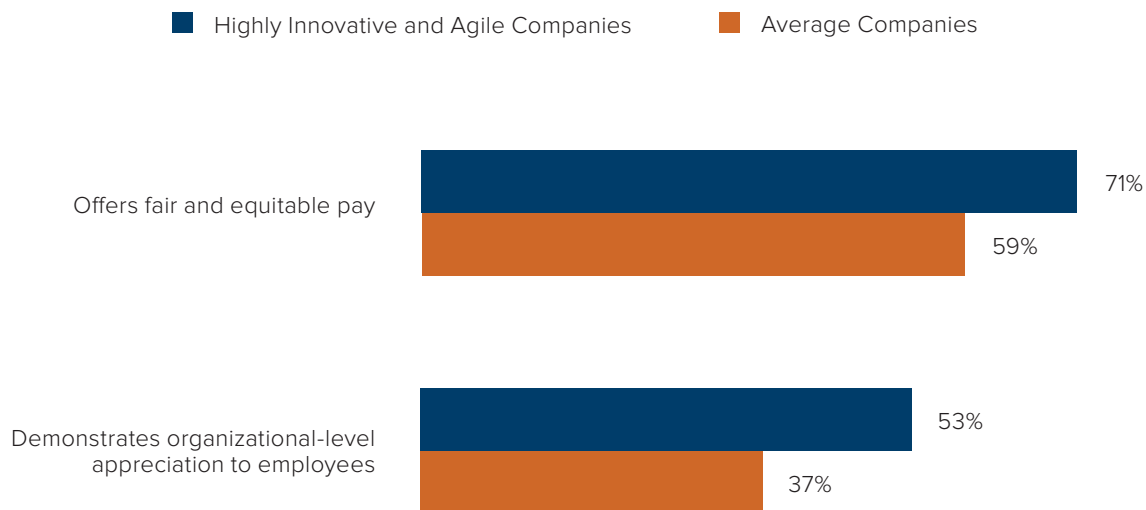
Performance-driven—Competitive variable compensation, bonuses in real time, and pay adjustments more than once per year

Organizations that manage compensation effectively are 4 percent more likely to be highly innovative and agile. This is a low number, but it is underscored by the fact that only 6 percent of organizations that were high on innovation and agility scored low on fair and equitable pay. Clearly, these compensation practices are table stakes for organizations aspiring to be highly innovative and agile.

Perspectives from HR and non-tech workers

When we compared the perspectives of tech workers with those of HR professionals and non-tech workers, we found little variation in scores. For the most part, regardless of function, employees at highly innovative and agile companies indicated that their organization provides fair and equitable pay and competitive variable compensation for all employees.

Figure 10: Top compensation practices, according to tech workers—comparison of organizations with high levels of innovation and agility vs. organizations with average levels



n = 108

Note: Numbers reflect the percentage of tech workers responding, “to a significant extent” (4) or “to a very great extent” (5) (on a 5-point scale) that each practice is present in their organization.

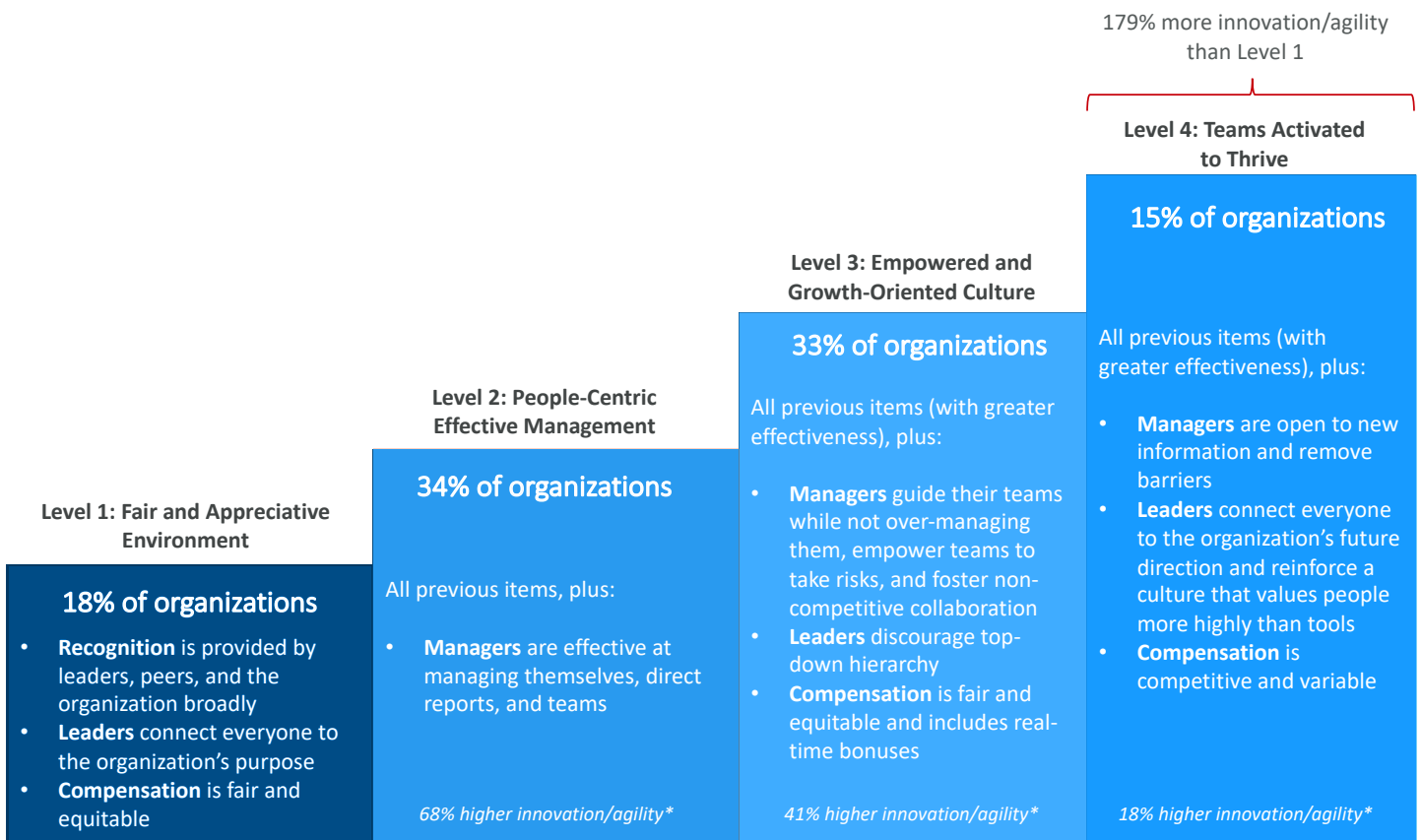
IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

How can you best take advantage of all that we've learned? As we studied the results, we found statistical groupings that help us break down insights into four stages of maturity. As talent management practices for tech workers become more mature, the likelihood of higher innovation and agility in the organization also increases (see Figure 11). You can use this information to reflect where your organization is today and also as a guide for what to work on next.

- » **Level 1: Fair and Appreciative Environment (18 percent of organizations)**—The organization creates an environment where pay is fair and equitable, employees are recognized, and individuals feel connected to the organization.
- » **Level 2: People-Centric Effective Management (34 percent)**—Managers are effective at the basics of management, such as using data effectively to manage employees, and are motivated by their work. They are beginning to enable the autonomy of individuals and teams and are at least somewhat open to new information.

