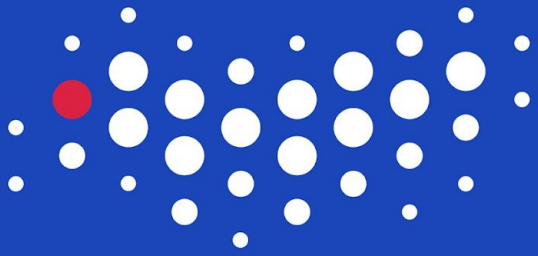

ITMO UNIVERSITY

CORPORATE ENVIRONMENTAL MANAGEMENT

Anastasia Pavlova

Saint Petersburg, 2018

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Scientific interests:

- Environment Management System
- Energy Efficiency, Circular Economy
- Corporate Social and Environmental Responsibility

ENVIRONMENTAL ASPECTS ANALYSIS

- know system approach based on PDCA circle, basic principles and methodologies for environmental aspects analysis
- identify inputs and outputs of the process
- apply the proposed method for environmental aspects analysis

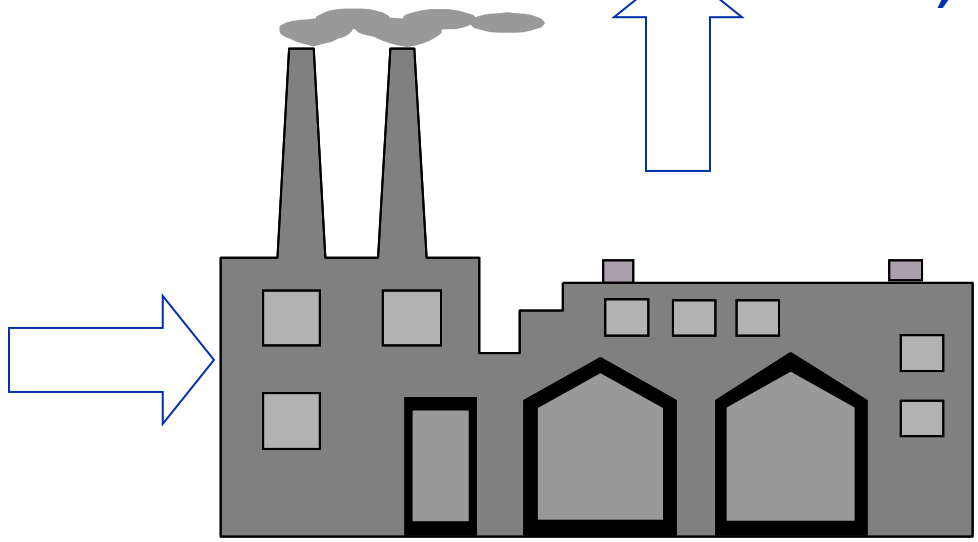
WHY IS
ENVIRONMENTAL
MANAGEMENT
SO IMPORTANT
FOR A COMPANY?

Structure for ISO management system standards

0. Introduction
1. Scope
2. Normative references
3. Terms and definitions
4. Context of the organization
5. Leadership and commitment
6. Planning
7. Support
8. Operation
9. Performance evaluation
10. Improvement

DEMING CIRCLE (PDCA)

6.1.2 ENVIRONMENTAL ASPECTS



EMISSIONS, NOISE, ODOR, HEAT, RADIATION

INPUTS

(raw materials, energy, water etc.)

OUTPUTS

Goods or services

(by-product)

WASTEWATER

WASTE

6.1.2 ENVIRONMENTAL ASPECTS

Environmental aspect is *element of an organization's activities or products or services that interacts or can interact with the environment*

- *Note 1 to entry: An environmental aspect can cause (an) environmental impact(s).*

A significant environmental aspect *is one that has or can have one or more significant environmental impact(s).*

- *Note 2 to entry: Significant environmental aspects are determined by the organization applying one or more criteria.*

6.1.2 ENVIRONMENTAL ASPECTS

cooking

FRIED EGGS

6.1.2 ENVIRONMENTAL ASPECTS

cooking

inputs

eggs

salt

energy

frying pan

water

FRIED EGGS

outputs

FRIED EGGS

emissions

wastewater

dirty dishes

waste:

- food waste
- package (plastic, paper etc)

