

1.3 Risk-Taking and Creativity

Reference: D. W. Hess, Leadership by Engineers and Scientists, Wiley, 2018

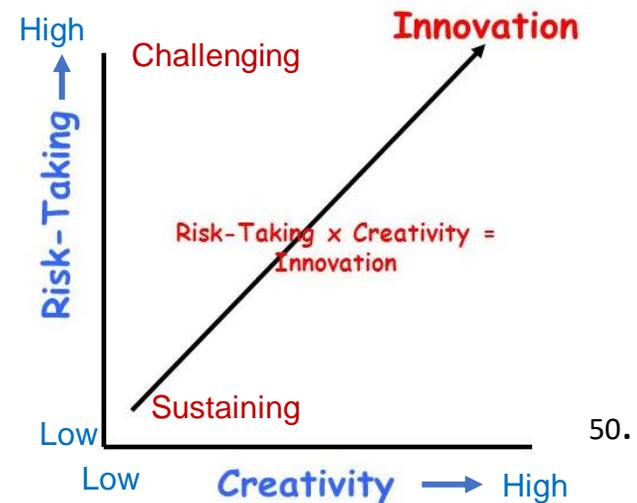
Risk-Taking and Creativity

If you push through that feeling of being scared, that feeling of taking risks, really amazing things can happen – Marissa Mayer, Former CEO of Yahoo

If you don't take risks, you'll always work for someone who does - Nora Denzel, Board Director, Ericsson

The road to bold is paved with failure, and this means having a strategy in place to handle risk and learn from mistakes is critical – Peter H Diamandis, Founder of Singularity University

If you always do what you always did, you will always get what you always got - Albert Einstein, Nobel prize winning theoretical physicist



- ✓ **Risk-taking, creativity, and confidence** are capabilities that leaders must exhibit if they are to move their team/organisation forward.
- ✓ **Effective risk-taking** therefore requires creativity and confidence, qualities that are **developed** through:
 - Technical education, multidisciplinary activities, training, track record successes, experience, consultative and collaborative behaviours, and a willingness to challenge conventional views and learn from (rather than attempt to avoid) mistakes.
- ✓ Although most of us recognise that we can learn from failure, we frequently avoid taking substantial risks
- ✓ One reason for the unwillingness to take risks, is because we are worried about what our family, friends and society will think. This prevents our willingness to try something new and removes the opportunity for success.
- ✓ **Failure to act due to fear, will not ensure that we do not fail; instead, it removes an opportunity to win**
- ✓ **If we want to develop creative and innovative paths, then we must also be open and willing to fail along the way.**

Encouraging Risk Taking

- ✓ **Effective leaders accept failure** but they also expect every failure has a lesson to be learned from.
- ✓ They use that lesson and failure outcome to work out **how to move forward**.
- ✓ It is important that the leader does **not** impose negative consequences for any team member(s)' failure because of risks or unconventional approaches that the team took:
 - **Such behaviour leads to frustration, dissatisfaction, and send a message “Avoid Risk”**. It also cripples innovation and prevents positive change
- ✓ **Example:** The Tata Group in India has established an annual competition that presents a prize for the best failed idea.
 - They claim that failure is a “goldmine” due to the learning opportunities
 - These workplace cultures create an environment for innovation and creativity and motivate employees to take responsibility and risk to develop new products, processes, and directions.



Risk-Taking: You Win or You Learn

Encouraging Risk Taking

- ✓ Some companies (e.g. 3M) expect employees to use a fraction of their time to **investigate problems unrelated** to their job duties
 - There is no penalty for failure, but significant praise and remuneration are given for successes in these unrelated areas and for taking risks
- ✓ Leaders can be **role models** by describing their own failures to team members, where they indicate how they learned from these, and then describe how they grew from that learning.
- ✓ This is especially important when the leader is providing professional development for team members, **particularly early career engineers and scientists.**
- ✓ When leaders incorporate these approaches when they develop and guide the next generation of leaders, it is encouraging and has an extremely positive effect on building confidence and **the willingness for others to take risks.**

Risk-Taking

- ✓ Risk-taking is necessary for survival and growth, but **risk-taking can also mean the end.**
- ✓ It is therefore important to be smart and informed when taking risks. The better you know yourself and the outside world, the better you are predicting the future. **The more you can calculate the risk, the greater the likelihood that it will be a successful conclusion.**
- ✓ **It is important that risk-taking is built into the organisation,** i.e. that there is room to invest in more innovative projects and to have the opportunity to test many of the creative ideas that come from employees.
- ✓ It is a good idea for leaders to spread the risks and, for example, never bet more than **10% of the development budget** on a single risky new project.
- ✓ Leaders must be willing to take risks themselves, if they wish to perform projects that have significant impact and as a result, move science and technology forward.

