

A Proposal for an OSH Management System Focused on the University Education Field

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Zásady pro vypracování:

1. Formou literární rešerše pojednejte o zásadách uplatňovaných v bezpečnosti a ochraně zdraví při práci.
2. Analyzujte systém legislativních požadavků na BOZP v podmínkách České republiky týkající se předmětné oblasti.
3. Analyzujte systém normativních požadavků na BOZP v podmínkách České republiky týkající se předmětné oblasti ve smyslu specifikace OHSAS 18001 pro certifikaci systému BOZP.
4. Vytvořte modelovou strukturu pro zkoumání předmětné oblasti.
5. Analyzujte a vyhodnoťte rizika vznikající při pracovních činnostech u vybraného subjektu.
6. Na modelové struktuře vybraného subjektu navrhnete systém řízení BOZP.
7. Na základě bezpečnostní analýzy zpracujete systém požadavků a doporučení pro objekty obdobného typu vedoucí k certifikaci.

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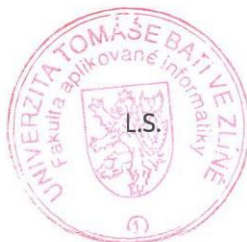
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ABSTRAKT

Diplomová práce uvádí své čtenáře do oblasti bezpečnosti a ochrany zdraví při práci prostřednictvím analýzy legislativních a normativních požadavků, přičemž z každé oblasti formuluje zásady uplatňované ve zkoumané oblasti. Protože podstatou systému bezpečnosti a ochrany zdraví při práci je účinné řízení rizik, diplomová práce dále popisuje teoretické přístupy k této problematice - zvláště pak metody identifikace a hodnocení rizik. Dále byla vytvořena modelová struktura pro návrh systému řízení bezpečnosti a ochrany zdraví při práci v prostředí vysokého školství včetně provedení analýzy rizika při pracovních činnostech a stanovení opatření pro snížení či eliminaci rizika. Z bezpečnostní analýzy složené z roční prověrky bezpečnosti a ochrany zdraví při práci a interního auditu modelové struktury následně vyplynuly doporučení vedoucí k dalšímu zlepšení a případné certifikaci.

Klíčová slova: řízení rizik, řízení BOZP, OHSAS standardizace, právní úprava problematiky bezpečnosti a ochrany zdraví při práci, certifikace.

ABSTRACT

Master's thesis introduces its readers to the field of occupational safety and health at work through analysis of essential legislative and normative requirements, while there are from both areas formulated principles applicable within the studied area. Because the core of health and safety at work system is an effective risk management, diploma thesis further describes theoretical approaches to this issue - especially the methods of risk identification and risk assessment. Further has been conceived a model structure for a draft of health and safety at work management system within the university education field, including an analysis of risks in work activities and determination of measurements to reduce or to eliminate the risk. From the safety analysis based on annual safety review and internal audit of the model structure subsequently resulted recommendations leading to subsequent improvement and to possible certification.

Keywords: risk management, OSH management, OHSAS standardization, legal regulations of occupational health and safety at work, certification.

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General motto:

„Think before you act.“¹

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Declaration of honor:

I hereby declare that the print version of my master's thesis and the electronic version of my thesis deposited in the IS/STAG system are identical.

¹ 40 Free Safety Slogans For the Workplaces. *Safety and Risk Management* [online]. 2011 [viewed 2014-02-08]. Available from: <http://www.safetyrisk.net/40-free-safety-slogans-for-the-workplaces/>.

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INTRODUCTION

I remember I used to have a problem with selecting the OSH as a topic of my further professional specialization a period time ago. The OSH has been just anything weird and not just as exciting² subject. So I passed the OSH exam on the university while studying my bachelor degree and no love at first sight did not take place. It has been just an ordinary exam. I had an imagination the OSH is the matter of just complying any legal requirements with reality on particular workplaces.³ And of course I have passed several OSH trainings, which are commonly taken with the prejudice of the most boring lecturing activities - especially across non-industrial companies, where the risk is not as tangible.

Then I learned that people from daily study form, which are not sure about choosing the right topic, are just picking the OSH problematic, whereafter they wrote awfully formal theses with no added value at all. Maybe because they have not worked within this field or needed just to formally fulfil one of study requirement. And maybe there did not exist another reason for it - anyway they did not care if the result of their trying would help anyone⁴. This has been cruel founding for me, which demoted OSH in my eyes quite seriously. As just like the scenario of the safety specialist role, when I would conduct a safety observation within a factory and scream to any poor worker: *“Get your safety helmet immediately on your head or I will let you dismissed!”*. I have always believed in an **average inborn intelligence** of every human being⁵ and therefore for long period of time - not yet employed within the role of OSH responsible of course - I found highly unnecessary to tell anyone how to behave not to be harmed. With more practical experiences, I must admit it is needed to tell and even to scream sometimes important safety information, because on the workplace you can find people with no imagination, with almost no self-control, with no planning sense at all and generally not disposing of the higher *“what could happen if”* sense. You can not even send the assistant of finance

² In comparison to all the possible fields of security management specialization like forensic psychology, criminal law, investigation of extraordinary events, secret services issues, terrorism and organized crime or criminology.

³ As I found later, this used to be expressed as „*acceptable level risk setting*“ by adjusting minimal security or safety requirements by the simplest method given by legal regulations - as described in: PALEČEK, Miloš. *Prevence rizik*. Vyd. 1. Praha: Oeconomica, 2006, 257 s. ISBN 80-245-1117-7, p. 6.

⁴ Like society, other students or themselves in any activity connected with thesis elaboration.