PRACTICE #1

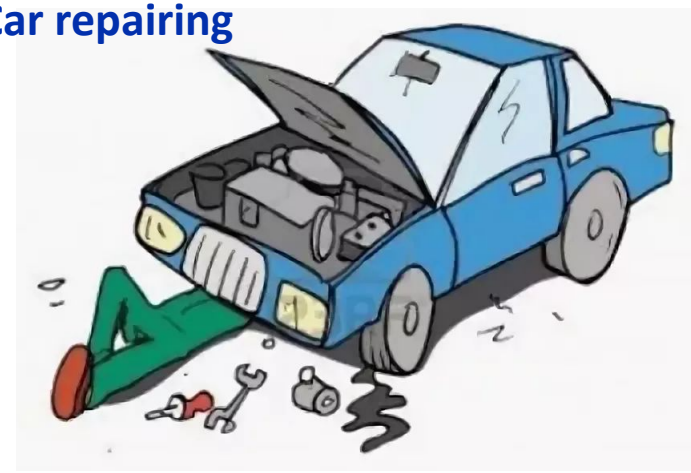
- Join in groups (3-5 persons)
- Identify inputs and outputs for the following process:
  - Car using
  - Car washing
  - Car repairing
  - Car utilization
- Timing for discussion – 10 min.
- Present the results

PRACTICE #1. ENVIRONMENTAL ASPECTS IDENTIFICATION

Car using

Car washing

Car repairing

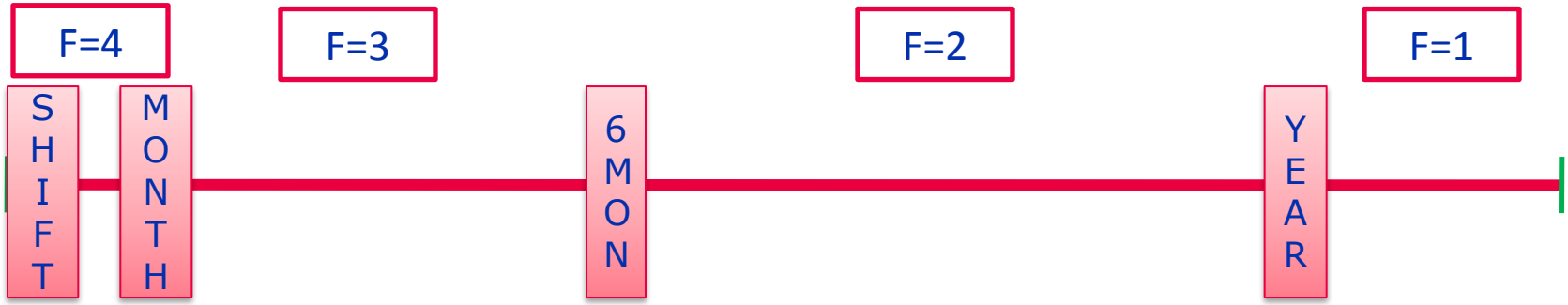


Car utilization

6.1.2 ENVIRONMENTAL ASPECTS ANALYSIS

$$C = F * S * L$$

F- the probability of occurrence of the impact



S- *the severity of the impact to the environment*

S=1 no impact;

S=2 low impact;

S= 3 medium impact;

S=4 high impact.

L- *damage to the company*

L=1 – lack of damage to the company;

L=2 - damage to the company (financial, image risks).