- » **Level 3: Empowered and Growth-Oriented Culture (33 percent)**—Managers have honed many management skills, specifically when it comes to guiding their teams without over-managing them and to encouraging their teams to take risks. The organization discourages top-down hierarchy and provides competitive variable compensation.
- » **Level 4: Teams Activated to Thrive (15 percent)**—Managers tend to embody servant leadership, working to remove barriers to getting work done and guiding their teams to learn quickly from mistakes. Managers are responsive to feedback and able to manage difficult conversations effectively. Leaders give everyone an opportunity to contribute to the organization's future direction and reinforce a culture that values people more highly than processes.

Figure 11: Maturity model for managing technical workers



*compared to previous level

IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

LEVEL 1: FAIR AND APPRECIATIVE ENVIRONMENT

Level 1 practices can be boiled down into three words: recognition, connection, and compensation. These practices are table stakes because they provide a strong foundation to manage tech workers. Specifically, the most highly rated management practices by tech workers for Level 1 organizations are:

- » Organization enables leaders to recognize employees
- » Organization enables peer recognition
- » Organization offers fair and equitable pay
- » Organization demonstrates appreciation to employees
- » Leaders find ways for everyone to feel connected to the organization's purpose

One of the things that strikes us from this list is that these are all organization-level practices and have relatively little to do with managers' individual capabilities in managing their tech workers. (We talk about those capabilities more in the section on Level 2 organizations.) The good news about this is that many of these practices can be influenced by practices and structures put into place by HR. Therefore, unlike with some of the practices that come at higher levels of maturity, leaders can implement changes and see an impact relatively quickly.

Recognition

Three of the top four practices at this foundational level focus on recognition, so let's start by discussing the different approaches to recognition. The top practice in our analysis is enabling leaders to recognize employees. There are a multitude of ways to do this. One example comes from a company where the CEO reserves Tuesdays to call individual contributors around the company to get feedback or provide recognition.

The next most important practice to tech workers is enabling peer recognition. In our research, we heard about both high-tech and low-tech ways to do this. For example, organizations are increasingly turning to software-enabled peer-to-peer recognition platforms. These technologies enable employees to recognize one another without managers having to be involved for approvals (but they can be). Further, recognition can be associated with a financial value (though it does not have to be).

One organization that has implemented a social peer recognition platform is Cardinal Health, a global health-care services and products company. Employees can use their phones, in addition to the desktop version, to quickly access the recognition app and give or receive recognition. Having easy and mobile access to the recognition platform enables employees to recognize one another, which further embeds appreciation as a core behavior within the organization.

There are also low-tech ways to enable peer recognition. For example, Thrive, a cloud-based platform based in Pittsburgh, PA, that helps organizations through cognitive

technologies, encourages teams to recognize members' contributions through regular callouts during team meetings.

*"We talk a lot about gratitude and respect as being central tenets to what Thrive stands for as a company. We encourage people to point out exactly what they did and the impact it had on the organization and our customers."
—Joe Stafura, founder and CEO*

The final type of recognition is broad recognition of employees from the organization—meaning peers or leaders may identify employees to recognize, but the actual recognition comes from the broader company. This recognition is typically the result of a nomination process of employees, often (but not always) by managers.

Another example of an organization that enables recognition is Procter & Gamble, which is headquartered in Cincinnati, OH, and has 95,000 employees around the world. Through "Power of You," its global recognition program, P&G provides employees across functions and levels with the opportunity to show appreciation on an ongoing and organic basis. For example, the "Power of You" platform allows employees to celebrate one another's work and embeds recognition into the organizational culture. Recognition through "Power of You" is tied to specific values that drive success at P&G. The platform also includes a public newsfeed where employees can see award messages and congratulate their peers. Employees can also earn monetary awards for their contributions, and P&G ensures that gift cards rewarded are locally relevant and provide a high level of flexibility and choice to employees.

Case Study: RF-SMART Understands the Power of Employee Recognition

RF-SMART, a mid-size company that provides mobile barcoding and data collection solutions, understands the power of employee recognition. RF-SMART puts a lot of time and effort into reinforcing a culture rooted in rewards and recognition because doing so pays dividends in terms of employee engagement.

About three years ago, RF-SMART introduced a peer recognition award, which deviated from its practice of having recognition come from a leader or the organization. Previously, most awards were from a manager to a team member.

"The DYST," or "Did You See That," award recognizes employees who embody RF-SMART's core values or who are going above and beyond expectations. Peers can nominate one another to win a \$25 gift card. And what makes this program somewhat unique is that peers, rather than leaders, get to hand winners their \$25 reward. The employees also

IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

take an instant photograph of themselves, write the reason for winning the award on the picture, and post it for everyone to see.

The program has been a huge success, and RF-SMART has taken hundreds of DYST pictures. On average, at least one DYST award is presented each day. “We hear a lot of buzz around this award because it’s fun,” says Aaron Ellinger, VP of People at RF-SMART. “We’ve given thousands of dollars to our team members through this award. It strengthens relationships in addition to highlighting great performance.”

The Life@RF-SMART award is presented quarterly and recognizes an individual who has significantly and positively impacted his or her own life as well as the organization in any area of health and wellness. For example, this award could recognize an individual who has improved his or her diet and exercise regimen, or it could honor a team member who has attended the company-sponsored personal finance class and worked hard to get out of debt. Life@RF-SMART award winners inspire their teammates and are celebrated for their impact.

RF-SMART has found numerous ways to recognize individuals. Its recognition efforts have created camaraderie and good relationships and have reinforced a culture in which all team members, not just leaders, are empowered and encouraged to recognize and reward high performance. In fact, RF-SMART has been rated one of the best places to work in the Jacksonville area numerous times.

Connection

The second area of focus for Level 1 organizations is on leaders connecting people to the organization’s purpose. This practice reinforces the importance of leaders creating ways for individuals at all levels to understand and contribute to the organization’s mission, vision, and goals.

An example of an organization that does this well is Confrimit, a market feedback and research firm headquartered in Oslo, Norway. At Confrimit, managers constantly communicate and clarify the connection between what tech workers do and the organization’s goals. Clarifying this connection helps tech workers understand how their work adds value. Tech workers also maintain constant communication with the organization’s sales team, and at times even customers, so they can understand firsthand the customer perspective. Having more visibility into how their work connects to the larger strategy of the organization has a mutually reinforcing benefit: It allows tech workers to see value in their efforts and also informs the ideas they generate and the products they develop.

Compensation

The final area within Level 1 to focus on is compensation, and specifically offering fair and equitable pay. The most critical practice here for tech workers is to maintain a transparent decision-making process when determining individual compensation.

Another important part of offering fair and equitable pay is making sure that employees understand the factors that influence compensation, how their compensation can change over time, and why their pay is fair vis-à-vis others’. An example of how to do this effectively comes to us from Limeade.

Case Study: ***Limeade Creates Structure and Clarity on Compensation***

Compensation is an important element to be competitive in the tech talent market. But beyond pay, tech workers also care about the actual process for determining their compensation. Thus, less than a year ago, Limeade partnered with an external compensation consultant to better understand and document the compensation process, as well as explain it to tech workers.