⁵ As it is expected from the provision of § 4, article 1 Civil Code.

manager to the production section of workplace. When deciding to pack off the assistant there, the manager⁶ usually says for himself: “*That girl is clever enough to behave safely anywhere!*” And that could be a mistake, because without particular OSH training this decision may cost employee working in another conditions or environment whole hand till shoulder. We consider some people highly intelligent, but they could be intelligent, but not disposing of the special type of social intelligence as is the **safety feeling - or so called awareness**. Therefore they had to be lectured in a right way - at the best from someone disposing of this sense and know how to behave safely. Nowadays when I would see anyone behaving risky, **I would prefer to preventively scream a bit than giving him the first or the last aid.**

As I found later, the essentials of OSH are of course far from screaming and should not be built on principle of slave compliance, which formed not only a distorted picture of boredom for this professional specialization. In my opinion OSH represents an interesting interdisciplinary field with higher purpose consisted of legal, health, technical and social aspects, where should be applied proactive clear-sighted spirit of OSH responsible. It is pretty good job to ensure, that work should not harm human’s senses, human’s body and human’s soul. In my opinion OSH is not just about physical well-being, but should be oriented also on the psychical aspects.

Although in the contemporary world there are so many different issues within the field of private property protection and although there is possible to steal or to harm almost anything - like money on your bank account, your own identity or any other property, I believe **the protection of human’s health and life should have such an extra priority**. Generally I do not like mentioning of any economical approaches to this issue. Yes, there are some possible logical ways of setting the life’s value⁷, but despite how interesting it is, I personally find any means of human’s life evaluation in money as very inaccurate and in some respect rude matter. My reason is, that **every single human’s life has its unique and original value** not just only for the wide society, but chiefly for the closest environment the one is living in. And this surrounding is such as complicated system of impacts and contexts, so the real loss is not really expressible in money. As human is considered the

⁶ Acting in the charge of OSH responsible person according to provision of § 101, article 2 Labour Code.

⁷ HUDEMA, Marek. Jak se dá odhadnout cena života?. In: *Lidovky.cz* [online]. 2010 [viewed 2014-01-07]. Available from: http://byznys.lidovky.cz/jak-se-da-odhadnout-cena-zivota-dze-/moje-penize.aspx?c=A100614_160105_moje-penize_nev.

greatest entity in the world we are living in, especially for the abilities of creating, feeling, learning or independent thinking, **the society should better think about improvement of life and health protection** in wide respects than think about how much money does it cost, as this question is unfortunately the one, that controls the whole present world. But on the other hand many people forget about their life and health with the simple “*I do not care*” approach until losing it. And it might be too late for start of thinking on the safety.

The importance of human’s health and life safety is fortunately supported by the overall trend across the *developed world*, where human’s work is being replaced by technologies and **human is also instead of performing elementary working operations, which fits to the machines, spending more and more time on work with more added value** using its own personality.

Ending this introduction I would like to express my will to create **a thesis with added value** in order to my further personal development.

I. THEORY

1 LEGISLATIVE REQUIREMENTS FOR OSH SYSTEM

„Your work and safety can not be separated.“⁸

The basic legal frame for OSH is given by the **Charter of Rights and Freedoms**⁹, where there is in chapter 4, article 28 and article 31 granted the right for “*satisfactory working conditions*” and the right for “*health safety*”. In article 29 could be found closely connected rule, that “*women, adolescents and persons with disabilities are entitled to increased health protection at work and special working conditions*”. Details are provided by *lexes specialis* as analyzed in subchapters below. Overall Czech legal order consists so many acts, which would be almost impossible and inefficient to just quote all of them. Therefore below, there are mentioned fundamental ones creating base frame or those, which are fitting the field of university education.

As the Czech Republic is a part of European Union, local legal background is also created by its legal acts - in the field of OSH especially by the directives. As generally known, directives are legal acts, whose aim is to harmonize national legislation with the European community law and therefore **these acts are implemented into legal orders** of European union members. For illustration author quotes just two directives from the OSH field called as “*Framework Directives*”. It is Council Directive 89/391/EEC of 12 June 1989 *On the introduction of measures to encourage improvements in the safety and health of workers at work* and the second one is Council Directive 91/383/EEC of 25 June 1991 *Supplementing the measures to encourage improvements in the safety and health at work of workers with a fixed-duration employment relationship or a temporary employment relationship*. Others European “*individual directives*” are for example focused on the minimum safety and health requirements for the use of work equipment by workers at work, on protection against the dangers arising from exposure to ionising radiation or arising from physical

⁸ 40 Free Safety Slogans For the Workplaces. *Safety and Risk Management* [online]. 2011 [viewed 2014-02-08]. Available from: <http://www.safetyrisk.net/40-free-safety-slogans-for-the-workplaces/>.

⁹ Česká republika. Zákon o vyhlášení Listiny základních práv a svobod jako součásti ústavního pořádku České republiky. In: *Sbírka zákonů*. 1993. Available from: <http://portal.gov.cz/app/zakony/zakonPar.jsp?page=0&idBiblio=40453&fulltext=&nr=2~2F1993&part=&name=&rpp=50#local-content>.

agents, on minimum requirements for the provision of safety and/or health signs at work, and concerning many others issues.¹⁰

At least we should take into account **ratified international conventions** like *Convention concerning Occupational Safety and Health and the Working Environment*¹¹, which are also legally binding for Czech republic and entered into force for this country.

We can not overlook **practice of the courts**. For the law unification, its interpretation and accuration within OSH are responsible Supreme Court of the Czech Republic and Constitutional Court of the Czech Republic, which issue legally binding decisions for further similar cases and specifying in detail any provisions of legal acts as shown below.¹²

1.1 Labour Code

In the most important act **governing generally OSH conditions** could be found in its part 5 called appropriately as “*Health and safety at work*”. By its first provisions legislators intended to express the **employer's obligation**¹³ of **ensuring OSH** regarding possible risks related to the particular work. Employer's obligation is applicable not even for his employees, but is related as well **to any person present at the workplace**, about which the employer knows. At the beginning of Labour Code there is possible to find general rule saying that **costs associated with ensuring the OSH are to be always paid by the employer**. Therefore typical situation, when employer sends newly incoming employee to medical examination, doctor issues a bill and employer refuses to pay for this expenditure, is unacceptable. The same situation is with PPE's costs, which are to be wholly covered by an employer.