6.1.2 ENVIRONMENTAL ASPECTS ANALYSIS

C < 8 → Environmental aspect

C ≥ 8 → Significant environmental aspect

6.1.2 ENVIRONMENTAL ASPECTS ANALYSIS

$$C = F * S * L$$

F- the probability of occurrence of the impact

$F = ?$

S- the severity of the impact to the environment

$S = ?$

L- damage to the company

$L = ?$

$$C = 4 * 1 * 1 = 4$$

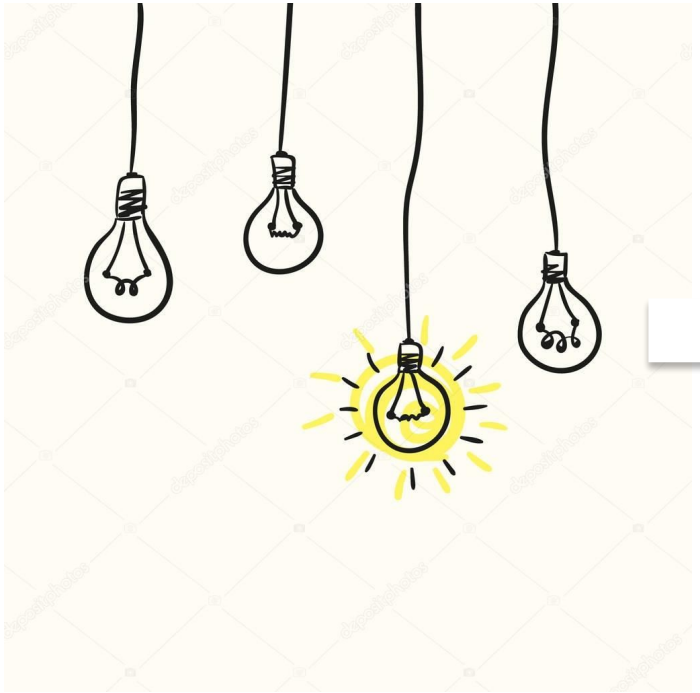
Environmental aspect

6.1.2 ENVIRONMENTAL ASPECTS ANALYSIS

Lamp replacement

inputs

New lamp



outputs

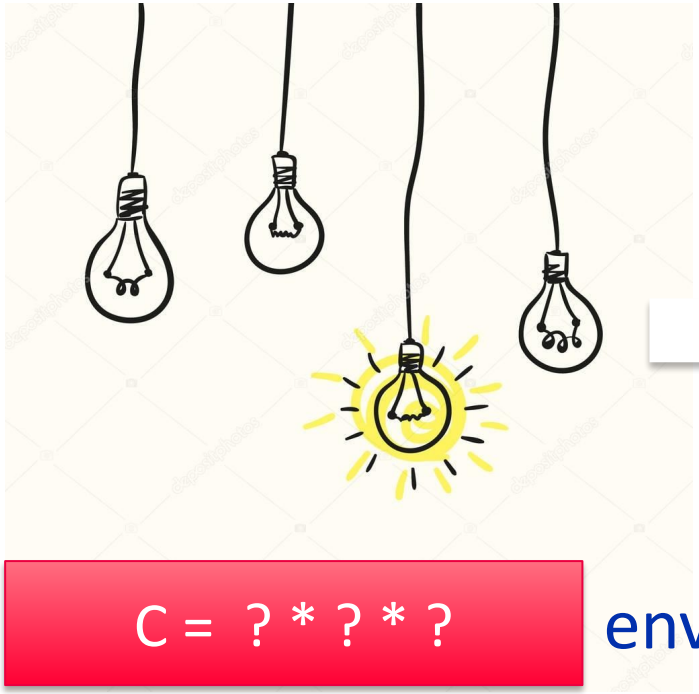
Used lamp

6.1.2 ENVIRONMENTAL ASPECTS ANALYSIS

Lamp replacement

inputs

New lamp



outputs

Used lamp

RECYCLING	C = ? * ? * ?	environmental aspect
LANDFILL	C = ? * ? * ?	significant env.aspect

PRACTICE #2

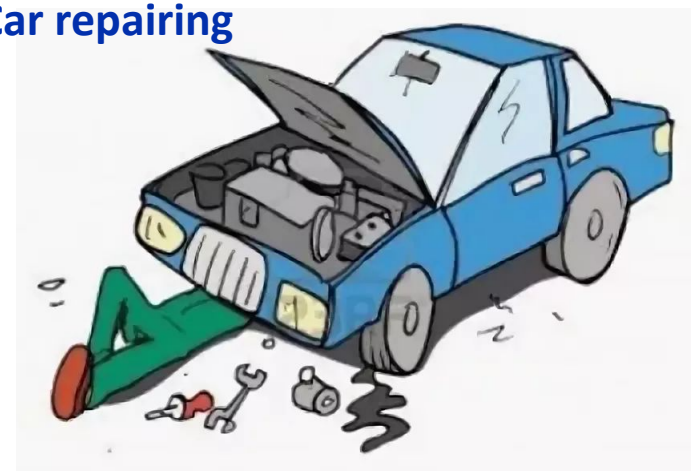
- Work in the same groups (3-5 persons)
- Analyze the environmental aspects for the processes using proposed methodology
- Determine the significant environmental aspect
- Timing for discussion – 10 min.
- Present the results

PRACTICE #1. ENVIRONMENTAL ASPECTS ANALYSIS

Car using

Car washing

Car repairing



Car utilization

CONCLUSIONS

WHY IS
ENVIRONMENTAL
MANAGEMENT
IMPORTANT
FOR YOU as SPECIALIST?

HOME TASK

- Know your environmental aspects - > carbon footprint:

http://footprint.wwf.org.uk/carbon/footprint

- Think what you can do to decrease your impact to environment

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Thank you for attention!

Saint Petersburg, 2018