

当 代 中 国 学 术 文 库



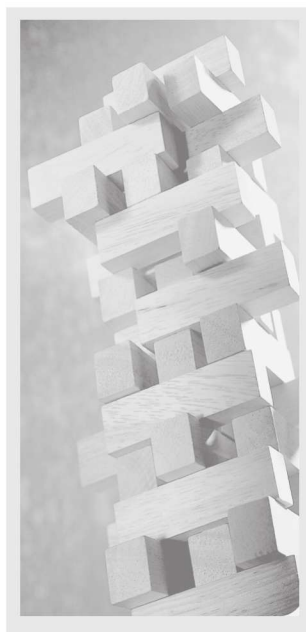
如何进行创新管理

How to carry on the innovation management

郭 凯◎著



中央编译出版社
Central Compilation & Translation Press



如何进行创新管理

How to carry on the innovation management

郭 凯◎著



中央编译出版社
Central Compilation & Translation Press

图书在版编目 (CIP) 数据

如何进行创新管理 / 郭凯著. —北京: 中央编译出版社, 2016. 7

ISBN 978-7-5117-2758-9

I. ①如… II. ①郭… III. ①企业管理—创新管理

IV. ① F270

中国版本图书馆 CIP 数据核字 (2015) 第 201823 号

如何进行创新管理

出 版 人: 葛海彦

项目统筹: 董 巍

特约编辑: 张树相

责任编辑: 陶莎莎 曲建文

责任印制: 尹 珺

出版发行: 中央编译出版社

地 址: 北京西城区车公庄大街乙 5 号鸿儒大厦 B 座 (100044)

电 话: (010) 52612345 (总编室) (010) 52612341 (编辑室)
(010) 52612316 (发行部) (010) 52612317 (网络销售)
(010) 52612346 (馆配部) (010) 55626985 (读者服务部)

传 真: (010) 66515838

经 销: 全国新华书店

印 刷: 北京天正元印务有限公司

开 本: 710 毫米 × 1000 毫米 1/16

字 数: 235 千字

印 张: 17

版 次: 2016 年 7 月第 1 版第 1 次印刷

定 价: 49.00 元

网 址: www.cctphome.com 邮 箱: cctp@cctphome.com

新浪微博: @中央编译出版社 微 信: 中央编译出版社 (ID: cctphome)

淘宝店铺: 中央编译出版社直销店 (<http://shop108367160.taobao.com>) (010) 52612349

本社常年法律顾问: 北京嘉润律师事务所律师 李敬伟 问小牛

凡有印装质量问题, 本社负责调换, 电话: (010) 55626985

Abstract

The innovation is human unique creativity work manifesting, it is core power and fountainhead which the human society progresses. The innovation is the power which the world progresses, the humanity can manifestng, national and social development fountainhead and power. Innovation is a conceptualization characterized by new ideas, new inventions and new description.

With the continuous development of human society forward, innovative methods and techniques constantly move forward. We look at a number of innovative methods and techniques thich are prove cost-effective and are internationally applied to 6σ , TRIZ theory and the theory of extracted wisdom are worthy of our attention and adoption of enterprise. On 6σ , TRIZ theory and extracted innovation theory, the book has done comprehensive presentation and analysis. Innovative approach to the process of scientific and technological progress and social development, along with the development of human history and civilization makes considerable progress and development, which sums up many effective specific principles and techniques.

In this book, we discussed the innovation management classifications. The main innovation management could be divided

into technology innovation, product innovation, management innovation, service innovation, method innovation. Every innovation types have detailed introductions in the chapter 2.

How to achieve the innovation, the core is importance to manage innovation projects effectively. So we analyze innovation management from innovation projects level. In the innovation process, managing innovation project action, project plan, project control and project risk are researched in depth.

In the last chapter, we focus on discussing innovation teams' management. The team leadership and how to play the role in the innovation team were analyzed in detail. At the same time, how to build the innovation team, we discuss and research from cultivating team spirits, making clear innovation team goals, formulating reasonable incentive assessment system, building learning innovation organization, cultivating positive corporate culture, being on guard against the danger signal in the innovation team, and so on.