The company had historically used one vendor to determine compensation but found that doing so lacked the structure Limeade needed to substantiate decisions. For example, the practice of pulling salary ranges for job offers felt somewhat ad hoc rather than part of a strategic compensation program. “We wanted to have more clear salary ranges to better prepare managers to discuss compensation with their employees, and to also empower employees by essentially showing them that we are doing our due diligence with market data to remain competitive,” says Mari Hegyi, senior manager of Limeade’s people team.

For every job offer, Limeade now pulls the most recent pay data from the database it developed from its work with the compensation consultant. The database refreshes every six months. It also does a full analysis every year to make sure that all pay grades and salary bands are up-to-date. At the end of the year, the company provides all employees with their salary range so they can see how it compares with the rest of the marketplace.

Taking an in-depth look at its compensation decisions as part of a larger strategy and better documenting the process has given Limeade a stronger foothold on which to have compensation discussions with employees. It has also armed managers with information and knowledge that they can share with employees in more-transparent conversations. It has even provided a springboard to discuss further career development and compensation opportunities.

IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

LEVEL 2: PEOPLE-CENTRIC EFFECTIVE MANAGEMENT

In Level 2 organizations, managers begin to be more effective, versus simply allocating work (as a Level 1 manager tends to do). In this level of maturity, managers are trained to select, hire, and manage their direct reports effectively and then to reward and recognize them appropriately. Level 2 organizations are rewarded for this additional effort by having innovation and agility scores that, on average, are 68 percent higher than the scores of Level 1 organizations.

What goes into being a Level 2 organization? We analyzed the practices of these organizations by both the top-five most highly rated practices as rated by tech workers

and by how much more proficient Level 2 organizations are at those practices than Level 1 organizations. The results are shown in Figure 12 (italics indicate that it is a top-5 rated practice, with the number in parentheses indicating its specific ranking):

All of this detail can be boiled down into three suggestions for organizations looking to move up from Level 1 to Level 2:

- » Improve managers' capabilities: self, individuals, teams
- » Encourage people to hold one another accountable
- » Enable leaders to recognize employees

We provide some suggestions for how to do this from our interviews below.

Figure 12: Practices that differentiate Level 2 organizations from Level 1 organizations

| Manager Practices | Organizational Culture | Employee Recognition | Compensation |
|--|---|--|--|
| <p>Manages Self</p> <ul style="list-style-type: none"> • Has exceptional technical skills • Highly effective in his or her job as a manager • Truthful and transparent • Motivated by their work (#4) <p>Manages Individuals</p> <ul style="list-style-type: none"> • Enables autonomy (#2) • Manages difficult conversations effectively • Open to new information (#3) • Supports learning through experimentation <p>Manages Teams</p> <ul style="list-style-type: none"> • Clearly communicates the organization's goals to the team • Guides the team while not over-managing it | <ul style="list-style-type: none"> • Encourages people to hold one another accountable | <ul style="list-style-type: none"> • The organization enables leaders to recognize employees (#1) • The organization demonstrates appreciation to employees (#5) | <ul style="list-style-type: none"> • <i>No significant difference</i> |



IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

Improving managers' capabilities

The quality of people-management at Level 2 organizations is remarkably higher than at Level 1 organizations. As we heard from a leader at Degreed:

“Managers might understand the work, but they don’t always understand the people. They need to understand how people work, their psychology. I could have someone that doesn’t understand technology but understands people and be a very successful manager. So, in terms of priorities, managers must know how to lead and enable people.” —Kat Kennedy, chief experience officer, Degreed

Leadership development and training for new leaders is critical to this transition. One of the more innovative approaches we heard in our interviews came to us from Western National Insurance, which created a “software development team lead” role that focuses on tech workers’ growth and development. Team leads at Western National maintain a macro-level view of their team’s development needs to identify strengths and opportunities for improvement and then make necessary adjustments within the team. They also monitor specific behaviors to help people define their career path and how that path can help the team succeed. While some of the development opportunities provided via this role to tech workers are technical, the majority focus on soft skills.

With the help and coaching of team leads, tech workers interested in a promotion can have a clear path to understand what soft skills they currently have and what they need to learn and do to move up to the next level. In other words, team leads help identify the specific behaviors, characteristics, knowledge, and core values that tech workers need to demonstrate in order to achieve their goals.

Encourage people to hold one another accountable

Organizations at Level 2 encourage people to hold one another accountable. They do so by understanding the difference between responsibility and accountability. Responsible

tech workers are those who get the job done according to their assigned duties. In contrast, accountable tech workers feel a deep and meaningful connection to their work. They complete, and at times go beyond, their assigned tasks primarily because they believe and feel invested in the end product or result.

Among tech workers, accountability comes down to feeling determined to build a valuable product or solution. They feel a sense of ownership to address challenges, solve problems, and achieve results. Thus, they are also invested in keeping others accountable and building a sense of shared success.

Organizations that successfully build a culture of accountability often meet three basic psychological needs: autonomy, competence, and relatedness. For example, they may provide autonomy by allowing tech workers to choose the order of the tasks they must complete or the location where they work. Organizations may meet tech workers’ need for competence by allowing them to build mastery of certain skills or perhaps to expand their knowledge base by working on a different aspect of a product. Organizations that foster relatedness value collaboration over competition. They may also host activities or foster ongoing communication among tech workers, which can help them feel connected to one another, the organization, and their work.

Enable leaders to recognize employees

Also important at this level are leaders who provide proper recognition to tech workers. For example, SnackNation CEO hand-writes notes to employees to recognize hard work, highlight achievements, or celebrate anniversaries or birthdays.

At Button, a mobile commerce company, newly hired employees complete a survey on their first day at work that asks about personal recognition preferences. Leaders use this information to customize recognition to each individual. For example, some prefer public appreciation whereas others prefer more-private recognition. Other organizations have leaders who call out specific contributions of employees during all-hands meetings or via internal communications platforms.



IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

LEVEL 3: EMPOWERED AND GROWTH-ORIENTED CULTURE

One of the most interesting findings from our research is that many of the top-five practices of Level 3 organizations are the same as those of Level 2 organizations (see Figure 13); in fact, the only truly new differentiating practice is that leaders discourage top-down controls/hierarchy.

However, Level 3 organizations, on average, have 41 percent higher innovation and agility than Level 2 organizations, so we thought there must be something more going on. And it turns out, there is—we just had to think about the problem a bit differently.



Figure 13: Practices that differentiate Level 3 organizations from Level 1 organizations

| Manager Practices | Organizational Culture | Employee Recognition | Compensation |
|--|--|---|---|
| <p>Manages Self</p> <ul style="list-style-type: none"> Motivated by their work (#3) Open to new information (#2) <p>Manages Individuals</p> <ul style="list-style-type: none"> Enables autonomy (#1) <p>Manages Teams</p> <ul style="list-style-type: none"> Guides the team while not over-managing it | <ul style="list-style-type: none"> Leaders discourage top-down controls/hierarchy | <ul style="list-style-type: none"> No significant difference | <ul style="list-style-type: none"> Compensation is fair and equitable (#4) |

We hypothesized that there might be some “sleeper” practices where organizations improved a little bit at each level, but not enough to show up as statistically different between immediately adjacent levels. And, when we looked at these practices across multiple levels (e.g., comparing Level 3 to Level 1), we found that they were critical. This was definitely the case in Level 3 organizations, and you can see the added critical “sleeper” practices (in red) in Figure 14.