Paragraph 102 of the Labour Code is laying down **employer's duty of providing safe and healthy working environment and working conditions** by appropriate organization of

¹⁰ See individual directives at: European Agency for Safety and Health at Work. *Thematic selection of EU directives related to OSH and related modes* [online]. 2014 [viewed 2014-02-09]. Available from: https://osha.europa.eu/fop/czech-republic/en/legislation/smernice.php?set_language=en.

¹¹ See more at: International Labour Organization. C155 - Occupational Safety and Health Convention, 1981 (No. 155) [online]. © 1996-2012 [viewed 2014-02-09]. Available from: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312300.

¹² Some examples are described for instance in the chapter 1.1.4 about work accidents.

¹³ In the meaning of § 101, article 2 Labour Code, the care for safety is given concretely to the managers at all management levels.

OSH and taking measures to prevent risks, which are employer's actions, aimed at **preventing, removing or minimizing** the effects of unavoidable risks - especially:

- **searching for** dangerous factors and processes,
- **identifying** its origins,
- and **taking measures** for its elimination.

The **employer has to keep records** about searching and evaluation of risks and the measures taken in accordance with **general precautionary principles** stated in § 102, article 5 Labour Code.¹⁴

Any employer has to take “*in case of emergency*” events¹⁵ **measurements**, providing evacuation of workers, giving the first aid - including equipping the workplace by adequate medical material regarding the relevant risks occurring in the particular workplace¹⁶ and staff training - and as well in case of need alarming the appropriate emergency services. Taken measurements **must be adapted** to the changes, its effectiveness and compliance **must be monitored** and improvement in working environment and conditions **must be ensured**.

1.1.1 Duties of employer and duties and rights of employee

Labour Code is further in § 103 providing 13 specific **duties of the employer**. For illustration author would like to make reference just on several of them. Employer's *inter alia* musts are:

- **not to allow any employee performing forbidden works** or works inadequate regarding his abilities and health status¹⁷,
- **ensure the ban of smoking** on the workplace,

¹⁴ Example of search and evaluation of risks with taken measures is included under Appendix VI.

¹⁵ Such as accidents, fires, floods, earthquakes, storms or other serious hazards.

¹⁶ The Czech legislation is recently not stating any specific first aid kit equipment.

¹⁷ If the employer is employing employees classified to category one, he is obliged to have undersigned contract with medical doctor just with specialization in general medicine to professionally assess the current health status of employee. Source: Česká republika. Zákon o specifických zdravotních službách: zákon ze dne 6. listopadu 2011. In: *Sbírka zákonů*. 2011. Available from: <http://portal.gov.cz/app/zakony/zakonInfo.jsp?idBiblio=75507&fulltext=&nr=373~2F2011&part=&name=&rpp=15#local-content>.

- **allow the employee to look into the record**, which is led about every single employee in connection with managing the OSH,
- **not to use those methods** of financial motivation, which would **expose workers to increased risk** of accident or may cause negative consequences to health,

and others.

In contrast, the **rights and obligations of employee** could be found in the provision of § 106 Labour Code, so employee has right for:

- **ensuring OSH, for information** about the **risks** of his work and for information about protective **measures**; information must be in **understandable** form¹⁸ for the employees,
- **refusing the work order** which is reasonably considered as immediately and seriously **threatening employee's life or health**, or the life or health of other persons; such a refusal **can not be considered as failure** to fulfill obligations of the employee.

Employee is obliged according to his ability to **heed for own safety**, health and health of each individuals, which are directly affected by employee's activity, and according to exhaustive list in article 4 must for example:

- **participate in training** provided by the employer focused on OSH; including verification of their knowledge,
- **not to drink alcoholic beverages** and not to consume other addictive substances in the workplace, during working hours and not to enter under its influence in the employer's premises and **submit to an inspection** of the employer **if the employee is under the influence of alcohol or others addictive substances**; ban of the

¹⁸ In the meaning of Supreme Court of the Czech Republic decision - the command for ensuring the OSH is both written or oral instruction regardless to its expressiveness or rules of social conventions if it provides binding instruction for subordinates. In this case the manager said to workers using the rude word and street language to not get up the skylights, because there is a risk of falling down and court took it as relevant warning for the risk, because it consisted binding instruction for subordinates and explaining the reason of it. Source: *Rozsudek sp. zn. 21 Cdo 2141/2011 ze dne 4. září 2012*. Nejvyšší soud České republiky, 2012. Available from: http://www.nsoud.cz/Judikatura/judikatura_ns.nsf/WebSearch/6AB53459D321133CC1257A7D004133C0?openDocument&Highlight=0.

consumption of alcoholic beverages shall not apply to employees, for whom consumption of these beverages is a standard part of work performance or if carrying out those tasks is normally associated with their job; and those employees who work in unfavorable microclimate conditions should drink beer with low alcohol content,

- **not smoking** in the workplace and in other areas where there are present nonsmokers,
- **notify** immediately his manager **about any accident** of own person or anyone else's, which had been witnessed and to **cooperate in the investigation** of the accident.

1.1.2 Safety trainings

In provision of § 103, article 2 and § 106, article 4, letter a) Labour Code there is anchored **the requirement on staff safety training** focused to the particular works with orientation to the risks to which an employee may get in touch with. Trainings must be provided, if:

- employee **starts** working in any position within the company,
- employee **changes** the position or **changes** the work **character**,
- new technology is implemented, is done any **change** in production or in working means or there has been done any change in technology or in work practices,
- there is any case, that **should have any significant impact** on OSH.