52.



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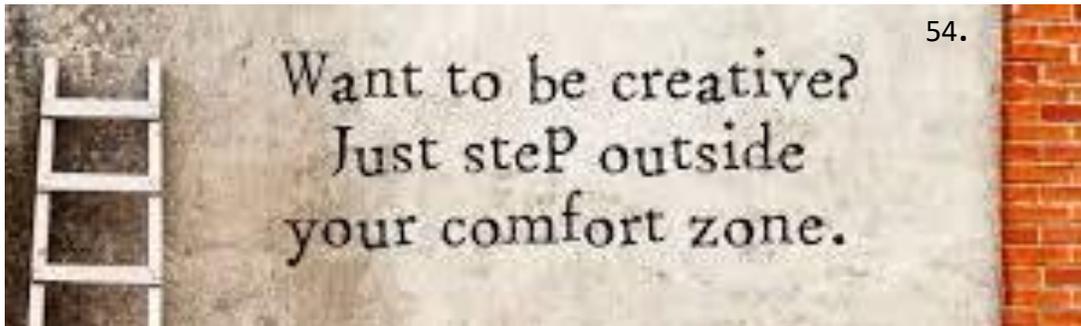


Creativity: Creative Leaders

- ✓ The role of a creative leader is not to have all the ideas. **It's to create a culture** where everyone can have ideas and feel that they're valued – *Ken Robinson, Professor University of Warwick*
- ✓ **Creativity** is one of the most important characteristics of an effective leader. It fosters a successful and healthy workplace environment.
- ✓ Creativity opens up opportunities in problem-solving, achieving goals, and inspiring teams to be creative and find unlikely perspectives.
- ✓ **Leaders must be aware that certain organisational structures and attitudes prevent creativity.**

Creative leadership has **four** key attributes:

1. To meet tomorrow's challenges
2. Take care of the staff and nurture them
3. To support a creative working climate
4. To support a creative physical and social environment



Be prepared to rethink everything₈₀

Creativity: Creative Leaders

- ✓ Creativity is a major component of successful technical endeavours.
- ✓ Leaders want to **maximise creativity** in teams:
 - However, highly creative individuals in a team can be difficult to manage because as expected, they are typically nonconforming and follow the path less travelled. They find difficult problems immensely interesting and motivating.
 - The leader must have patience, be flexible and have open discussions with the highly creative individuals so that they are encouraged, appreciated and contribute positively
- ✓ A **successful technical leader** must ensure that all team members feel valued and appreciated for their contributions, and are given flexibility and freedom to pursue their passions
- ✓ **Diversity and inclusion of technical backgrounds**, experience, and divergent viewpoints create an ideal group of team members to address all types of problems in the world.

Examples of rules for creative leadership:

1. It's not about your creativity. It's about the team's creativity
2. You don't need to be creative, but you need to understand creativity
3. Need to understand diversity, inclusion and equity and create systems and environments around this
4. Identify strengths and weakness on your team
5. Trust your staff and encourage them
6. Embrace failure
7. Encourage debate and constructive criticism
8. Champion ideas

Multiple Choice and Short Answer Questions

MCQ

Acceptable risk-taking in an organisational context is referred to as (Select only one option below):

- (i) The willingness to pursue an opportunity knowing that there might be an unreasonable risk involved
- (ii) The willingness to pursue an opportunity knowing that there might be a reasonable risk involved
- (iii) The willingness to pursue an unrealistic opportunity knowing that there might be a reasonable risk involved
- (iv) None of the above

Short Answer Question

The relationship between risk-taking and creativity is critical to understand innovation. If you were a student working on a project, what beliefs could potentially inhibit your willingness to embark on a risky direction in a technical problem?

What would be the consequences if you fail or succeed? Briefly explain. (Please ensure that you cover both the fail and the success consequences, not just one of them). What could be the consequences of *not* taking the risk ?