Innovation through thinking in technology

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Have you ever wondered how it would appear to travel on a ray of light? Albert Einstein had done that and he had gone beyond the frontiers of his time’s mathematics and physics. His passionate curiosity had challenged him to make some discoveries during his lifetime and career. Today those achievements could get recognized as innovations as the criteria in science and technology have become much higher, so far. The modern information-communications technologies (ICT) have offered us an opportunity to reach anyone in this world so promptly and find the answer to any question so effectively. The first step in any technological innovation could be a thinking process and in so many cases such a model could involve some supporting phases. In theory, the innovation would mean an improvement to the current solution or at least a better, simpler and more effective response to the ongoing situation in a certain field of interest. On the other hand, the condition in the practice is much more complicated and it’s quite uneasy to cope with all natural phenomena challenges. Maybe something would work flawlessly in our minds, but when we put that problem on the ground – we would realize that the things are not that simple at all.

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1. INTRODUCTION

The scientific thought has been present through the history and even today the people would deal with some sort of mindful approach. One of the greatest minds in the entire human kind past and the father of mechanics – Sir Isaac Newton had come to the revolutionary new idea addressing we live in some kind of gravitational field that would pull down the objects stronger or weaker depending on their mass. He had noticed that simply observing the apples in his garden and wondering why they go down, not up. The similar case studies could get correlated with so many brilliant minds through our history and what we can see as the pattern repeating itself is that any great scientist who had found something through his life and work was so curious to figure out how things work in the nature.

With the beginnings of industrialization across the globe there had been more space for the engineering approach to discoveries. In other words, the people would begin thinking in more practical way and resolve the problems day by day. The engineers are so ingenious persons who have the capacity to bring an innovation to what they do. The innovation is something getting the ability to improve the exiting situation in some area of science and technology.

Next, the innovation could get considered as effort, contribution or even achievement that can serve to find the completely novel paths within some arena. The innovation is not only the matter of science and engineering, but rather an outcome of the business, economy and society at the same glance.

In the industrialized world, the discovery could get assumed as the invention or in some cases, something being patentable. Nowadays so many people would make so many offerings to the marketplace and it may seem the people would be more creative than ever for a reason they would provide so many solutions to the rest of the planet. On the other hand, the innovation could get understood as a step forward to some product, service or model.

Being innovative could mean dealing with some skill or simply getting capable to make an innovation on. So, the point is in order to do anything being somehow innovative is to think hard and concentrate all your energy to tackle some challenge. The innovation by itself can cope with the certain social and
economical impacts and it can bring the benefits to many. The main question here is how we could place the innovative ideas to any area of human activities.

2. WHAT IS THE INNOVATION?

The innovation is a process of making the solution that is better, simpler and more effective than the previous one.

The well-known case studies of the innovative individuals who had changed the world we know would suggest that there had been some sort of the rule which could get noticed in the procedure of obtaining the innovation.

At any beginning, the innovators had wondered about some question that had occupied their attention and, consequently, they had thought hard how to resolve such a concern which had led them to the certain innovation. In that case, we would like to introduce the Wonder – Think – Resolve – Innovate (WTRI) model which graphical representation is given in the Figure 1 as follows.

![Figure 1 - The WTRI model](image)

For instance, we would mention an American inventor and electrical engineer Nikola Tesla who had so many patents being correlated with the 2nd technological revolution. Tesla had a great capability of visualization and before he had produced anything – he had made the simulation of such a solution in his mind. If it had worked in his imagination – it had worked in the reality. As Albert Einstein, Sir Isaac Newton or Leonardo de Vinci – Nikola Tesla also had coped with the Wonder – Think – Resolve – Innovate pattern of creativity. The innovation is not something that the creative persons can obtain only – it’s the subject that can get found anywhere in our surroundings. Even the common worker on a production line can simplify his task and that’s the real improvement to his everyday working routine.

In so many cases, even ordinary people would wonder how to tackle some concern and they would apply their mental capacities in order to resolve their preoccupation and make it being much simpler, so far. The innovation is a topic that can find its place everywhere and in our opinion – it’s so welcome to the entire defense community and its industry. As it’s well-known, the defense industry would deal with the cutting-edge technology and it’s quite straightforward why such a field needs the innovations. On the other hand, the army skills and expertise are the factors that need the innovations as well. For example, providing much more impactful military training could be the challenge and the right question here is how to make your program being simple, so it can fit to anyone’s learning curve. If the common worker in the packaging department can figure out how his task could get easier to him – the professional soldier must do the same without any doubts.

3. INNOVATION THROUGH THINKING VS. INNOVATIVE THINKING

Innovative thinking is a skill that can get learned – it would include reasoning, judging and decision making processes, so far. On the other hand, the innovation through thinking would mean that you would obtain some effort, contribution or achievement using any possible method of thinking – not necessarily the innovative one. Innovative thinking could get applied in everyday life, business or any other activities in
order to make the small improvements day by day. The trick with the innovative thinking is that you do not need to get taught to deal in such a manner – you need to practice that skill in order to make it being your habit, so far. The persons who have mastered the innovative thinking and who have gotten the habit to mentally operate live so could get capable to improve their everyday routines and bring more simplicity to their activities. The simplicity is an ultimate sophistication, so it’s clear why we need the innovative thinkers.