This data, in combination, tells us that Level 3 organizations have fundamentally better managers who operate

in and create environments that enable individuals and teams to make decisions, take risks, and grow, and these Level 3 organizations compensate people appropriately for doing so.

Therefore, as organizations look to move from Level 2 to Level 3, they need to focus on:

- » Refining managers’ team management capabilities
- » Addressing organizational controls and hierarchies
- » Offering fair and equitable compensation that allows for real-time rewards

Figure 14: Practices that differentiate Level 3 organizations from Level 2 and Level 1 organizations

| Manager Practices | Organizational Culture | Employee Recognition | Compensation |
|---|--|---|--|
| <p>Manages Self</p> <ul style="list-style-type: none"> Motivated by their work (#3) Open to new information (#2) Continually improves people-management skills <p>Manages Individuals</p> <ul style="list-style-type: none"> Enables autonomy (#1) <p>Manages Teams</p> <ul style="list-style-type: none"> Guides the team while not over-managing it (#5) Empowers team to take risks Fosters non-competitive collaboration among team members | <ul style="list-style-type: none"> Leaders discourage top-down controls/hierarchy | <ul style="list-style-type: none"> No significant difference | <ul style="list-style-type: none"> Compensation is fair and equitable (#4) Uses bonuses to recognize employee contributions in real-time |

IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

Refining managers' team management capabilities

Managers at Level 3 organizations focus on improving their own people-management skills, especially when it comes to managing teams (not just individuals). They reinforce a shared responsibility for success and may emphasize team goals versus individual goals as well as team people success (team engagement and team retention) as outlined in Figure 15 below.

A global manufacturing company encourages managers to allow team skills to flourish. It hires and promotes managers who are open-minded and creative, which has been challenging in the past since manufacturing is such a process-driven industry. The best tech managers can balance adhering to processes while also allowing a certain level of creativity to flourish within their team, which also encourages accountability among team members. This has been an area of focus in how managers relate to tech workers and how the organization structures projects.

This focus on teams reflects a higher level of manager mindset and capability, as it requires managers not only to manage individual relationships, but also to enable the team and all of its complexity. An example of this higher-level mindset can be found at Crunchr, a software

company that develops a mobile and Web-based workforce reporting and analytics platform. At Crunchr, leaders understand that managers play a significant role beyond their vast technical expertise:

“Great managers understand the context in which people work. Managers need to understand what people are doing, but they also need to provide opportunities to learn and coach them. So a really great manager helps their people develop from one platform to the next.” — Dirk Jonker, founder and managing director, Crunchr

In addition to cultivating a particular manager mindset, another important component of an organization's success is allowing tech workers to continue to develop professionally if they do not want to manage employees. This option allows organizations to have managers who actually want to manage people, as opposed to feeling trapped into managing them in order to continue to progress financially and in their career path. An example of an organization that gives this option—and then also invests in the development of people who opt to become people managers—is ON Semiconductor.

Figure 15: Individual vs. team approach for accountability

| Level 1: Individual Approach | Level 2: Team Approach |
|---|---|
| Hire for technical skills | Hire for team fit |
| Set goals for individuals | Set goals based on team results |
| Assess performance of individuals | Assess performance of project or team |
| Manager as focal point for leadership | Team leaders establish goals and evaluate team itself |
| Manager decides what to do next | Team decides where to focus priorities |
| Innovation comes from individuals through manager | Innovation comes from team interaction and team experimentation |
| Goal: individual output | Goal: project or team success |



IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

Case Study:

ON Semiconductor Provides Varied Development Opportunities

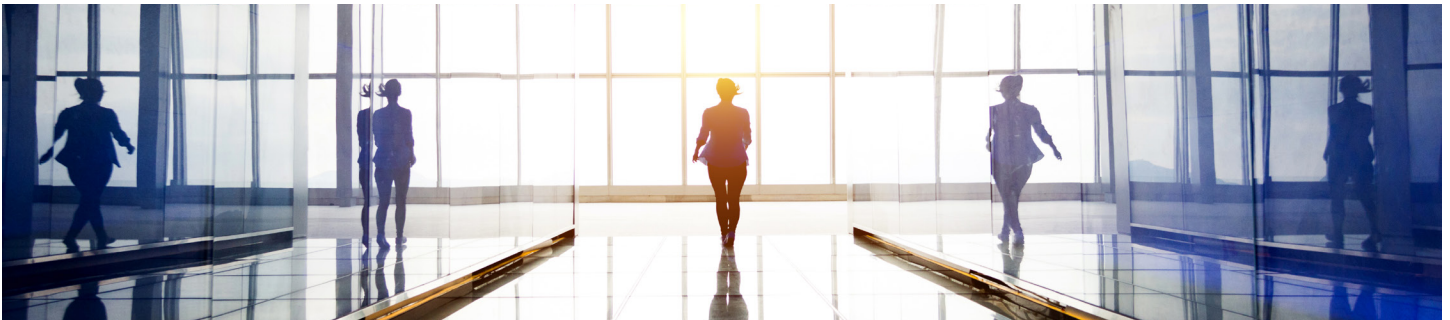
ON Semiconductor—with over 30,000 employees working at manufacturing sites and a large number of tech workers (over 6,500)—takes management effectiveness seriously. It understands that not all tech workers want to move their career forward by managing other people. Thus, it offers two career paths: technical expertise or people management.

Any employee hired into a technical role has the opportunity to choose a technical career ladder, which is usually selected by engineers who want to focus on their technical expertise. Other employees (some with deep technical expertise) opt for a more traditional people management ladder. ON Semiconductor recognizes that tech workers need different career options because following a traditional path does not appeal to everyone.

However, ON Semiconductor goes beyond providing tech workers with two career ladders. As an

organization, it understands that wanting to manage people is one thing, but actually being an effective people manager is another. To address the need to develop managerial skills, especially for newly promoted managers, ON Semiconductor recently conducted a pilot program based on MIT's Sloan School of Management recommendations. The pilot program identified five essential people management skills for tech workers:

- » Motivation and change: strengthening communication and leadership skills related to managing organizational and project changes
- » Uncertainty: improving motivation and innovation through the reduction of uncertainty
- » Diversity: dealing effectively with creative technologists in team environments
- » Group dynamics: managing team dynamics and making effective decisions
- » Information flows and technology transfer: leveraging online collaboration tools to share information



This particular program has created a lot of excitement in the organization. Those in the people management ladder look forward to the opportunity to develop in ways beyond their technical expertise and to become more effective people managers.

Addressing organizational controls and hierarchies

We saw in the previous section that Level 2 organizations need to focus on enabling and responding to teams, and Level 3 organizations need to double-down on this by addressing centralized controls or hierarchies that may be keeping teams and individuals from contributing fully.

In a global manufacturing company, leaders use a variety of formal and informal methods to maintain a culture of openness and transparency. Formal methods include collecting feedback through engagement surveys where all employees (including the technology function) can provide specific and anonymous feedback. Informal methods include managers being transparent in keeping with the organization's culture. Leaders also maintain an open-door

policy, which they reinforce daily by emphasizing that all ideas are welcome.