Key words: Innovation, Management, Innovation methods, Innovation project, Team management

目 录

CONTENTS

1. What is innovation?	1
1.1 Definition of innovation	9
1.1.1 Concept of innovation	9
1.1.2 Basis of innovation	15
1.1.3 Innovation related concepts	16
1.1.4 Qualities the Innovators	23
1.2 Innovation and creative thinking	27
1.2.1 Innovative thinking is a prerequisite for innovation play	27
1.2.2 Two basic forms of thinking of creative thinking	28
1.2.3 Notable features of innovative thinking	30
1.3 Innovation principle and innovation management method	31
1.3.1 The basic meaning of the innovative principles	33
1.3.2 Innovation management methods	34

1.4	Innovation method and management innovation	
	method	41
1.4.1	Management Innovation divergent thinking	44
1.4.2	Innovative thinking management system	46
1.4.3	Reverse thinking management innovation	47
1.4.4	Lateral thinking management innovation	48
2.	Innovation management classifications	51
2.1	Technological innovation	51
2.2	Product innovation	57
2.3	Management innovation	65
2.4	Service innovation	76
2.5	Method innovation	81
2.5.1	Total Quality Management	81
2.5.2	Six Sigma innovation management method	85
2.5.3	Lean Production innovation management	
	method	87
2.5.4	Extract wisdom (TRIZ) innovation	
	management	91
2.6	Process innovation	100
2.6.1	External source	101
2.6.2	Brand Re-engineering	102
2.6.3	Supply chain management	104
2.7	Disruptive innovation	105
3.	Management of innovation target	112
3.1	Innovation Environment Analysis	112
3.1.1	PEST analytic method	116

3.1.2	SWOT analytic method	123
3.1.3	Five-Factors model	129
3.2	Identify innovative targets	137
3.2.1	Definite stakeholders	137
3.2.2	Defining Innovation Requirements	144
3.2.3	Defining Innovation goals	148
3.3	Innovation performance measurement	150
3.3.1	Performance indicators choice	151
3.3.2	Defining performance indicators	153
4.	Managing Innovation Project	159
4.1	Managing Innovation Project Action	161
4.2	Managing Innovation Project Plan	164
4.3	Managing Innovation Project Control	182
4.4	Managing Innovation Project Risk	188
5.	Innovation Teams Management	202
5.1	Innovation and Team Leadership	202
5.1.1	Define team	202
5.1.2	Define leadership	204
5.1.3	Types of leader	207
5.2	Traits of Leadership	212
5.3	Leadership role in innovation team	216
5.4	Team building	231
Reference	239

1. What is innovation?

The innovation is human unique creativity work manifesting. It is core power and fountainhead which the human society progresses. The innovation is the original theory created in the people's the understanding world and transformation world process, its viewpoint breakthrough and surmounting which were practiced in the past. The innovation is the power which the world progresses, the humanity can manifest, national and social development fountainhead and power. The innovation is a new idea being mentioned in the modern work frequently, which we should have a more thorough understanding of it and utilize it. No matter being engaged in the high technology and new technology work or the basic unit work, in order to impel its progress, all needs to innovate the idea to merge to in the work and the life practice, which thus raises own innovative ideology and ability.

It is very important that innovation for one country. The innovation is the hope of a national. In the intense competition age, our individual must have the crisis feeling, change with each new day the competition consciousness, and sharpen own innovation ability. Nowadays, between each international and national competition is mainly on the innovation ability competition. In the

world, the most developed capitalist country U. S. , holds the leading status in the technical domain, forms the integrity of the innovation system, trains and attracts massive innovation talented person carrying on the technological innovation.

Japan establishes the technological innovation for founding a nation foundation of, carries on the technology and the management innovation for a long time, and forms to take the enterprise as the main body. "it has produced study the official to grind" the close cooperation technological innovation pattern, has supported the Japanese economy and the social long-term health fast development, which causes Japan to become the world economic power and the technical power.

The Europe is developed capitalist countries. Germany, for example, the economy one of the important reasons for its long-term, healthy and rapid develop, is the powerful German company's ability of technology innovation and improvement, the national innovation system. The strength of scientific research and technological innovation is mainly made by universities and enterprises. These institutions experiences a long history of development, and gradually evolves and forms a functional positioning and clear research areas in Germany's social and economic life. From the developing basic research application of products prototype and small batch production demonstration of technology innovation sequence, institutions of all kinds of conversion undertake relations clear, coordinate and complement each other, constitute a pragmatic, rigorous, efficient technology innovation system. Making Germany in many technological innovation areas, always in Europe and the world's leading position.

