General Risk Management Concepts

Valentin Nikonov, PhD (Economics), Coordinator, International Conference on Risk Assessment and Management

Valentin.Nikonov@gmail.com, Valentin@traectoria.ru
Цель управления рисками

"Бегать быстро" → Прибыль → "Бегать медленнее" → Безопасность

Управление рисками

Баланс

Неопределенность

Меры безопасности - дополнительные издержки
РГ.6 - вопросы нормативного регулирования

- Инструменты для смягчения риска
- Органы по техническому регулированию и стандартизации
- Предпродажная деятельность
- Сертификация
- Широкий спектр рисков
- Организации
- Внутренние риски, влияющие на эффективность бизнеса
- Риски, которые оказывают влияние на общество, потребителей
- Надзор за рынком
- Потребители
- Когда риски реализуются, они могут оказывать влияние на потребителей
- Научные институты, профессиональные организации, органы по стандартизации
- Разработка методов и инструментов управления рисками
- Изменяют поведение организаций на рынке
- Технические регламенты и стандарты способствуют смягчению рисков
- Внедрение нового технического регламента - это проект с высоким уровнем неопределенности
General Risk Management Objectives

- Finding a balance between profitability and safety
Safety – necessary and enough
Risk Management in the context of MS

Tools to mitigate the risks

Changing the behaviour of economic operators
Technical Regulations and Standards contribute to 'mitigate' risks
Imposing a new technical regulation itself is a project with a high degree of uncertainty

Technical Regulations Authorities and Standardization Bodies

Pre-market activities
Certification
Conformity Assessment

Wide range of risks
Internal risks affecting business efficiency
Risks that have undesirable effect on society, consumers

Economic operators

Consumers
When risks occur within a company, they may impact consumers

Development of Methods and tools for Risk Management
Academia, Professional Organizations, Standardization Bodies

Post-market activities
Market Surveillance
What is good risk management?

• Risks are determined in a way that it becomes clear what to do with them
• We see the whole picture of risks
• We know the most critical risks and don’t start with least important
• We determine and implement optimal risk management strategies
• We develop a crisis management plan (continuity)
What is a risk?

We need to know the following:

- Event
- Vulnerabilities
- Probability
- Impact

Relationship
- Event
- Vulnerabilities
Vulnerabilities and Risk Events
Assignment 1

• Imagine that you took your kids to an amusement park. While you are sitting at the café having coffee, the kids are enjoying the attractions. After a while, they come running and tell you this:
  – They desperately need some ice-cream and they know where you can buy it; they spoke with a guy who’s selling it already to know how much it costs, he is a funny guy though coughing all the time
  – The observation wheel is great but it is gritting loudly; and they didn’t like the operator – he looked very pale

• Determine the risks based on this information
Developing a risk profile

• To know as many risks as possible
• The concept is very simple:

  - Your key worker will get a cold
  - Your key worker will want to change jobs
  - What else? (filling in other risks)
What kind of risks can we face?

1. Business risks (consumers, competitors)
2. Credit risks (partners)
3. Market risks (securities, stock exchanges)
4. Commodity risks (Markets)
5. Liquidity risks (Markets)
6. HR risks (e.g. Health and Safety)
7. Infrastructure (e.g. Ecological risks)
8. IT risks (e.g. Information Security)
9. Risks of other business processes (main processes, marketing, design and development, testing, etc.)
10. Interest rate risks (Governments)
11. Currency risks (Markets)
12. Legal risks (Governments, Partners)
Developing a risk profile

What are the events that may influence the demand for our services?

Business risk

**write it down here**

• Go on – for all types of risks in your classification
Assignment 2

• You were sitting at the café reading the papers and talking to the waiter; and that is what you got to know:
  – Close to the amusement park you are sitting at somebody will soon start building a huge mall and an aqua park;
  – Euro is rising and the café is buying beer in Euros;
  – There was an accident on a roller-coaster at another park;
  – A lot of people forget to pay after they played tennis;
  – The park is planning to buy a new attraction – ‘Pirate’s ship’

• Develop a risk profile on the basis of this information (on behalf of amusement part)
Determination of the most critical risks
Stress testing

Improbable events

Stress testing

Scenario analysis
What must happen so that we will lose $1,000,000?