“Maintaining transparency as a company and in our talent management approach is a big part of what we look for in people, both in our new hires and managers.” —HR manager at a global manufacturing company

Acorio, an IT operations enterprise cloud-based service provider, focuses on creating a transparent culture, which can help reduce perceived organizational controls and hierarchies:

“People not only have opportunities to learn and to grow, but they are also having a lot of fun. Having a transparent culture that feels like a community is key. We practice radical candor as a company where everyone is allowed to and expected to speak very candidly and challenge one another directly while showing that they personally care.” —Jen Miller, VP of people and culture, Acorio

IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

Offering competitive and variable compensation

Level 3 organizations take a more aggressive approach to compensation, ensuring that it remains competitive (including by doing regular benchmarking and adjusting pay more frequently) and that it is used to recognize employees' contributions (including appropriate variable pay to reflect performance on specific projects). One approach to addressing this need to offer competitive and variable compensation is to review compensation more frequently. For example, a technology company we interviewed has seen an uptick in compensation expectations and has addressed them as follows:

“We have a lot of new hires coming in with higher expectations and needs, so, for the first time, we’re reviewing compensation mid-year. Also, once in a while we’ll have someone come to us and say, ‘Hey, I got another job offer elsewhere. I really don’t want to leave, but they’re giving me X amount of dollars more. Can you meet that?’ And then we have that discussion.” —HR executive

In the course of our interviews, we came across other innovative approaches organizations use to address the need to offer competitive and variable compensation. For example, LearnBrite offers equity as a form of variable compensation to employees, which also connects people to business outcomes:

“There are expectations to get some form of equity stake in the business by default. But at LearnBrite, we reward people based on their input and their contribution to the

organization’s mission. It may not be in the form of shares, but it might be something else. We are definitely not greedy because we share the rewards with people. If we have people work on a new project that will generate some form of revenue or cost savings, then we find ways to share the actual outcomes of the project. It’s a great way to get everyone aligned to our business outcomes.” —Danny Stefanic, founder and CEO, LearnBrite

Another approach is to look beyond monetary compensation and focus on benefits that employees may not receive elsewhere. For example, Western National Insurance understands that tech workers in the insurance industry may not earn as much as tech workers in other industries. Thus, it provides greater flexibility, numerous development opportunities, and fun gatherings to tech workers.

“We emphasize workplace flexibility by offering the ability to work from home and have a flexible schedule. We’ve also done a good job of hiring people who are kind, open-hearted, and interested in helping one another, so people generally get along and like working with each other. In addition, we encourage and support employee development through opportunities such as going back to school or getting certifications. We also try to make things fun and engaging. We offer paid volunteer time to employees, and once in a while we’ll throw a picnic, a bingo lunch, or a random free lunch.” —Brandy Churchill, software development team lead, Western National Insurance



IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

LEVEL 4: TEAMS ACTIVATED TO THRIVE

Level 4 organizations are the most innovative and agile of all—on average, they are 18 percent more innovative and agile than Level 3 organizations and a significant 179 percent more innovative and agile than Level 1 organizations. Level 4 organizations have managers who not only empower individuals, but also activate teams. They do this by taking on a servant leadership style. Their focus is to meet the core needs of their direct reports and teams by removing barriers. In terms of culture, these organizations place a high value on people rather than following strict protocols, and this tends to create a warmer environment for tech workers.

It is critical to note that Level 4 organizations do everything better than Level 3 organizations. Therefore, though we have highlighted the above practices, we want to encourage all readers to continue to focus on the practices discussed earlier.

- » However, if an organization is looking to move up from Level 3 to Level 4, leaders should particularly focus on:
- » Teaching managers to serve as activators
- » Reinforcing that everyone is a contributor to the organization
- » Continuing to address compensation needs

Figure 16: Practices that differentiate Level 4 organizations from Level 3 organizations

| Manager Practices | Organizational Culture | Employee Recognition | Compensation |
|---|--|---|---|
| <p>Manages Self</p> <ul style="list-style-type: none"> • Motivated by their work (#2) • Open to new information (#4) <p>Manages Individuals</p> <ul style="list-style-type: none"> • Removes barriers to getting work done (#1) <p>Manages Teams</p> <ul style="list-style-type: none"> • Guides the team to learn quickly from mistakes | <ul style="list-style-type: none"> • Leaders provide everyone with an opportunity to contribute to the organization’s future direction (#3) • Culture that values people more highly than processes (#5) • Leaders find ways for everyone to feel connected to the organization’s purpose | <ul style="list-style-type: none"> • No significant difference | <ul style="list-style-type: none"> • Competitive variable compensation |



IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

Teaching managers to serve as activators

At this highest level of maturity, managers serve as activators of teams and individuals by removing barriers, helping them learn from their mistakes, and managing difficult conversations.

What does this look like in reality? There are many different scenarios. For example, our research uncovered some suggestions, for how managers can remove barriers:

- » Remove “just because” policies or those that focus on the few “bad apples”
- » Make sure meetings have a clear objective that wouldn’t be achieved without the meeting
- » Identify the situations or problems that employees have the authority to handle on their own
- » Provide a clear framework of when and how to escalate issues
- » Ask employees in weekly check-ins about barriers the manager can help remove

Helping employees to learn from their mistakes is also important. An example of an organization that does this well is Thrive, where managers are taught how to use positive psychology within groups to create open communications, reassuring employees that it’s OK to admit when they do not know something. The organization reinforces broadly that managers and employees should look forward, but also learn from the past.

Another example is Zen Hub, which uses candor and difficult conversations as a way to help managers and employees learn from their mistakes.

Case Study:

ZenHub Increases Candor to Develop Its Engineers

ZenHub, a project management software firm located in Vancouver, Canada, implemented ideas of radical candor to enable the members of its engineering team to challenge one another more directly. The company put two practices into place that helped employees and managers show more candor in their interactions with each other: (a) using the stop, start, continue framework and (b) conducting root cause analysis.

ZenHub already held retrospective meetings at critical points in each project (e.g., after launch, following each sprint). Now, during retrospective meetings, each team member identifies things he or she needs to start doing, stop doing, or continue doing on future projects.

Root cause analysis helps the team dig deeper into problems to identify where they started. Importantly, ZenHub uses this practice when an error or issue arises. Instead of simply identifying and commenting on an incorrect code or bringing it up after it had been fixed, the team stops and discusses why the code was incorrect and how it happened in the first place. This provides in-the-moment feedback and promotes learning within the flow of work.

The simple practices incorporated by ZenHub promote candor by encouraging managers and employees to discuss problems openly. Because they focus on a shared goal when discussing problems, employees avoid “the blame game.” Thus, they can find solutions, develop, and learn how to do things better next time.



IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH

Reinforcing that everyone is a contributor to the organization

Level 4 organizations communicate to their workforce that everyone has an opportunity to influence the organization's future direction and that the organization has a responsibility to respond to their feedback and needs. This type of tone often comes from the top, where senior leaders set out a vision that employees at all levels can connect with. This is then reinforced by managers in their discussions with employees about their goals, priorities, and values.