It is importance of innovation for enterprise. With the deepening of the global economy, China's market economic system is also maturing, and the leading role of the market in resource allocation is strengthening gradually. In the face of increasing market competition, technological innovation has become the key factor for survival and development of enterprise, especially for businesses. The enterprises' own healthy and stable growth have direct impact on the rapid development of China's economy and the improvement of people's living standards, therefore, the company's technological innovation has very important theory and practice significance.

The rapid technological innovation has become the key factor of winning in the market. So, the world giant company, like Microsoft, not only has the profound understanding the truth of the above, but also try their best to enhance "sense of crisis" to stimulate technological innovation, form innovation consensus to maintain the leadership in the international market of Microsoft products. In fact, technological innovation is the goal, and "crisis" being created is a management tool for the resurrection. Only keep sense of "crisis", can we create a unique atmosphere for technological innovation, so as to continuously coruscate innovation vitality of the entire staff.

Specifically, the enterprises can carry on technical innovation and management innovation by science and technology innovation in order, to create products to meet consumer demand, to capture the market and enhance corporate capacity; Through technological innovation and improved technology can reduce manufacturing costs. Scientific and technological innovation can improve corporate

profitability to some extent.

It is importance of innovation to individuals. In real life and work, few people will show their all kinds of ideas and put them into practice, which will bury a lot of early germination innovative bright spots. People used to thinking the problem with the new thinking. In fact, it is relatively easy to stimulate some innovation ideas, but it is relatively difficult to make fruitful actual creative work. In practice, when we adhere to the concept of work, we must adhere to it in the end, and then you will be able to taste the sweet fruits of success. I also believe that whoever wants to have good life will think about how to innovate. Innovation is also a kind of power, which will help you to give full play to your potential.

In fact everyone has his own superiority, and it is very important to how to find a stage for your superiority. This stage can make you more excellent than others. Furthermore, our knowledge and technology are used to serve society. When it cannot play a role, I think it is a waste that we spent so much effort to learn. However, when once you have this sense of innovation, you will certainly be attracted by its charm, and you will act. In my life, I am very confused, because I do not know what to do, and do not know what the purpose of my learning. I have no purpose and no power, so it is no way to learn. We know that any innovation requires a process. When you have this idea and act, and not succeed suddenly, then you need to adhere to, relentless stick to it, you will be able to complete your original dream.

Innovation and creativity are the cornerstone and driving force of human civilization evolving. When turnover of the history reel, we find that Bi Sheng, Cai Lun, Zhang Heng, Karl Benz, Henry

Ford, Thomas Edison, Bell, Shockley and so on promote the progress of human civilization. These great figures, as if everyone is presenting in our eyes. Perhaps more than admiration, you will feel a trace of regret, could not help thinking “When will hold my own invention?” At this moment, perhaps you will ask yourself in your heart “Do I have the potential of invention? Can I invent? ” Because, you do not think you are a “genius ” of invention. Admittedly, including scientists, majority of people have to admit that “genius ” is indeed born with. While scientists have worked hard, hoping to explore the “genius ” secret from the human brain, however, it is still in dense fog.

Dr. Bruce Chryser of University of California believes that the human brain has a genius button, which located in a particular region of the brain under the right zygomatic. However, because this region is often oppressed by some neurons, it is usually doing not be started. He believes that if the brain region activated, the individual innovation will be stimulated. He also find that, when damaged neuronal necrosis, genius brain regions will no longer be oppressed, then the repressed talent will be released. So scientists have a new idea, perhaps the use of certain artificial means, it is possible to start the brain “genius button”. Australian scientists make experiment in seventeen volunteers, which prove this point. The researchers use a magnetic field to disconnect relevant part of the cerebral cortex for a few seconds, then five people of them can calculate a day of the week, and six people of them are able to draw the horse head correctly by memory.

Specializing in brain science, Russian neurophysiologist, believes that these repressed genius neurons is a preventive

mechanism, because the human brain must guarantee normal operation of necessary “function” for survival, such as thinking, interpersonal communication, sports and love, rather than the consumption of resources on these unique extraordinary idea. Many geniuses are not perfect and deviant, such as poor social scientist Albert Einstein, the great poet Pushkin artists, and painter Vincent van Gogh, all of them have some degree of mental illness. With respect to the genius of “brain defect” of genius, we should be glad that we are “ordinary”.