What will we do if there is another global economic crisis within the next 5 years?
Impact categories

- Image, reputation
- Efficiency
- Health
- Finance

Risks may impact...

etc...
Determination of the most critical risks

• Which impact should a risk have so that we consider it to be a severe risk in terms of business efficiency? In terms of health? In terms of finance?
## A simple table: amusement part example

<table>
<thead>
<tr>
<th>Category</th>
<th>Severe risks lead to</th>
<th>Medium risks lead to</th>
<th>Low risks lead to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category1: Business efficiency</td>
<td>Business Interruption (the whole park)</td>
<td>One attraction will not work for more than one hour</td>
<td>Additional work for employees</td>
</tr>
<tr>
<td>Category 2: Finance</td>
<td>Losses more than $1,000,000</td>
<td>Losses from $500,000 up to $1,000,000</td>
<td>Losses less than $500,000</td>
</tr>
<tr>
<td>Category 3: Health</td>
<td>Severe injuries (hospital)</td>
<td>Medium injuries</td>
<td>Light injuries</td>
</tr>
<tr>
<td>Category 4: Image, reputation</td>
<td>All clients dislike the brand</td>
<td>Articles in Mass Media</td>
<td>Rumors</td>
</tr>
<tr>
<td>Category 5: Regulatory requirements</td>
<td>License suspension</td>
<td>Fines</td>
<td>Warnings, notifications</td>
</tr>
</tbody>
</table>
Determination of a risk management strategy

• Risk management strategies
  – Risk acceptance
  – Risk avoidance
  – Risk mitigation
  – Risk transfer

• What we need to know to choose a strategy:
  – Payoff from the activity than contains a risk
  – Risk management costs
  – Risk impact
Risk acceptance

• We know that there is a risk
• We accept it and continue to work ‘no matter what’
• Risk acceptance does not mean ‘I don’t care’:
  – We know what is at risk and why we are taking it
  – We know all the risks that we accepted
  – We know what we will do if risks occur
When does risk acceptance make sense?

- High profits – when the payoff is ‘worth it’
- When risk mitigation costs are higher than the probable losses
- When something doesn’t depend on us
- When we want to accept a risk
Risk avoidance

• We simply eliminate the activity that contains a risk
  – If you don’t leave your house, you face no risk of getting into a car accident
  – And you don’t get any benefits of being outside
When does risk avoidance make sense?

- If the payoff will be less than the risk mitigation costs
- If you can’t accept the risks
Risk transfer

• There are two options:
  – To pay an insurance company for managing our risks (insurance);
  – To pay some other company for managing the activities that contain risks (outsourcing)

• When risks after risk transfer are lower than before...
Risk mitigation

• The most interesting strategy
  – Minimizing the probability
  – Minimizing the impact
• Risk mitigation requires investments
• Not all the risks can be mitigated
• Not all the risks should be mitigated
Risk mitigation tools

- Vulnerability analysis
- Diversification
- Hedging
Diversification

• Minimizing our dependence on one particular parameter that can change in the future
  – Investing simultaneously into two assets that behave differently
  – Not storing all information on one memory stick
  – Not getting all supplies from one supplier
  – etc
Hedging

• To fix now everything that may change in the future
  – Booking a table at the restaurant
  – Buying oil which is not yet even pumped
  – etc
Risk acceptance diagram
Risk acceptance diagram
Risk mitigation diagram
Risk avoidance diagram
Risk transfer diagram
Assignment 3

• Determine risk management strategies for all risks that were identified earlier
Business continuity management – crisis management

• ‘Safety pillow’
• Business continuity plan – what will we do if the risk occurs?
  – Who does what, who manages the team, etc.
• Building reserves
Assignment 4

• Develop a crisis management plan for a risk ‘Technical break which causes an interruption during the roller-coaster ride’
Risk management process

What can we do with risks?

Development of a crisis management plan

Analysis of strategy realization

Risk Assessment
- Quantification
- Evaluation

Choosing a risk management strategy
- Risk Acceptance
- Risk Avoidance
- Risk Mitigation
- Risk Transfer

Identification
- Gathering the information
- Risk registration
Conclusion

• Risk management process is similar for all organizations, though implementation depends on the nature of risks that are managed;
• It is not an elimination of uncertainty, it is a way of doing business under the conditions of uncertainty
• If it is implemented properly it will help to find a balance between safety and profitability, profits and costs