A NEW ENGINEERING MINDSET
FROM GEEK TO KNIGHT

Gone are the days when software engineers were the go-to geeks tasked with cranking out clean code to meet specs. Digital transformation's urgency is forcing **a new engineering mindset** for survival of the fittest.

According to <u>Gartner</u>, more than 50% of software engineering leader roles will change to explicitly require oversight of Generative AI by 2025.

Changes to the managerial responsibilities of engineering leaders will include those related to **team management**, **talent management** and **code of ethics** (Gartner). These responsibilities require critical human skills. Technology leaders like Satya Nadella, Sundar Pichai, and Tim Cook have all noted the growing importance of skills like critical thinking, communication, and ethical reasoning in the age of AI.

However, it is precisely these soft—or hard-to-teach—skills that most people, including engineers, lack. According to <u>SHRM</u>, the top three areas of missing soft skills in the workplace are:

- Problem solving, critical thinking, innovation and creativity
- Ability to deal with complexity and ambiguity
- Communication

If these human skills are not trained at the same time as technical skills, problems that technology cannot solve will quickly follow.

✓ REFLECT ON YOUR TEAM'S PERFORMANCE

On a scale from 1 (very weak) to 5 (very strong), my team members are:

Effective collaborators ☐

Powerful communicators ☐

Adept at problem-solving ☐

Able to reason and think critically ☐

Influential among their colleagues ☐

TOTAL SCORE ☐

High performance teams score between 20 to 25.

To train your team in the mindsets, behaviors, and soft skills needed to achieve a score of 25, <u>book a meeting with one of our learning experts here</u>.

3 ESSENTIAL SKILLS ENGINEERING TEAMS NEED

I. INFLUENCE

As new technologies and AI are rapidly introduced, the role of engineers is increasingly becoming that of change agents.

Given the nature of their work, engineers are well-positioned to drive adoption of new tools, technical advocacy, innovation and continuous improvement in and outside their organizations.

Engineers must master the art of influence to be effective, visible and ensure their voices are heard.

On top of handling technical tasks, engineers will play more important roles in digital transformation and helping organizations stay competitive.

II. CRITICAL THINKING

Engineers have always needed problem solving abilities but in an increasingly complex world, the ability to think critically and strategically is a winning trait. Today's engineers solve not only product and technical challenges, but also navigate complex business landscapes and other wider problems.

> **Digital skills alone, however, are not enough. Problem-solving, self-management, and interpersonal skills are just as important. We need to go beyond upskilling and reskilling, and look at humans as a whole, combining IQ and EQ.**

**Thomas Saueressig
Member of the Executive Board of
SAP SE for SAP Product Engineering**

Source: SAP Corporate Blog, "Changing work for good", 2022.

To see the 'bigger picture', engineers must go beyond the technical.

Understanding geo-politics, changing regulatory frameworks, supply chains, consumer trends and competition sets high-performers apart.

This broader perspective also helps engineers make judgements that consider the complexity of situations and diversity of opinions. These are increasingly important traits, especially as engineers begin developing AI code of ethics.

Technical know-how and a critical thinking mindset characterize the best engineers.

III. COLLABORATION

As technology's impact on our lives deepens & widens, the case for having more voices engaged in conversation is growing.

Subject matter experts from non-engineering backgrounds now get a share of voice on critical decisions, and many of the best and most successful ideas come from tapping diverse inter-disciplinary and cross-functional teams.

Effective collaboration, however, requires more than just an openness to let others into the room.

> As AI moves into the mainstream, specialist tech staff are working more closely than ever with business managers and finance staff.
>
> The soft skills of interpersonal communication, strategic problem solving and critical thinking are required across all disciplines to help ensure the most beneficial personal interactions.

**Sharon Moore MBE
CTO, Global Government
IBM Technology**

Source: Sharon Moore MBE, "Skills shortfall threatens to stifle Europe's adoption of AI", 2022.

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Many engineers feel more comfortable working with data and technical frameworks, and less so with building rapport and relationships.

To expand one's horizon and get things done successfully, building strong connections inside and outside the engineering team and company is necessary.

Mastering these skills isn't straightforward.

The ability to be influential, think critically and collaborate effectively requires a set of interrelated capabilities that don't come naturally to many of us, including engineers.

The prize for cracking the skills code is high:

- increased productivity
- successful innovation
- employee retention
- individual, team and organizational growth

HOW CAN LEADERS DRIVE NEW SKILLS & MINDSETS?

Engage your people
Know what motivates your team, and offer development opportunities.

Be intentional about training
Set clear goals to keep you and your team on track and aligned.

Lead by example
Take up learning opportunities and share your own learnings and insights.

Train at scale
Bring teams together with a shared set of operating behaviors for critical mass.

> "
>
> When you think about what defines modern companies and work, it's all about collaboration. No big thing gets done by one individual. Things get done by teams.

Satya Nadella
CEO
Microsoft

Source: Fast Company and Satya Nadella, "How collaboration drives innovation at Microsoft", 2020.