As an “ordinary”, when I am glad to fail to become the “genius”, is it real that I cannot invent and innovate? Of course not. As long as strengthen the cultivation of creative thought, grasp certain innovation principles, and can be more appropriate to use innovative management techniques, innovation is not out of reach. When you have your own invention at first time, perhaps you are immersed in the Kingdom of joy, even if looking forward to becoming Chinese “Jobs”. This is not impossible. However, according to Schumpeter, you are far from success in innovation. At this moment, perhaps you are confused and have many questions: Spending a lot of time and even a lifetime of effort, innovation cannot be called an invention, then what is invention? Is my invention worthless? When you finish reading this book, you will reduce a lot of confusion, or even eliminate, perhaps you will have a surprising discovery: innovation has its own regular pattern and innovation can be more efficient and relaxed. through understanding and awareness of innovative management methods, we are able to be better to grasp the principles of science and technology and to effectively develop people’s initiative, and promote social

development and progress in accordance with the inherent rules of innovation.

Innovation is the driving force of world progress. When you have innovation spirit, then you will be forward with hope. Bird needs wings to fly, and the world needs innovation spirit to progress, then the spirit of innovation is the wing of world progress. There was once a disease. As long as people suffering from this disease, then there was no cure, and only slowly were tortured to death by the disease. There was a chemist, he unfortunately had the disease, and treated this disease everywhere and failed at last. One day, he heard that there was a well in village which could cure this disease. As long as drinking water in the well, the disease would be cured. Shortly after the chemist drinking the well water, he was cured. Chemists became interested in the well water, and he studied the well water and found that well water contains a chemical substance—thenardite, which has magical effect on this disease.

China has a famous old saying, often being suspected, is a new beginning of innovation. The courage to break the suspect is the new power. That is, if a person can observe the phenomenon around with puzzled eyes, he will create an incentive to break the suspect.

Villagers who often drank well water did not produce doubt when they knew the well water could cure disease. However, the chemists produced doubt on well water and finally discovered the secret of well water. If the chemist just felt lucky because that the well water cured the disease, then he would never find the secret. This fully shows the importance of innovation for us.

All Businesses need development. If the industry lack of innovation and creativity, then it will stand still, even fall back.

Only by adhering to the spirit of innovation, the courage to practice, industry can be developed. Today the international community is an era of rapid development, the spirit of innovation is very important. Only countries with innovative spirit can stand in the world powers.

The market is merciless, competition is brutal, and only adhering to innovation, can reflect the value of individuals, enterprises can gain an advantage, States can own prosperity. Innovation is the highest form of human talent, and it is the wheel of pushing forward of human society.

Throughout history, every person with great success, all dare to innovate. Innovation is a very precious spirit, so all of us should learn it.

About 2,300 years ago, Greece had a great thinker — Aristotle. He thought that the objects' falling speed and their neights were proportional. About 400 years ago, the Italian scientist, Galileo, did not believe what Aristotle said. He overturned Aristotle's view through his experiments, and established the law of free fall. All objects have the same acceleration in free fall if without air resistance. Galileo has such a spirit of innovation, he established the law of falling bodies in physics, the law of inertia, and found a projectile motion law, shimmy law of motion and so on. Some says that the first one who describes the girl with flowers will be praised and known as the genius; the second person who applies the metaphor will be ridiculed as mediocre; the third person who still uses this metaphor will be dismissed as fool people. This argument will be an exaggeration, but it did praise the innovation.

Hugo said "Even if you are successfully imitate a genius, you still lack his creative spirit, and this is why he is called genius.

Let's praise master, but do not imitate them. Let's invent. If successful, it will be nice, if fails, what does it matter? " We should promote innovation, and dare to innovate, rather than imitate others. Innovation is the source and power of a state and national for sustainable development. Innovation is a practice melting responsibility, courage, method, attitude and spirit. Innovation is very important for a national and an ethnic to survive and develop.

1.1 Definition of innovation

1.1.1 Concept of innovation

Innovation is a conceptualization characterized by new ideas, new inventions and new descriptions. It originates from Latin and has three meanings: firstly means update; secondly, create something new; finally, change. Innovation is a unique cognitive ability and practice ability of human. Innovation is an advanced manifestation of human's subjective activity.

Different subject areas explain innovation from different angles. In the field of sociology, innovation refers to people's needs of development, to break the routine by known information, to discover or produce something new and unique which has social value or personal value. Nature of innovation is breakthrough, that is, breaking the old mindset, the old conventional precepts. The core of innovation is "new", which is either lead to new products by new ideas or knowledge embedded in the production process, or new ideas or concepts of knowledge product itself. The most basic