The chief experience officer at Degreed shared an example of how to create an open culture where everyone is seen as a contributor:

“I see my job as enabling communication and strategy. I am the owner of enablement, but that relies on everyone voicing their constraints. It’s easy in technology to focus on process, and you can get lost and think that you are successful because you are abiding by processes. That’s not how we succeed. We succeed by using processes to enable strategy. We take advantage of ongoing processes like companywide and weekly team meetings, managers’ one-on-one conversations, and communication channels like e-mail and Slack. We try to have an awareness of how people are engaging in term of process and how we can use that as a tipping point to have the right conversations.” —Kat Kennedy, chief experience officer, Degreed

We also heard from Booz Allen Hamilton, where our interviewee commented:

“We have a core set of values that we believe in, operationalize, and discuss all the time. One of them is collective ingenuity. We truly believe that we are stronger when other people’s voices and contributions are heard. A key enabler for our ability to let everyone contribute is that we work on an entirely first-name basis within the firm, from our CEO down to our newest hire.” —Joseph Thompson, senior human capital strategist delivering solutions for cyber talent and critical tech fields, Booz Allen Hamilton

Another example of an organization that has enabled employees to influence the organization's future direction is IBM, when it redesigned its performance management practices.



IV. MANAGING TECH WORKERS WELL: A MATURITY MODEL APPROACH



Case Study: **IBM Co-Creates Performance Management with Its Employees**

In response to rapid changes and technological disruption, IBM shifted its business model and began to expand its portfolio into areas such as blockchain and the Internet of Things. Along with that business model shift, employees were working differently. More specifically, the organization as a whole was operating in more open, dynamic, and agile ways—reflecting the way technology workers approached everyday work.

Yet, an outdated performance management system was still in place. This system rested on annual goals that were reviewed at the end of the year and used as the basis for performance ratings. So, while the work being done at IBM was forcing individuals to operate in iterative and agile ways, the organization was evaluating employees based on longer annual cycles that no longer fit a highly technical workforce. This discrepancy created a lack of confidence and trust in the system. Employees weren't evaluated or developed in a way that resonated with how they actually showed up at work. As IBM put it, "We looked seriously at how the work of digital business actually gets done and recognized shifting to agile at scale was the change we needed to make."

So, IBM set out to redesign performance management. But first it had to make a fundamental shift in its culture. IBM knew that in order for the initiative to be successful, employees had to have a voice in the redesign effort and in the platforms that supported it. As you might expect, the tech-focused workforce had an opinion on the technologies used at work. In fact, these workers voiced their frustrations that their digital life outside of work provided a better experience and said they expected the same consumer-grade digital experience while at work.

IBM's redesign effort—termed "co-creation"—involved all IBM employees. To begin, the CHRO invited all workers to take part in the process via a blog. Within hours, 18,000 comments were left. IBM used text analysis to identify the aspects employees loved and hated about performance management. This provided a starting point. Leveraging design thinking and an agile approach, IBM went through a series of iterations to create a minimum viable product.

Following each iteration, IBM invited its workforce to try out the product and provide feedback—good or bad. Employees were encouraged to discuss, debate, and vote on different aspects of the new approach. During this co-creation process, IBM learned that employees wanted a more iterative, agile form of performance management—they wanted to know how they were performing and where they could improve on a more frequent basis.

The result was "Checkpoint"—a modern performance management approach aligned to how employees work and focused on a more agile approach with continuous, open feedback and more frequent development and performance discussions with managers. In addition, IBM internally developed a feedback app that employees could use anywhere, and at any time, to provide real-time feedback—a consumer-grade experience at work. Ultimately, by including the employee perspective, IBM was able to build a performance management system and platform that resonated with employees.

Continuing to address compensation needs

The final point is that compensation competitiveness remains a top priority for Level 4 organizations. Level 4 organizations tend to review compensation multiple times per year to ensure that it remains competitive and to differentially reward top performers.

V. CONCLUSION

Given the nature of their work, tech workers need different things from their managers and organizations than non-tech workers need. In this report, we found that tech workers at companies with the highest levels of innovation and agility have:

- » Managers who support autonomy and provide freedom to collaborate
- » An open and developmental but accountable culture
- » Recognition-rich interactions from the organization, leaders, and peers
- » Performance-driven, fair, and equitable compensation

Our analysis shows that for the first two items in particular—manager practices and organizational culture—there is a divergence between how HR and non-tech workers think tech workers are managed and how those workers themselves want to be managed. By and large, tech workers demand more autonomy and better team management than others.

To help organizations understand at what level they are currently operating and how to improve, we developed a four-level maturity model for managing tech workers. The four levels are:

- » **Level 1: Fair and Appreciative Environment (18 percent of organizations)**—The organization creates an environment where pay is fair and equitable, employees are recognized, and individuals feel connected to the organization.
- » **Level 2: People-Centric Effective Management (34 percent)**—Managers are effective at the basics of management, such as using data effectively to

manage employees, and are motivated by their work. They are beginning to enable autonomy in individuals and teams and are at least somewhat open to new information.

- » **Level 3: Empowered and Growth-Oriented Culture (33 percent)**—Managers have honed many of their management skills, specifically when it comes to guiding but not over-managing their teams and encouraging their teams to take risks. The organization discourages top-down hierarchy and provides competitive variable compensation.
- » **Level 4: Teams Activated to Thrive (15 percent)**—Managers tend to embody servant leaders, working to remove barriers to getting work done and guiding their teams to learn quickly from mistakes. Managers are responsive to feedback and able to manage difficult conversations effectively. Leaders give everyone an opportunity to contribute to the organization's future direction and reinforce a culture that values people more highly than processes.

Organizations that are at the highest level of maturity are more likely to be highly innovative and agile.

Our hope is that this report provides a road map for the management practices organizations should prioritize for tech workers. Driving innovation and agility is key for every organization today. The practices featured in this report should help improve the management of tech workers—and spark a broader conversation about everyone's unique management needs and how the organization can best fulfill those needs in pursuit of a more innovative and agile business.



VI. RECOMMENDATIONS

Throughout our study, we uncovered insights on how to best manage tech workers. The following list of top-10 recommendations serves as an opportunity to self-assess current practices and identify those with the greatest need for improvement. The list begins with crucial and foundational recommendations to implement (manager practices, organizational culture) and ends with other important practices to consider (recognition, compensation).



1 Develop people-management skills in managers. Look at your hiring and promotion practices for managers. Understand that good managers are those with effective people-management skills, not just technical expertise. At a minimum, provide ongoing support to both first-time and seasoned managers on soft skills such as self-awareness, verbal and written communication, active listening, trust building, conflict resolution, relationship building, interpersonal interactions, problem solving, delegation, and decision making.



2 Connect tech workers to the organization's purpose. Communicate clearly and often how tech workers contribute to the organization's purpose and fulfill the mission, vision, and goals of the organization through their work. Connect daily tasks to the organization's macro-level strategy and objectives.



3 Share open feedback that connects tech workers to customers. Increase tech workers' exposure to customer ideas and feedback so they can hear and see firsthand the impact of their work.



4 Cultivate a culture of accountability over projects. Nurture an organizational culture that meets tech workers' need to feel autonomous and competent and to relate to others. Identify and establish competencies that focus on shared success, rather than individual performance. Allow people to set goals, commit to results, and feel a sense of ownership over projects.



5 Flatten the organizational structure and enable autonomy-driven processes. Think of ways to provide autonomy. Flatten the organization as appropriate. Allow tech workers greater choice over projects, work schedules, goals, team assignments, and development opportunities.



6 Offer various career development paths. Understand that traditional career ladders may not be relevant to all tech workers. Instead, offer non-traditional ways for tech talent to move up in the organization. Consider increasing their scope through greater responsibility over projects without having to manage people to move forward.



7 Provide multiple and diverse learning opportunities. Consider development opportunities beyond traditional skills, courses, or certifications, such as the opportunity for tech workers to attend specialized conferences in their particular area of expertise. Or perhaps offer to increase their exposure to different ideas, people, and levels of expertise by working in a different department, team, or geographic location.