The employer is required to determine the content, the frequency of trainings and the method of verifying employees' knowledge and to conduct the documentation of realized trainings. If it is required by the character of the risk and its severity, training must be repeated periodically. So the question of **how often, who to, and which content to lecture is absolutely up to the employer** - anyway it is employer, who is responsible to do his best in order to avert the risk, because in case of accident State Labour Inspection Office will be asking if, about which matter and when has been particular employee trained. Period of safety trainings should be carried out every year, every second or third year -

depending on the character of performed tasks. It is said administrative clerks should be trained every two years.¹⁹

In the tables enclosed to appendice under number I. of this master's thesis there have been divided trainings on regular and specialized ones. Every training has its name and it is clear who is trained subject, when or how often does lecturing take part, who is conducting it, what is the matter and which documentation is needed to acquire. In literature²⁰ there is mentioned following **list of important documents and records** from training:

- list of attendance,
- training outline,
- presentation,
- authorization of lector,
- knowledge verification.

Safety trainings **should not end up at signature of any paper** declaring, that this employee has been trained having just administrative character and is overestimated. Awareness about OSH should be noticed and taking into account according to risk of a particular employees. It is recommended to deploy at the workplaces slogans, which could revive the employee's awareness about OSH as on the start of every thesis chapter. In author's experience it is only positive if the particular OSH slogan sounds crazy, because it is causing a feedback and employees are thinking about it, so they are safety awared.

1.1.3 Personal protective equipment

Labour code is then in provision of § 104 dealing with PPE, which are **to be distributed** to employees in cases, **where the risk can not be eliminated or sufficiently limited** by means of collective protection or by measures in work organization. The aim of PPE is to protect employees from the hazards, shall meet given requirements and paralelly must not threaten their health, nor impede the performance of work. On workplaces, where there are extreme conditions as pollution, the employer must provide the employee working clothes or shoes as PPE. Detergents, cleaners and disinfectants are supplied to employees in regardance of the extent skin and clothing pollution. On workplaces with unsatisfactory

¹⁹ Školení BOZP. *BOZP Ostrava* [online]. © 2012 [viewed 2014-02-10]. Available from: <http://www.bozpostrava.cz/skoleni-bozp/>.

²⁰ ŠENK, Zdeněk. *1309 testových otázek BOZP: jedinečný zdroj informací pro OZO BOZP*. 1. vyd. Olomouc: ANAG, 2011, 415 s. Práce, mzdy, pojištění. ISBN 978-807-2636-471, p. 321.

microclimate conditions are to be served protective beverages. PPE, detergents, cleaners and disinfectants and protective drinks are given to employees **for free of charge**. Providing PPE **could not be replaced** to employees in money.

1.1.4 Work accidents

The meaning of work accident term explained by provision of § 380, article 1 Labour Code, under definition of: “*an injury or death of employee caused independently on his will by short, sudden²¹ and violent external influences during the performance of work tasks or in direct connection with it.”²² Similar definition could be found in provision of § 10 Act No. 266/2006 Coll., Employee Accidental Insurance Act, which is estimated to come in force from 1st January 2015.*

In my experience, in some companies there are being analyzed not just work accidents, but also incidents - so called “near-misses”, which are those situations connected to work accidents, **where should nearly happens an accident** - for example falling of burden close to employee. author found this point as important, because paying attention to such situations has significant preventive character and it is a proof of conducting the risk evaluation within the organization.

For performance of work tasks is basically²³ considered fulfilling work duties, other activities performed on the employer's command or the activity that is the subject of work trip. General practice of courts - as shown in decision of Supreme Court of the Czech Republic²⁴ - is stressing the fact, that **not the whole time employee is left on the work**

²¹ Work accident must truly happens in a sudden way: for example in the case of R 28/1980 published in *Collection of Judgments and Opinions*, the health of employee have been gradually deteriorated and *nexus causalis* has been connected also with other factors like heavy regular work and the employee's age - source: HOCHMAN, Josef. *Judikatura v pracovním právu*. Praha: Linde, 1999, 152 s. ISBN 80-861-3105-X, s. 97.

²² „Poškození zdraví nebo smrt zaměstnance, došlo-li k nim nezávisle na jeho vůli krátkodobým, náhlým a násilným působením zevních vlivů při plnění pracovních úkolů nebo v přímé souvislosti s ním“, source: Česká republika. *Zákoník práce: zákon ze dne 21. dubna 2006*. In: *Sbírka zákonů*. 2006. Available from: <http://portal.gov.cz/app/zakony/download?idBiblio=62694&nr=262~2F2006~20Sb.&ft=pdf>.

²³ Comprehensive list is provided by the provision of § 10, article 1 and 2 Act No. 266/2006 Coll., Employee Accidental Insurance Act, which is estimated to enter into force from 1st January 2015.

²⁴ *Rozsudek sp. zn. 21 Cdo 4834/2010 ze dne 5. ledna 2012*. Nejvyšší soud České republiky, 2012. Available from: http://www.nsoud.cz/Judikatura/judikatura_ns.nsf/WebSearch/49DAAA9E52986EF9C1257A4E00669DF5?openDocument&Highlight=0.

trip and happens any injury, should be assessed as the work accident in the legal meaning. In this event the employee has been in the destination of work trip on his way from the workplace to the accommodation attacked, injured and subsequently hospitalized. Supreme Court of the Czech Republic expressed the view, that not all the activities in the length of work travel are to be considered for tasks related to performing the job or tasks connected with it. **The entire assessment is depended on *ad hoc* details** - in this case on so called “**necessary acts**” in direct connection to performing the work activities. Above mentioned journey to the hotel has been taken by court as a regular way home.

