Essential Skills
For 2023 Engineers

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FUTURIST

Hello 2023!

Be ready for VUCA world

Essential Skills For 2023 Engineers according to the World Economic Forum.

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Engineering Talent Market

STRENGTHS
Creative mindset

WEAKNESSES
Major skills gap

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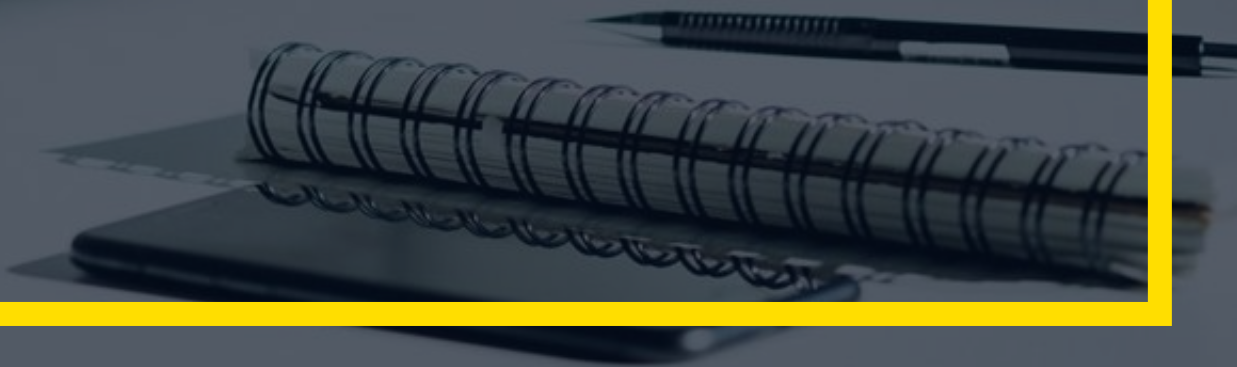**O** **T**

High demand
OPPORTUNITIES

The VUCA world
THREATS

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1.
What are behind the need for 2023 skills?

Let's start with the main drivers

More than *1 billion* jobs, almost *one-third* of all jobs worldwide, are likely to be transformed by technology in the next *10 years*.

1- Digital and technological transformation

- Artificial Intelligence, quantum computing,
- The Internet of Things, and robotics.

As a result, there is a strong need for the upskilling and reskilling of engineers as their jobs increasingly involve the use of these disruptive technologies.

2- Emerging new business models & workplace transformation

- Existing business models are restructured, new (online) business models emerge, hybrid working is the new normal.

- The Companies are more aware of their social responsibilities, people's jobs, and the skills required to perform them are also changing.

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3- Bridging the skills gap

- According to a 2020 McKinsey & Company study, 87% of executives and HR managers say they currently face a major skills gap.

- They primarily recruit externally to fill those gaps, about a third said they have started focusing on skills building and training.

4- The need for self-actualization and adapting to a changing world

- When we look at employee happiness, learning new skills and growing in a certain direction plays an important role.

- In order to adapt to a changing world, you'll need to keep on developing yourself and master several future proof skills.

2.

What are the in-demand skills of 2023?

WEF listed a list of 10 future skills that will be highly in demand.

WEF 10 future skills

1. Analytical thinking and innovation
2. Active learning and learning strategies
3. Complex problem-solving
4. Critical thinking and analysis
5. Creativity, originality and initiative
6. Leadership and social influence
7. Technology use, monitoring and control
8. Technology design and programming
9. Resilience, stress tolerance and flexibility
10. Reasoning and ideation

1. Problem-solving

We can not solve our problems with the same level of thinking that created them.

Albert Einstein

1. Problem-solving

What?

Having the skill of complex problem-solving means being able to solve issues that other people can't solve. Whether it's through pure creativity, or through statistical analysis.

Why?

As the world of work becomes more complex and fast-moving, the ability to find the cause of complex problems and then solve them will become increasingly vital.

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Take action

- Provide your team with goals, not instructions

- Stimulate a culture that appreciates new ideas and creative minds

- Create an atmosphere of trust and respect.

Problem-solving

2. Self-management

We learn from failure, not from success!

Bram Stoker, author of Dracula

2. Self-management

What?

Self-management contains the skill of resilience, stress tolerance, and flexibility, to continue to maintain a positive mind even when things get tough.

Why?

It is necessary to forgive yourself when you make a mistake, to remain positive and believe that mistakes help us improve, and experiences make us grow.

Take action

- Make sure you learn

- Understand that mistakes are part of growth

- Create a culture where learning new skills is rewarded.

