



RICARDO
VARGAS

The History of Risk Management

Based on the book Against The Gods

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Ricardo Viana Vargas is a project, portfolio and risk management specialist. During the past 15 years, he has been responsible for over **80 major projects** in various countries in the areas of petroleum, energy, infrastructure, telecommunications, information technology and finances, comprising an investment portfolio of over 18 billion dollars.

He was the first Latin American volunteer to be elected Chairman of the Board for the **Project Management Institute (PMI)**, the largest project management organization in the world with close to 500,000 members and certified professionals in 175 countries.

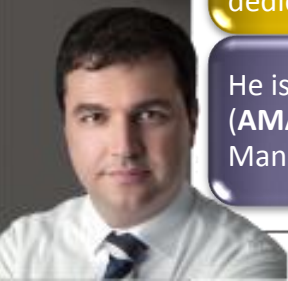
Ricardo Vargas has written **ten books** on project management, published in Portuguese and English, which have sold over 200,000 copies throughout the world. In 2005 he received the PMI Distinguished Award for his contribution to the development of project management and the PMI Professional Development Product of the Year award for the PMDome® workshop, considered the best project management training solution in the world.

He is a project management professor for various MBA courses, and actively participates on editorial boards for specialized journals in Brazil and the United States. Vargas is a recognized reviewer of the **PMBOK Guide**, the most important reference in the world for project management, and also chaired the official translation of PMBOK into Portuguese.

He is a chemical engineer and holds a master's degree in Industrial Engineering from UFMG (Federal University of Minas Gerais). Ricardo Vargas also holds a Master Certificate in Project Management from George Washington University and is certified both as a Project Management Professional (PMP) by PMI and as IPMA-B by the International Project Management Association. He attended the Program on Negotiation for Executives at **Harvard Law School**.

Over an eleven year timeframe, which began in 1995, Ricardo, in conjunction with two partners, established one of the most solid Brazilian businesses in the area of technology, project management and outsourcing, which had a staff of **4,000 collaborators** and an annual income of 50 million dollars in 2006, when Ricardo Vargas sold his share of the company to dedicate himself on a fulltime basis to the internationalization of his project management activities.

He is a member of the Association for Advancement of Cost Engineering (**AACE**), the American Management Association (**AMA**), the International Project Management Association (**IPMA**), the Institute for Global Ethics and the Professional Risk Management International Association (**PRMIA**).



Historical Aspects

Distant past was full of brilliant scientists, mathematicians, inventors, technicians and political philosophers

- Hundreds of years before the Christ was born, the skies had already been mapped,
- The great library of Alexandria had already been built and Euclid's Geometry was already being taught,
- And the demand for technological innovations with belical intentions was so sought for as today.



Historical Aspects

The revolutionary idea that sets the boundaries between modern times and the ancient times is the **ascendancy over risks**:

- The idea that the future is much more than a wish of the gods and that man are not passive before nature.
- Until man discovered how to overcome this boundary, the future was merely a mirror from the past or an obscure oracle that held the monopoly over predicted events.



Against the Gods..

The book is about the story of a group of thinkers whose vision revealed how to put the future into the service of the present.

They showed the world how to understand, measure and evaluate the impact of risks, thus making the act of taking chances into the most important propellers of modern occident society.

Conclusions : Against the Gods...

Without insurance and many of its variances,

- The death of a father would leave the young family with a terrible fate;
- Medical care would be denied to an even higher number of people.

If the farmer couldn't sell the harvest beforehand, they would produce much less food.

The ability to manage risks is the key that feeds the economic system.

How it all started...

The word “risk” comes from ancient Italian *risicare*, which means “to dare”.

In that sense, risk is an option , and not fate.

Our freedom of choice depends from the actions we dare to take,

TO DARE IS STILL THE BEST WAY TO LIVE

How it all started...

The study of risks began in the Renaissance, when people released themselves from the constraints of the past and openly challenged the sacred beliefs.

It was an era when the world was discovered and greatly explored, and the a lot of resources were found.

In a time of religious turbulence, of the beginning of capitalism, science was vigorous and the approach for the future was bold.

How it all started...

1654 – The Enigma of Méré's

- The noble knight rider Méré, with a keen taste for games, challenged the famous mathematician Blaise Pascal to decipher an enigma that had been exposed by Paccioli 200 years before.
- *How to split a bet on a game that had been interrupted when one player was winning ?*
- Pascal asked for Pierre de Fermat help, and the result of that collaboration was pure intellectual dynamite.
- What might look like a XVII century version of the game Trivial Quest, it led to the discovery of the probability theory, the mathematical core of the concept of risk.

How it all started...

The solution to the Enigma of Paccioli allowed that, for the first time, people made decisions and predicted the future with the help of numbers.

Back then, people were able to make decisions, defend their concerns and do business, but without a real understanding of risks or decision making.

As time went by, mathematicians transformed the probability theory into a powerful tool to organize, interpret and use information

How it all started...

XVIII Century

- Mathematicians used to compete against each other to invent new life expectancy charts
- Shipping insurances had emerged as a promising and sophisticated business in London.
- Gottfried von Leibniz stated: "Nature establishes standards that originate the return of events, but only in the majority of cases", leading Bernoulli to create the Law of the Big Numbers and statistical sampling.

How it all started...

Abraham de Moivre demonstrated the normal distribution – also known as bell curve – and discovered the concept of standard deviation.

That constitutes the ground concept for the Law of the Averages.



How it all started...

Daniel Bernoulli defined for the first time the systematic process by which most people make choices and come to conclusions.

He proposed the idea that the satisfaction that comes from a slight increase in richness will be inversely proportional to the amount of goods possessed before.

With that, Bernoulli explained

- Why King Midas was an unhappy man,
- Why people are usually risk averse and
- Why prices have to fall before clients can be persuaded to buy more.

How it all started...

Thomas Bayes

- Made a huge leap in statistics by showing how to make decisions by **mixing new information with old information**.
- Bayes' Theorem focuses on the frequent occasions where we have intuitive and safe judgments about an event and we want to understand how to modify them as time goes by and other events take place.

How it all started...

1952

- **Harry Markowitz** demonstrated mathematically why putting all eggs in the same basket is an unacceptable and risky strategy and that diversification is the best alternative.



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