The occasion of **teambuilding** is supposed for performance of work tasks as well, but **in dependence on the content of activities**, which should be targeted to build and to develop the potential of the working teams, to increase the motivation, confidence and communication among members.²⁵ This could not be applied on the action having just the title of “teambuilding” with private character.

The issue of assessing work accidents is in the light of legal meaning quite complicated.

The term of “direct connection with performance of work tasks” is basically determined as **activities required to perform the work** and usual tasks during the work or needed to be done in order to start or to end the work, normal activities during meal breaks or rest performed in the premises of the employer.

Harm on health for employee could be **both physical or psychological** and as known, psychological trauma could lead in heart attack. But as solved in case published under R 11/1976 of *Collection of Judgments and Opinions*,²⁶ when assessing the work accident it is necessary to take into account the employee **workload and its connection to the accident**. Therefore the event of sudden heart attack, which has been started by the senior manager's sacking the subordinate employee, could not be assessed as an accident, because the heart attack has not been caused by the employee's performance of job duties. On the contrary, according to decision of Municipal court in Brno, file number 34 C 202/82,²⁷ these conditions of work accident have been fulfilled in case, when public transportation

²⁵ *Rozsudek sp. zn. 21 Cdo 5060/2007 ze dne 12. února 2009*. Nejvyšší soud České republiky, 2009. Available from: http://www.nsoud.cz/Judikatura/judikatura_ns.nsf/WebSearch/07398E4E98BF06FBC1257A4E006ABEC3?openDocument&Highlight=0,.

²⁶ HOCHMAN, Josef. *Judikatura v pracovním právu*. Praha: Linde, 1999, 152 s. ISBN 80-861-3105-X, p. 96.

²⁷ *Ibidem*, p. 97.

controller decided to chase person without valid ticket for the purpose of identification and fining, but when running the employee of public transportation company got heart attack considered as work accident.

The employer is **required to clarify the causes and circumstances** of any employee's accident under the provision of § 105 Labour Code. If possible, on the investigation should participate injured employee, witnesses and OSH representative. Except serious reasons²⁸ **employer must not change conditions at the accident scene** until the causes and circumstances of the accident are not clarified.

The employer is required to have records and documentation of all accidents, especially then about accidents, **which caused** accidents to employees with **work incapacity of more than 3 calendar days** or to **employee death**. The employer is then of course obliged to **take measures against the accidents recurrence**.

About any accident must be kept record in the “*Accident book*”, notwithstanding the fact if there is or is not caused any employee's work incapacity.²⁹

Accident book led in paper or electronic form should for example follows this structure:

1. **cover sheet** with the book title and particular year, in which the accident took place,
2. **list of all occupational accidents** including serial number of record, date of accident, name and surname of injured employee, type of accident and injured part of the body and any others details that may contribute OSH efficiency,
3. **individual book records** of accidents consisting all the required information pursuant provision of § 2 Government Regulation No. 201/2010 Coll., including investigation and taking measurements against the recurrence of work accidents.³⁰

If possible to accident circumstances, author personally recommends **to take photo or video documentation** in order to have appropriate evidence for possible proceedings.

Administrative proceedings connected to this topic are then to be done in the occasions and terms according to enclosed table.³¹

²⁸ As for serious reasons are considered health and life rescue and recovery works.

²⁹ A form of record as part of the „Accident book“ is included under Appendix I. of this master's thesis.

³⁰ Pursuant to the provisions of § 105, article 1, first sentence and § 105, article 5 Labour Code.

1.1.5 Occupational diseases

Still valid³² *Government regulation No. 290/1995 Coll. Establishing the list of occupational diseases* is under § 1 defining the term of occupational disease as: “**disease arising from adverse effects of chemical, physical, biological or other harmful effects, if arised under the conditions specified in the list of occupational disease; occupational disease is also acute poisoning resulting from the adverse effects of chemicals.**”³³ The list of occupational diseases is divided on several parts depending on the chemical, physical, respiration, dermatic, parasitic and communicable or another nature of disease. So, compliance of the employee’s **diagnosis** and **description** of disease from the above mentioned enclosure of the government regulation arisen from **specific conditions on particular workplace** are three relevant factors for assessing the occupational disease.

The procedure of occupational diseases recognition may start employee, employer or medical doctor of employee or employer. But according to provision of § 61, article 2 Specific Health Services Code, **the medical report about occupational disease** should be issued only by medical doctor with **obtained authorization** from Ministry of Health of the Czech Republic for the field of occupational medicine.

In my opinion occupational diseases are **proofs of inadequate risk detection** given by insufficient communication of employees, their management and person responsible for OSH and not appropriately set periods of health examinations. Therefore the best prevention should be to **carefully listen** to repeated complaints of every single employee and pursuant to best practices **to enact a visit at doctor** in order to determine if there is any threat of occupational disease. Based on medical report stating there is the risk of

³¹ Included under Appendix II. of this master's thesis.

³² From 1st January 2015 this definition is to be probably found in provision of § 11 Act No. 266/2006 Coll., Employee Accidental Insurance Act, which is estimated to come in force from above mentioned date.