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TRAIN CRITICAL SOFT SKILLS WITH HARDSKILLS™

At HARDSKILLS, we help enterprises train their engineers in the hard-to-teach behaviours, skills, and mindsets needed for the new World of Work.

IN JUST 3 MONTHS,

59%
strengthened communication

41%
improved collaboration

60%
became better thinkers

THE HARDSKILLS ADVANTAGE

Cohort Delivery
Team-based learning experiences that ensure no learner is left behind.

Learning Science
Based on proven cognitive scientific research that makes learning stick.

Cinematic Content
Netflix-style learning with cinematic scenarios and real-life simulations.

Integrated Skills Training
Multiple skills are trained as integrated courses.

80% OF OUR LEARNERS ARE ENGINEERS

> Hardskills trains all the skills and tools that allow moving from reactive to proactive.
>
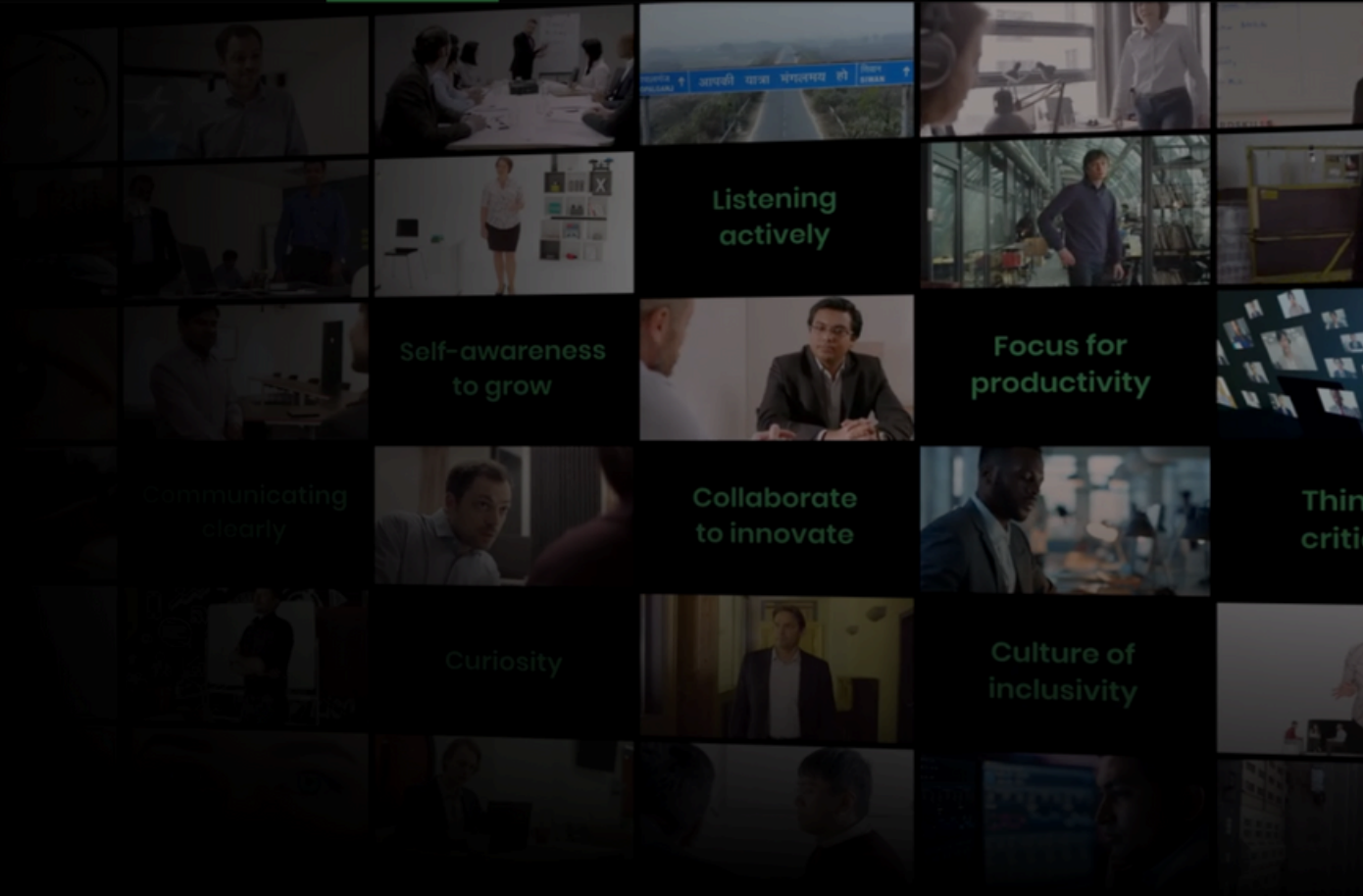> Boris Bachmann, Senior Service Delivery Manager, HCLTech

> Critical thinking helped me improve a lot in various aspects; I now think about how I can improve user experience using the techniques I learned as part of Global Business Skills.
>
> Mainak Sen, Senior Software Development Engineer in test, Gojek

TALK TO US

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Transforming workforces at scale