8 Democratize recognition approaches. Enable leaders, peers, and the broader organization to recognize high performance in various ways. For a more strategic recognition approach, try to first understand individual preferences for giving and receiving recognition (i.e., private vs. public, physical vs. digital), and then align recognition options to those individual preferences.



9 Make compensation fair and competitive. Ensure that pay is fair and equitable by diligently conducting audits for all employees, identifying gaps, and promptly addressing disparities. Communicate audit findings and clearly outline the process followed in compensation decisions.



10 Focus on a transparent and performance-driven compensation process. Consider increasing the transparency of the compensation process. Clearly tie compensation to performance and outline the specific factors taken into consideration to arrive at compensation decisions.

VII. APPENDICES

APPENDIX 1: RESEARCH METHODOLOGY

This study began in April 2019. Our research aimed to understand how high-performing organizations manage technology workers and the leading talent-management practices they implement. Another goal of this study was to develop a maturity model to manage the technology workforce. We sought to answer these questions:

- How are organizations attracting technology talent?
- To what extent do organizations use agile/scrum methodologies?
- What type of culture do organizations foster for technology workers?
- How do organizations manage the performance of technology workers?
- How do organizations encourage continuous learning for technology workers?
- What does career development look like for technology workers?
- What manager practices are most relevant among technology workers?
- How do organizations foster diversity and inclusion for technology workers?
- What are the pay strategies for technology workers?
- How do organizations recognize and reward technology workers?
- What is the relationship between talent-management practices for technology workers and organizational outcomes (innovation, agility, financial, employer brand, leadership effectiveness, employee engagement)?

First, in May 2019, we conducted a literature review of 50 recent (past 3-5 years) research articles with a blend of scholarly, business, trade, and news publications. Second, we collected data through the following methods:

- 19 interviews with leaders (directors and above) in technology (high-tech, IT, software engineering) or strategic HR and talent management
- A 29-item survey open to technology and HR or business leaders in any industry. The survey asked respondents (regardless of function) to indicate their level of agreement while thinking of how their organization managed individuals in technology roles or technical functions.

Respondents were invited by email to participate in the survey via a hyperlink. The survey collected responses from June 2019 to July 2019 from a sample of 792 individuals who currently work for or have recently worked in any role for an organization in the technology industry, a technology role within an organization in any industry, or a strategic human resources or talent management role within any industry. Responses are unique to each individual (the number of unique organizations was not calculated because respondents did not provide unique identifiers, such as name, for their respective organization).

Upon completion, the data was evaluated for response time and response rate. Some responses were outliers in terms of completion time or level of survey completion and were removed from the final dataset.

Data was analyzed between July 2019 and September 2019 using the following methods:

- Frequencies and descriptive statistics
- Correlation and regression
- Analysis of variance (ANOVA)
- Factor analysis
- Risk ratio (relative risk)

Based on factor analysis and theory, nine factors were identified. Factor and component scores were created through averages (simple means) and used in subsequent analysis (e.g., regression). Cut points were theoretically derived at the point at which the scale would suggest a competitive advantage. High and average performing organizations were categorized based on their degree of innovation and agility. Using a 5-point scale, a high innovation/agility score was defined as 4 or above and an average score was defined as below 3.5. Practices were then categorized into maturity levels according to their average innovation/agility score, which was split into four levels (level 1: 1.0 to 2.0; level 2: 2.5 to 3.5; level 3: 4.0 to 4.5; level 4: 5.0). We then compared items in each factor across levels.

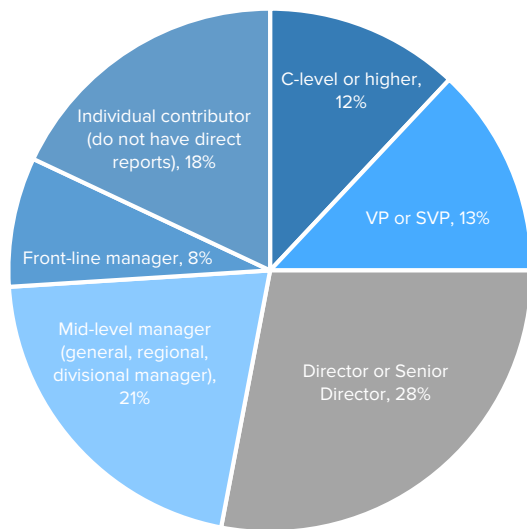
Findings derived from this research should be interpreted and applied with caution given the specific circumstances or needs of a particular organization. As with any research, results are only representative of the sample included in this study and may not be generalizable to the entire population of tech workers, HR or business leaders.

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APPENDIX 2: DEMOGRAPHICS

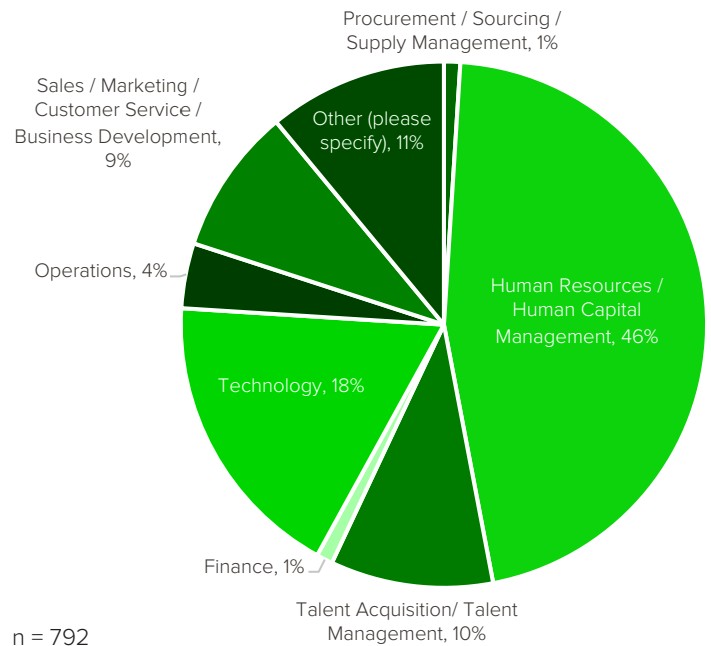
This survey collected data from a total of 792 respondents after data cleaning and removing partial and/or duplicate responses. Of these respondents, 28 percent were directors or senior directors (see Figure 17) and 46 percent worked in HR or human capital management roles (see Figure 18). People working in general technology roles accounted for 43 percent of the tech respondents (see Figure 20). Respondents represented a variety of industries and organizational sizes; 33 percent worked in high-technology/IT/software (see Figure 19), and 36 percent were from smaller organizations (500 or fewer employees) (see Figure 21). More than half of the respondents—51 percent—were from North America (see Figure 22). Twenty-three percent were from organizations with annual revenues between \$50 million and \$999 million (see Figure 23).