³³ „(...) nemoci vznikající nepříznivým působením chemických, fyzikálních, biologických nebo jiných škodlivých vlivů, pokud vznikly za podmínek uvedených v seznamu nemocí z povolání. Nemoci z povolání se rozumí též akutní otrava vznikající nepříznivým působením chemických látek.“, source: Česká republika. Nařízení vlády, kterým se stanoví seznam nemocí z povolání: nařízení vlády ze dne 15. listopadu 2005. In: *Sbírka zákonů*. 1995. Available from: <http://portal.gov.cz/app/zakony/zakonStruct.jsp?page=0&idBiblio=43357&recShow=0&fulltext=&nr=290~2F1995&part=&name=&rpp=15#parCnt>.

occupational disease should be done assignment to another job, **so the disease is prevented** and is not deteriorating any more.³⁴

Latest accessible information about this subtopic are from the year 2012 stating, that for this year has been reported 1042 occupational diseases and 57 reports about threats of occupational diseases. Previous year has been reported 167 more cases. Could be predictable that majority of 27,5 % occupational diseases were announced from Moravian-Silesian region, what is given by the fact that most people there are working in the primary economic sector. Very interesting information is as well that 51,2 % of occupational diseases happened within companies employing more than 500 employees, which could lead to thinking about effectiveness of the OSH management system. The most extended diseases has been caused by physical factors as vibrations or overburdening the limbs as typical example and most common diagnosis is the “*carpal tunnel syndrome*”. As shown on the following graph, the overall situation in occupational diseases has from the year 2000 decreasing trend.³⁵

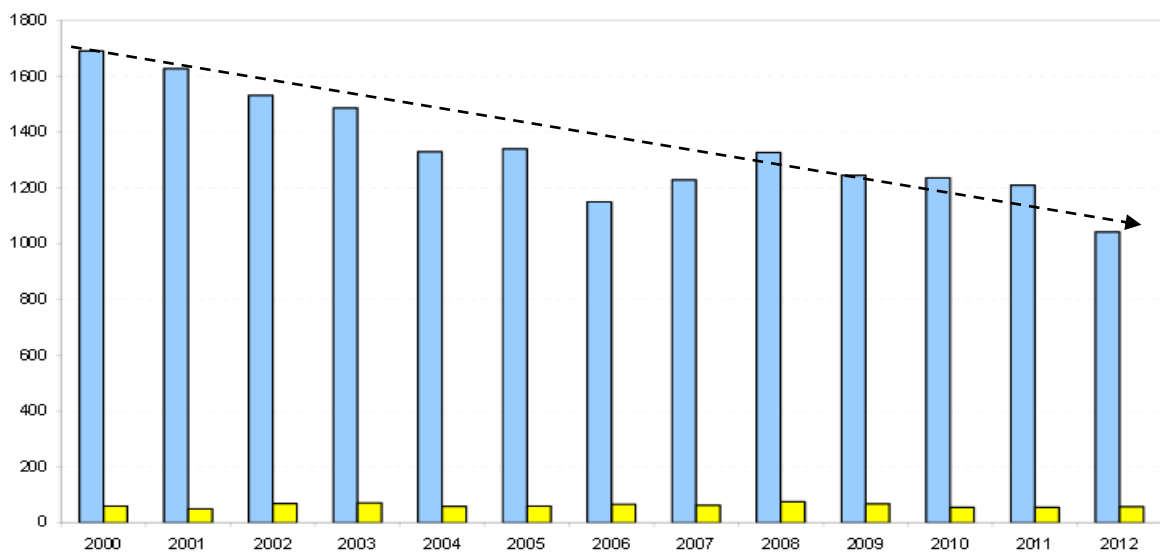


Figure 1: Trend of occupational diseases³⁶

³⁴ BĚLINA, Miroslav. *Zákoník práce: komentář*. 2. vyd. Praha: C.H. Beck, 2010, xxi, 1123 s. ISBN 978-807-4003-172, p. 389.

³⁵ FENCLOVÁ, Zdenka, Dana HAVLOVÁ, Michaela VOŘÍŠKOVÁ, Pavel URBAN, Daniela PELCLOVÁ a Jan ŽOFKA. *Nemoci z povolání v České republice* [online]. Státní zdravotní ústav, 2013 [viewed 2014-02-20]. ISSN 1804-5960. Available from: http://www.szu.cz/uploads/download/Hlaseni_a_odhlaseni_2012.pdf, p. 8.

³⁶ Ibidem, p. 75.

Pursuant the provision of § 105, article 6 Labour Code the employer should have **an evidence of occupational diseases** as in the case of work accidents. As there is not prescribed any binding form of its evidence, author prefers simple list consisting of employee's name, surname, age, position, length of employment contract within this position, the cause of occupational disease. Author considers just those information as important for further risk prevention.

1.1.6 Compensation for work accidents and occupational diseases

The problematic of above superscripted issue is regulated by the provision of § 366 Labour Code and following and continues to two previous subchapters describing the core of both institutes. Obligation of compensation is based on principle of objective responsibility pursuant the provision of § 366 Labour Code, where is - unlike subjective responsibility - **not required any employer's fail or guilt**. Assumptions of liability for damage are three: **existence of the work accident or occupational disease, caused harm and causal nexus** between those requirements as to be clear, that the damage is resulting to the harm.³⁷ The employee should require compensation, because if not so, why should the employer pay.

Pursuant to next provisions of Labour Code, the employer shall be relieved of liability for damage in full extent **only if** one of following condition is **just the one** causing the damage, which has been:

- caused by the fault of the employee **violating legal regulation or employer's guideline** to ensure OSH, although the employee has been properly **familiarized** with this rule and its knowledge and compliance were consistently **required and checked**,
- inflicted by the **employee's inebriety** or due to **abuse of addictive substances**, and the employer **could not prevent** the damage.

If abovementioned reasons were **one of several causes of the damage**, the employer should be liberated partially³⁸ as well as for the reason, that employee suffered damage, because of acting in a manner contrary to the usual behavior - even though there have not

³⁷ BĚLINA, Miroslav. *Zákoník práce: komentář*. 2. vyd. Praha: C.H. Beck, 2010, xxi, 1123 s. ISBN 978-807-4003-172, p. 989.