Further, we would mention the innovation through thinking. It’s a process of getting something new investing some mental efforts. Such an activity could get closely correlated with the Wonder – Think – Resolve – Innovate (WTRI) model and at this stage; we would mention that the innovation through thinking could require focusing all our intellectual capacities in order to perceive the better way of doing something. Definitely, if you got a skill in any business and if you have developed the habit to think about your tasks on a regular basis – you could find the ways to improve such a routine – making an innovation that could be so effortful. The innovation through thinking could be an occasional event that would cope with some chance to happen, while the innovative thinking is a skill that could get deeply developed through the exercise and that can give us the improvements in a long-term fashion.

The fact is the innovators would not necessarily cope with the innovative thinking or, in other words, they would not have such a skill. They would bring the innovation in any branch of science and technology relying on the WTRI model of gaining the innovation. Those people would be capable to do the real movements in their areas bring the innovation through some mind’s process. Everyone has gotten the predisposition to develop his IQ for some environment and if he puts a lot of effort every single day in order to progress under those conditions – he would undoubtedly leverage his innovative thinking. That would not mean he would obtain anything being so epochal, but let’s say he would build up the good shape in some business. Finally, being the innovator and being the innovative thinker is not the same stuff, but the both attributes are more than welcome in any area of human activity.

4. NEW PERSPECTIVES IN TECHNOLOGICAL PROGRESS

The modern days would cope with the 4th industrial revolution being strongly correlated with the digital transformation of the previously developed technologies. That sort of advancements would make a lot of benefits for many and provide the great economical impacts to small societies. Nearly anyone in the world would more or less successfully deal with the emerging solutions and high-tech ecosystems. It would appear this period of human history would get linked with more innovations as well as innovative thinkers than any epoch before. Would the innovation be the attribute of the creative individuals? Not necessarily! Even the common people could make some progress in their daily routine and get things being much more effective to them. Any new technological boom would include the financial benefits offering an opportunity to the industry leaders to make the huge profit on. It’s well-known that our economical curve will raise if we apply the new technology into any segment of our existence. The progress would love the cutting-edge solutions for a reason they would mean the improvement to all. So, why are we still with doubts about this novel information age?

5. DARK SIDE OF OUR NOWADAYS

The information would mean an advantage in any period of the human history. Even today when we live in the information age – such a fact would get more obvious than ever. The information would be mainly available through the computing systems, so that could motivate the cybercrime underworld as well as some terrorist organizations to take such an advantage and do espionage, sabotage and even damage of our digital and analog assets. The one who deals with the accurate information will get the war, our past would suggest! So, it’s quite clear why so many malicious actors would literally be in the race for new and new findings. The emerging technologies would make the both sides – the good and the bad one – getting dependable on the new advancements and even if we have an illusion that we are progressing – that would not be completely true. The fact is we go two steps forward and one step backward due to so many security challenges being present nowadays. The purpose of defense is to manage the risk, so that could be the imperative for a tomorrow which can give us a much more peaceful future.

6. WAY THE NATURE FUNCTIONS

According to some physics principles, any system in the nature would gravitate to the minimum of energy. In other words, the nature would suggest the more is less. Even some mathematical theories would come to the similar findings and indeed, if we deal with less energy – we would be safer. The truth could be so simple even the natural phenomena may appear as quite complicated to get described, understood and applied in the practice. The engineering disciplines are the areas that could offer us an option to challenge the
laws of physics. Any technological solution must cope with the rules of the nature and that’s why it’s so vitally significant to gain some perspectives about how our Universe functions. Above all, the human beings are the part of the nature and if we better understand the nature – we would deeply understand ourselves.

7. PROGNOSES FOR A TOMORROW

The point is the mathematics is our old, good pal who would trick God and bring some of his secrets to us. If we make a decision to invest more into the mathematical researches and explorations – we would make more innovations in the future. That could offer us a chance to improve our current technology and possibly cause some advancement in the modern security doctrine. In our opinion, it’s feasible to produce some innovations through thinking in technology if you direct our course of activities to the mathematical studies. Undoubtedly, we will trick God again only if we rely on his science which is the mathematics.

As so many military officers would say – try to attack your enemy using his own weapon and you will probably get the war!

8. DISCUSSIONS

Making the innovation through thinking in technology would sound great, right? That would especially be contributive in the field of security and defense. In other words, the innovations and innovative thinkers are so desirable in the army sector. On the other hand, if we take into consideration the entire positive impacts such a project could have – it’s quite clear why such an idea is worth that. As we would already indicate – the characteristic of the natural systems is to deal in a quite secure manner. Maybe we could learn something from the nature and apply those findings in science, technology and defense at the same glance.

9. CONCLUSION

The role of this effort is to introduce the Wonder – Think – Resolve – Innovate (WTRI) model of getting the innovation primarily in technology and additionally in any other human activities. In our opinion, such a model can get the strong application anywhere and even in the defense sector. Also, we would mention the effects of innovative thinking to our everyday lives and works, so that could mean we can make the great progress and resolve so many concerns simply adopting such a habit. The innovation through thinking would depend on someone’s mental capacities, while the innovative thinking is a skill which anyone can learn. The point is to make as many attempts as necessary in order to succeed!

REFERENCES


REZIME

INOVACIJA U TEHNICI KROZ RAZMIŠLJANJE


Ključne reči: inovacija, modelovanje, koncept, otkriće, pronalazak, saznanje