Risk-management in European Transport/
Logistical System involving both EU and non-EU Member State

Lecture 3

Prof. dr hab. eng. Iouri N. Semenov, CEng, FRINA, FIMarEST
Head of the Department „Logistics and Economic of Transport”
West-Pomeranian University of Technology, Szczecin, Poland
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Methods and techniques of effective management of transport / logistical safety
Lecture Motto:

*If you are not managing risk, the wrong one manages you*
Two approaches to problem of safety improvement

- Risk management in transport focused to two approaches to problem of safety improvement (Lecture 1 Part 2):
  - “ex post” approach, which based on using post accidents information;
  - “ex ante” approach, which aimed to avoidance or notable reduction of expected accidents.
“Ex post” approach to problem of safety improvement

This approach aimed to:

1. Accidents consequence minimizing (passive safety methods).
2. Prepared to recovery consequence of unwanted events (evacuation plans, crisis management).
3. Improves ability to cost-effective insurance.

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“Ex ante” approach to problem of safety improvement

I. This approach is aimed to:
1. Reduction the likelihood of an unwanted event.
2. Reduction the number of the unwanted event.

II. Focused to conception:
1. Accidents prevention;
2. Protection against transformation of incident into accident (active safety methods).
Three basic Techniques of Risk-management

Technique: Risk planning

Technique: Risk avoidance

Technique: Risk mitigation

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The British rule:

1. So-called the ALARP-rule (As Low As Reasonably Practicable).

2. According to that rule –

   the best decision is choice such risk which is “as low as it is practical justified”.

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Risk Management Strategies

According to ALARP-rule take place three possible management strategies:

- Risk Planning (*Acceptance and Budgeting*) – Acceptable Region
- Risk Assessment (*Mitigation or Transference*) - ALAPR Region;
- Risk Handling (*non-Acceptance*).

**Risk-Management realize into three areas:**
1. Threats;
2. Vulnerability;
3. Assets.
First Risk - Management Strategy:
Risk Planning  (Techniques: *Acceptance and Budgeting*)

- *If* consequence from refusal of transport work is greater than the risk itself, *then* we accept the potential risk under conditions:
  - capability for continue operating the transport system;
  - implement monitoring the risk level.

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Second Risk - Management Strategy:  
Risk Assessment (Techniques: Mitigation or Transference)

1. **Soft approach - Risk Mitigation.**
   To manage risk by developing a risk-management plan that prioritizes, implements, & maintains controls.

2. **Strong approach - Risk Transference (outsource or insure).**
   To transfer the risk by compensate for the loss, such as purchasing insurance.

**Comment:**
- Shipowners navigating the Gulf of Aden are seeing insurance premium for kidnap and random (K&R) increase tenfold as piracy escalates.
- Under current conditions shipowners could be paying $30,000 premium for $3 million of cover for one journey through piracy hotspots.
**Risk mitigation** is a systematic methodology used by Top managers to reduce mission risk and can be achieved through any of the following risk mitigation option:

- **Risk Limitation.** To limit the risk by implementing controls that (e.g., use of supporting, preventive, detective controls).
Transport risk mitigation cost

Benefits obtained from transport risk mitigation

Area of optimum cost effectiveness

Cost of transport risk mitigation

Amount saved

Transport Risk Mitigation

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Third risk - management Strategy:  
Risk Handling: (Techniques: Risk non- Accept)

- Strategy is used when the level of risk and the cost of compensation from undesirable event are not tolerable.
- In these cases, it is best to avoid the risk entirely.
- To avoid the risk by eliminating the risk cause and/or consequence, for example:
  - Refusal from transport work;
  - Limit some functions of the transport system;
  - Shutdown (layoff) transport system.

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Risk management according to “Ex ante” approach
Creates next chain of risk handling:

Transport system

1. Threats Identification & Risk Evaluation
2. Risk Planning & Assessment
3. Risk Handling

Risk management tools: (ISM Code, ISPS Code)

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Risk-management chain

1. RISK AVOIDANCE
2. RISK TRANSFER
3. RISK MITIGATION
4. RISK BUDGETING
5. RISK MONITORING
6. RISK CONTROL
7. RISK ACCEPTANCE

ASSESS THE PROBABILITY

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Level 5: > $40 MM
Level 4: 20 to < $40 MM
Level 3: 10 to < $20 MM
Level 2: 5 to < $10 MM
Level 1: 0 to < $5 MM

Level 1: 0.01% to < 5%
Level 2: 5% to < 15%
Level 3: 15% to < 30%
Level 4: 30% to < 50%
Level 5: > 50%