³⁸ Depending on the *ad hoc* extent of employee culpability, but for the oncoming reason the employer is bearing at least one third of the damage.

been violated any regulation or employer's guideline, but the employee acted recklessly and had to be aware that he might inflict damage considering employee's qualifications and experience.

Pursuant provision of § 368 Labour Code, **the employer can never be relieved** of liability if the employee suffered an accident **when averting imminent harm to the employer or imminent danger to life or health**, if the employee did not induced it.

In the particular extent is the employer responsible for damage suffered to the employee.

The employee should raise claims for:

- loss on earnings,
- pain and deterioration of social status,
- reasonably incurred costs of treatment,
- damage to property.

Compensation for loss on earnings compensation **during the period of working incapacity** is calculated as the difference between the amount of average earnings before the health damage occurred and the amount of sick leave remuneration claimed of course for the whole period of working incapacity. **After termination of working incapacity** or disability acknowledgement the employee is entitled to claim the difference between the amount of average earnings before the health damage occurred and the amount of earnings achieved after work accident or occupational plus disability pension. Further details are supplied in provisions of § 370 and 371 Labour Code.

Compensation for pain and deterioration of social status are set as a lump sum reward, which is regulated by provisions of *Ministry of Health and Ministry of Social Affairs Regulation No. 440/2001 Coll., About pain and deterioration of social status compensation*, pursuant to which both individual claims are based on medical report and being assessed in compliance with so called "*point rating*", where - pursuant the provision of § 7, article 2 of above mentioned Regulation - each point means the value of 120 Czech crowns.

Necessary costs of treatment should be represented for example by expenses on medicaments, on health rehabilitation - not covered by the subject of health insurance, on hiring the nurse, on dietary catering or on fare to the medical doctor.³⁹

The claim for damage to employee's property does not apply to equipment used for fulfilling the work without consent of the employer pursuant provision of § 265, article 3. But in case of given consent it should be for destroyed private car, notebook or clothes. Commentary to Labour Code⁴⁰ is stating, that under damage to the property should be subsumed all the damages, which could not be included to other claims and shall be applied to all cases, where **property has been reduced or cost has been spent on**.

Labour Code in provisions of § 375 and following remembers to compensation for survivors, which contains reasonable expenditures connected with treatment, funeral, alimentation and lump sum - compensation of survivors plus *in eventum* compensation of property damages.

In accordance to *Ministry of Finance Regulation No. 125/1993 Coll., Laying down the conditions and rates of employer's liability insurance for work injuries and occupational diseases* and its provision of § 1, article 3, each employer having at least one employee is automatically insured and the subject of insurance is then reimbursing all the damages.

1.2 Code on Ensuring OSH

Code on Ensuring OSH is **governing additional OSH requirements**, is incorporating legal requirements of European Union and is built on provision of § 107 Labour Code.

Author raised a question to himself why OSH problematic is not regulated just in the Labour Code as the rules would be better arranged and more synoptic. The answer could be found in Explanatory Report to Code on Ensuring OSH draft⁴¹, where there is stated, that antecedent rules of OSH in Labour Code contained only the basic rights and obligations of employers and employees' and these are in Code on Ensuring OSH being complemented by a range of new aspects with **mostly technical-organizational and**

³⁹ BĚLINA, Miroslav. *Zákoník práce: komentář*. 2. vyd. Praha: C.H. Beck, 2010, xxi, 1123 s. ISBN 978-807-4003-172, p. 1009.

⁴⁰ Ibidem, p. 1009.

⁴¹ Poslanecká sněmovna Parlamentu České republiky. In: *Sněmovní tisk 1155/0, část č. 1/4 VI. n. z. o bezpečnosti a ochraně zdraví při práci - EU* [online]. 2005 [viewed 2014-02-21]. Available from: <http://www.psp.cz/sqw/text/tiskt.sqw?o=4&ct=1155&ct1=0>, p. 18.

healthcare character. In accordance to aforementioned Explanatory Report those new institutes are largely exceeding the basic “*private-law character*” of the Labour Code and in the future will be influenced by the development of European law anyway, so it appears as appropriate to include all of these specific aspects into separate act, which is stipulating further requirements for OSH and not to burdening the Labour Code of these provisions.

1.2.1 Requirements on workplace and on working environment

Workplace must be **spatially and structurally organized and equipped** in the way as the working conditions should meet the safety and health requirements and **workplace complies following characteristics:**

- premises used for work, corridors, stairwells and other spaces should have **specified dimensions and surfaces,**
- **equipped** for locally performed activities in a way suitable for work⁴², and by means for providing **first aid** and for contacting the emergency medical service,
- workplace should be **lit** - preferably by natural light,
- on the workplace must be maintained **specified climatic conditions** - especially regarding air volume, ventilation, humidity, temperature and water supply,
- facilities for personal hygiene, dressing, storing personal belongings, leisure and catering staff should have **specified dimensions, design and equipment,**
- escape routes, exits and others ways leading out, including access roads **must still remain not blocked,**
- in aforementioned areas of employer has to be provided **regular maintenance and cleaning service.**

Further requirements on the workplace and working environment are set in the implementing legislation, by which is mentioned *Government Regulation No. 101/2005 Coll. Laying down detailed requirements for the workplace and work environment.*

⁴² Pursuant to provision of § 4, Article 1 Code on Ensuring OSH technical equipment such as machines, vehicles and tools must be equipped with protective devices, or should be ergonomically modified or adjusted in order not to expose employees to risk factors. Technical equipment needs to be regularly and properly maintained, monitored and reviewed.

This Regulation defines **list of necessities for putting the workplace to the operation** like the best arrangement of workplace as employees are protected against adverse conditions, safe mounting of workplace equipment so as to prevent its unwanted move, workplace security against unauthorized access, employer has to set terms of revisions and maintenance, additional requirements on workplace and working conditions are set in enclosure to this Regulation - namely mechanical resistance and stability of buildings, electrical installation, industrial wiring, piping systems, and other networks, requirements on escape routes and exits, storage premises and manipulation with burdens and others.