Figure 17: Research participants by job level



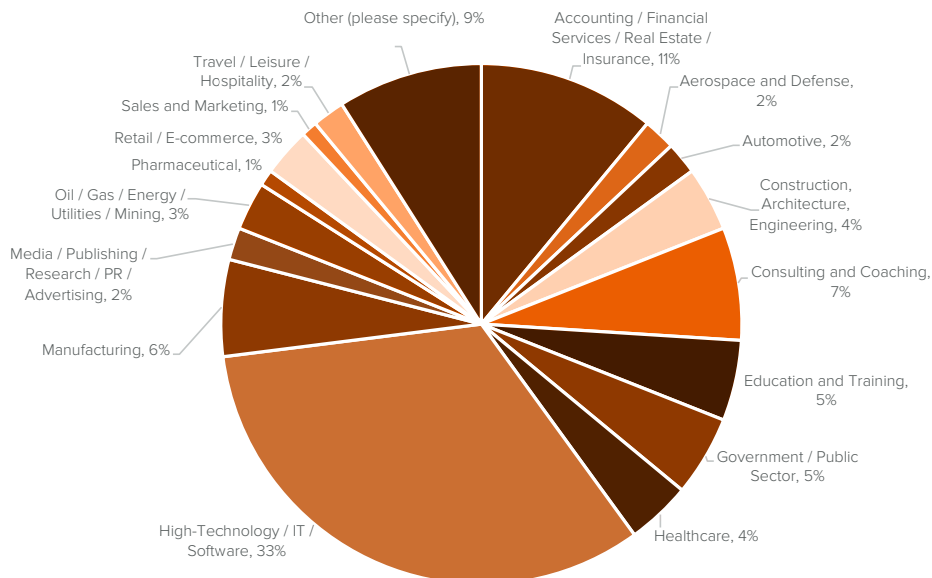
n = 792

Figure 18: Research participants by job function



n = 792

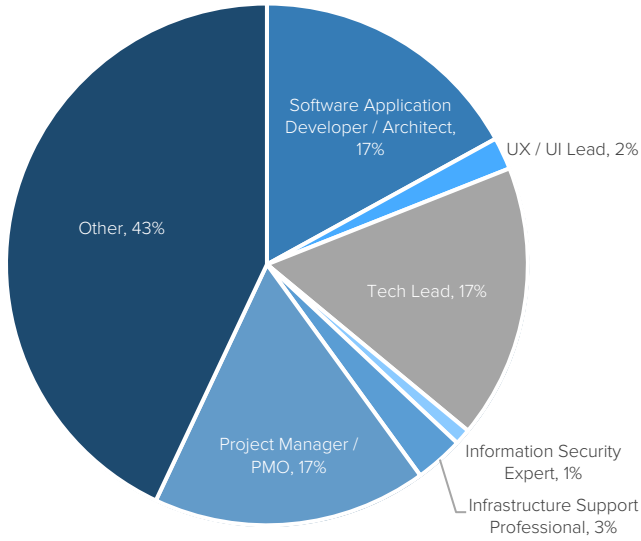
Figure 19: Research participants by industry



n = 617

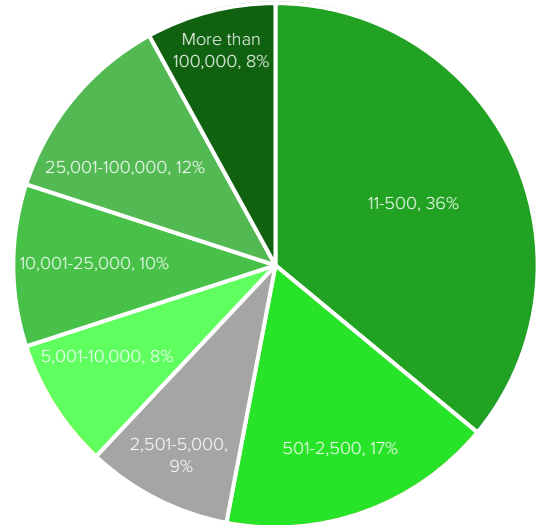
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Figure 20: Research participants in technology roles by primary technology focus



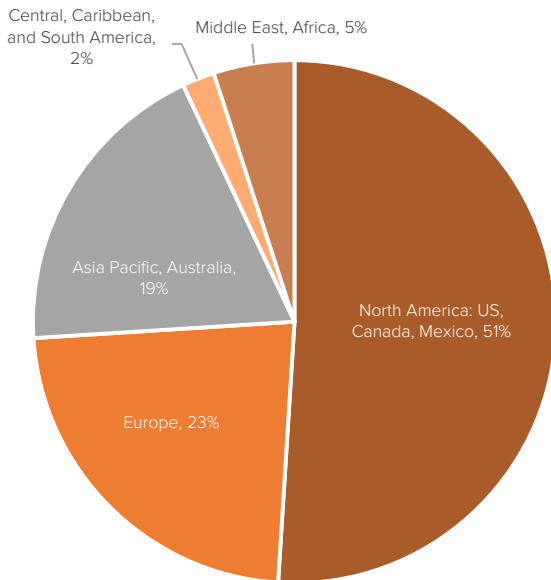
n = 145

Figure 21: Research participants by number of employees in the organization



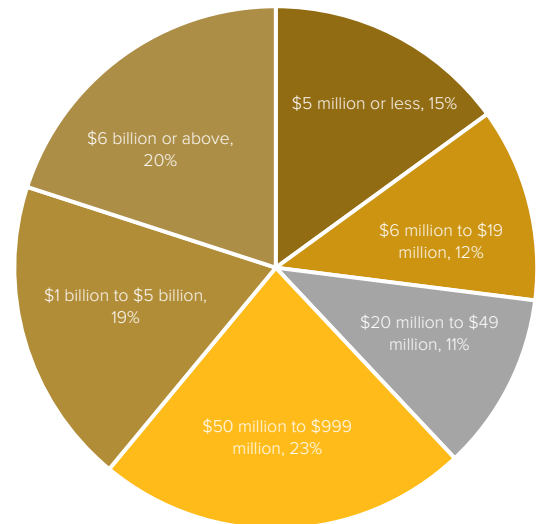
n = 145

Figure 22: Research participants by headquarters location



n = 617

Figure 23: Research participants by organizational annual revenue



n = 598

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APPENDIX 3: ITEMS WITHIN EACH FACTOR

| Factor | Survey Items |
|-------------------------------|---|
| Manager Practices | <ul style="list-style-type: none">Continually improves people-management skillsMotivated by their workOpen to new informationUses data effectivelyEnables autonomySupports learning through experimentationManages difficult conversations effectivelyRemoves barriers to getting work doneEmpowers team to take risksCommunicates clearly the organization's goals to the teamGuides the team to learn quickly from mistakesFosters non-competitive collaboration among team membersGuides the team while not over-managing it (team autonomy with guidance)Is truthful and transparentHas exceptional technical skillsHighly effective in their job as a manager |
| Organizational Culture | <ul style="list-style-type: none">Leaders are open to bad newsLeaders discourage top-down controls/hierarchyLeaders provide everyone with an opportunity to contribute to the future direction of the organizationFinds ways for everyone to feel connected to the organization's purposeEncourages people to hold each other accountableEmpowers teams to manage projects autonomously as needs evolveSupports career advancement through interest projects/opportunitiesImplements or responds to employee feedback in a timely manner |
| Employee Recognition | <ul style="list-style-type: none">Enables peer recognitionEnables leaders to recognize employees |
| Compensation | <ul style="list-style-type: none">Demonstrates appreciation to employeesCompetitive variable compensation (bonuses, equity, etc.)Uses bonuses to recognize employee contributions in real timeAdjusts pay level more than 1x/yearFair and equitable payPay transparency |

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