Quick Answer: How Do We Build Psychological Safety in Our Software Engineering Teams?

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Initiatives: Applications and Software Engineering Leaders; Software Engineering Strategies

Applications and software engineering leaders often focus on technical skills and work experience when building teams but overlook psychological safety, the best predictor of high team performance. Software engineering leaders must create a psychologically safe environment to drive high performance.

Quick Answer

How do we build psychological safety in our software engineering teams?

Psychological safety is the top predictor of high performance in software engineering teams. To create a psychologically safe environment, applications and software engineering leaders should:

- Role model and reinforce behaviors they expect from the rest of the team.
- Create a culture of cognitive diversity and collaboration.

More Detail

Role Model and Reinforce Behaviors You Expect From the Rest of Your Team

Psychological safety is a shared belief among team members that they feel comfortable about taking interpersonal risks. Organizations such as Google and Microsoft report that psychological safety is a key characteristic of a high performing team.\(^1\)\(^2\) The 2017 Gartner Culture Workforce Survey also found that when employees work in a psychologically safe environment, discretionary effort can improve by up to 24%.\(^3\)
Applications and software engineering leaders must work with HR leaders to deliberately design performance structures to promote psychological safety; for example, avoid stack ranking employees on a performance curve, but instead provide continual feedback.

Amy Edmondson’s research shows that in a psychologically safe working environment, leaders:

- Frame mistakes as opportunities to learn.
- Acknowledge their own fallibility.
- Model curiosity and ask lots of questions.

As a result of these leadership behaviors, team members feel more comfortable when:

- Giving and receiving information when communicating with their managers.
- Voicing radical business and technical ideas.
- Sharing their ignorance on a topic.
- Sharing sensitive personal challenges or other struggles that are distracting them from work.

“Psychological safety is not about being nice. It is about candor, about making it possible for productive disagreement and free exchange of ideas.”

— Amy Edmondson, The Fearless Organization, Wiley, 2019

Psychological safety creates a virtuous cycle where software engineers are more willing to speak up and share their viewpoints. Their increased authenticity and participation drives high team performance, as engineers feel more comfortable with collaborating, learning and innovating as a team (see Figure 1).
Through 2025, more than 50% of the highest performing enterprises will have created psychologically safe environments to increase team performance.

Create a Culture of Cognitive Diversity and Collaboration

Application and software engineering leaders should begin fostering psychological safety by building a team with cognitive diversity — that is, software engineers with unique viewpoints that are informed by their experiences, cultural background and gender identity.

To promote cognitive diversity for high performance, application and software engineering leaders must:
Pull the team together to review and understand the similarities and differences given the cognitive differences. Encourage a discussion of how much diversity (or lack thereof) there is in the team.

Work on building diversity of thought in your innovation initiatives by including people from outside IT or even outside the company. Always be aware of unconscious biases — we all have them and act on them as if on autopilot. Training is available to help people surface and recognize their own biases and those of others. There are tools that can help you do this. One of the most effective is the Implicit Association Test. 5

Avoid hiring toxic workers. Screen job candidates for potentially toxic traits (extreme self-absorption, for example) using tools such as assessments, group exercises and role playing. Check references thoroughly, as well as a candidate’s activities on social media. Bring a candidate in for a day or two and give him or her a short job to complete. This provides a glimpse into the candidate’s skills, personality and ability to work with others. Having just one toxic worker in a group can bring down team performance by 30% to 40%, and other team members often begin to exhibit the same toxic behaviors. 6

Create a culture that encourages a sense of community. Engineering teams that value rock “stars” over rock “bands” suffer loss of productivity and morale. High-impact product development efforts require a group of engineers that work as a team. As much as individual competence is desirable and glorified, it must not be at the expense of the team’s morale. High-performing teams require engineers who feed off each other’s ideas which creates teams that are highly productive and innovative.

Work closely with HR leaders to hire engineers, by preparing a detailed brief of not only desired skills but also the mindset traits the ideal candidate should possess. The problem with traditional hiring processes is that recruitment is typically considered a one-time activity, with HR leaders as the primary stakeholders. Instead organizations that share the responsibility of recruitment across IT, HR and business units will further develop a sense of community and strengthen the bond between team members. Applications and software engineering leaders should establish referral-based recruiting programs, conduct hackathons and look for open-source contributors in order to achieve this.

**Recommended by the Authors**

Create Psychological Safety in IT to Boost Team Performance
Proven Strategies to Drive Software Engineering Team Effectiveness

Fostering Psychological Safety During a Crisis

Understanding Psychological Safety: When and Why it Works

The Art of Building High-Performing Teams

The 'I' in Team: Understand Yourself to Be a Better Team Leader

The 'We' in Team: Understand Your Team to Be a Better Team Leader

**Evidence**

1. Identify Dynamics of Effective Teams (Google's Project Aristotle), re:Work

2. The Art of Teamwork, Microsoft and IDEO

3. 2017 Gartner Culture Workforce Survey. This survey collected data from 7,502 global employees and HR leaders across 25 industries and 23 countries.

4. Building a Psychologically Safe Workplace | Amy Edmondson | TEDxHGSE, TEDx Talks, YouTube

5. Project Implicit is a consortium made up of researchers from Harvard University, the University of Virginia and the University of Washington. The Project Implicit evaluation can be accessed for free here.

6. 370: Ruining It for the Rest of Us, This American Life