Self-management

3. Working with people

3. Working with people

What?

We are constantly connecting and collaborating with colleagues, clients, and other stakeholders at work.

How?

To successfully do this, soft skills like empathy, conflict resolution, communication, and decision-making are vital.

Why?

Emotional intelligence, cooperation, communication skills will become increasingly important.

Take action

Working with people

Make sure your team has the right communication skills

Offer teams autonomy and ownership over their careers and projects

Focus on the development of soft skills

4. Technology use and development

Data science, AI, machine learning, and deep learning are important skills.

+

Think big data architects, digital marketing specialists, and machine learning engineers.

→

But it's not only about having programming skills, it's also about understanding the power of technology, its use, and how to control it.

Take action

- Find an aspect that is not automated or digital and search for possibilities to optimize it

- Increase speed in your projects by delegating potential tasks to other tools and programs

- Empower your teams by teaching them to work with smart technologies and future-proof competencies

Roadmap

Understand how the future skills add value to your organization

①

Make sure you have a clear learning strategy that is future-oriented

③

Invest in growth and training programs

⑤

Make an inventory of which skills you have, which are missing, and which you are going to use

②

Put the well-being and talent development of your people first

④

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Gantt chart

	Week 1					
	1	2	3	4	5	6
Task 1						
Task 2						◆
Task 3						
Task 4						
Task 5						
Task 6						
Task 7						
Task 8						

WORLD ECONOMIC FORUM

Time needed to start building new skills online in jobs of tomorrow

1-2 Months
People and Culture, Content Writing, Sales and Marketing skills
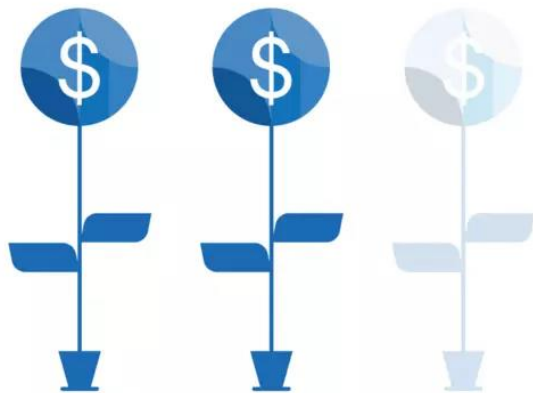
2-3 Months
Product Development and Data and AI skills

4-5 Months
Cloud Computing and Engineering skills

Human Capital Investment

2 out of 3

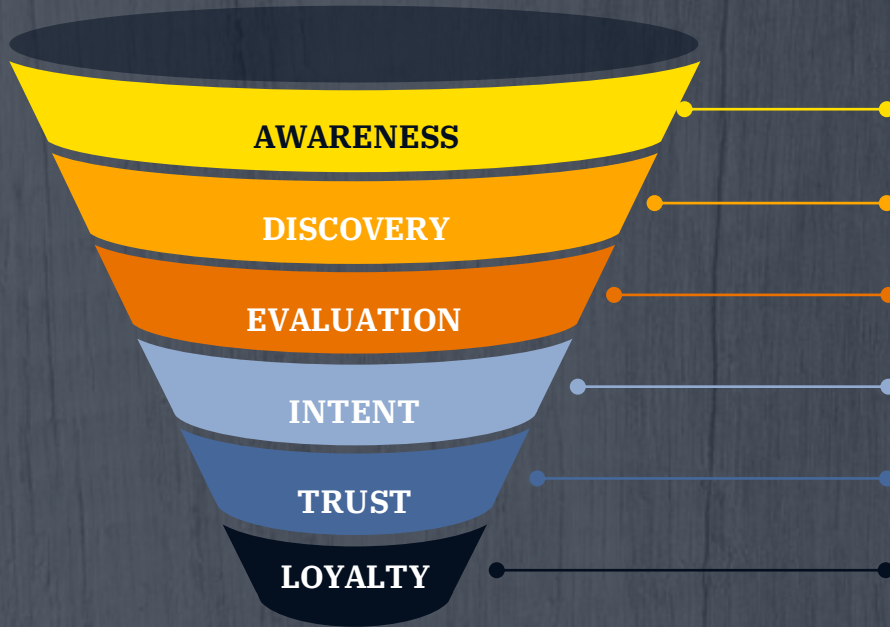employers expect a return on investment from reskilling within one year

Source: Future of Jobs Report 2020, World Economic Forum.

100%

Total success!

2023 Engineer

AWARENESS

DISCOVERY

EVALUATION

INTENT

TRUST

LOYALTY

Thanks!

Prof Akram Hasan

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