1.2.2 Requirements for the organization of work and working practices

The employer shall organize work and establish working procedures in conformity with the principles of safety and so that employees were:

- **not performing monotonous activities** and unilaterally onerous organism - if it could not be avoided, employees must have security breaks,
- **not threatened** by falling, nor by launched objects or materials and **protected against falling** or collapsing, even not endangered by transportation on workplace,
- **not working alone** in the workplace with an **increased risk**, so the protection should be secured by another worker or by any other means,
- **not performing manual handling** of burdens that could cause damage to their health.

In my opinion the most widest example of work organization across the companies should be in case of driving a car for business purposes, which is further defined in *Government Regulation No. 168/2002 Coll. laying down the methods of work organization and work practices, which is the employer obliged to ensure when running the transportation by transport means*. The employer is obliged to organize the work of staff in accordance with special legislation - as like *Act. No. 361/2000 Coll., Road Traffic Code*, with the manufacturer's instructions for operation of vehicles by “*local operational safety regulation*” issued by the employer.⁴³ Among others obligations having mostly industrial character, the employer has to lecture employees in order to:

⁴³ Content of local operational safety regulation is described in chapter 4.2.2.5.

- **ensure safe turning or reversing** with the help of another employee, if required by circumstances like insufficient outlook from vehicle or dangerous terrain,
- always **use reflective jackets**, when out of the car on the road,
- **not exceed the maximum driving time**, which is 4.5 hours and for time of driving is considered even break lasting up to 15 minutes; after expiration of maximum driving time should follow safety break⁴⁴,
- **led daily record** about period of driving vehicle and safety breaks in paper form or by technical equipment.

Others similarly regulated areas are for example works in the wood or animal husbandry.

1.2.3 Safety signs, markings and signals

At workplaces where there are carried out **works with potential of causing health damage**, is the employer obliged to place safety markings and to implement signals that should provide information or instructions related to OSH and make employees familiar with it. Safety signs, markings and signals may have **visual, sound or light characters**.

The appearance, location and design of safety signs, markings and signals are regulated in the implementing legislation, more precisely in *Government Regulation No. 11/2002 Coll. on the appearance and position of safety signs and the signals*. According to this Regulation safety signs, markings and signals should have following characteristics:

- **suitable** for environment, made of durable material,
- if not made of **reflective** material, in case of reduced visibility must be **lighted**,
- should be **in contrast** to the surrounding environment, but must **not dazzle**,
- **pictogram** must be simple, understandable, and should contain just necessary information,
- **devices requiring energy** supply must be equipped with **emergency power** for the case of energy failure,

⁴⁴ Safety break should last at least 30 minutes, may be divided in two parts lasting at least 15 minutes each; during safety break can not be performed any working activity except supervision on vehicle or its cargo. Those safety breaks should be brought together with breaks for food and rest, but can not be placed on the beginning or in the end of working hours.

- **maintained** so that should be preserved their original appearance and functional properties - if necessary, must be **replaced**,
- other signs and signals **must be used in case of** visibility or audibility deterioration,
- **not** to be placed **in groups** or broadcasted **together**.

Above mentioned Regulation is as well placing requirements to **appearance of safety signs**, which have according to next figure character of prohibition, attention, command, information of health protection character and information of fire protection character. For those safety signs are more than important used colors, which have significant meaning and light signals are broadcasted in those colors.



Figure 2: Types of safety signs

Beside description of the appearance of safety signs in this there are defined even sound codes, hand signals and voice signals.

1.2.4 Risk factors of working conditions

As for **risk factors** are deemed:

- physical factors (noise or vibrations),
- chemical factors (carcinogens),

- biological agents (viruses, bacteria, rust),
- adverse climatic conditions (extreme cold, heat or humidity),
- and dust, physical, mental or visual workload.

If there are on the workplace occurring any of these risk factors of work, **the employer** shall regularly - and promptly - whenever there is any change in the conditions - **detect and monitor** its values **to ensure that the risk factor is eliminated** or at least reduced to the lowest reasonably achievable level.

If it is **not possible to eliminate the occurrence** of biological agents and the maximum permitted levels of risk factors are exceeded, the **employer is obliged to limit their exposure** by technical, technological and other measures. Means of those measures are:

- adjustment of working conditions or working hours,
- establishment of controlled areas,
- use of appropriate PPE,
- or provision of protective beverages.

When identifying, evaluating risks and taking actions to comply with the limit values, the employer shall remain in compliance with the implementing legislation, which is *Government Regulation No. 361/2007 Coll. Laying down the conditions for the protection of health at work*. If it is impossible to stick to this Regulation, then should be used technical standards or to use any other method, but this method must be proved as reliable.

There are specified individual risk factors as mentioned above and as well determined **limits and specific measurements how to prevent** individual risk factors. For work in cold there is for example mentioned the requirement of gloves for protection against the cold, work clothes or safety breaks in “*warming premises*”, which must be tempered to 22 °C, equipped with seating furniture, table and hooks for clothing. On the other hand for work in heat should be provided protective beverages by the employer, which should not contain more than 6.5 % weight of sugar or 1.0 % of alcohol. Above quoted Regulation is laying down such a detailed requirements in relation to exposure an employee to risk factors, which are most typical for industrial sector.

However, even in other environments is useful information about manual handling of burdens as stated in provision of § 28 and following of Regulation mentioned above. Allowed hygienic limit for weight of the burden are set as stated in the table below.

	occasional limit	frequent limit	maximum per shift limit	sitting limit
man	50 kg	30 kg	10 000 kg	5 kg
woman	20 kg	15 kg	6 500 kg	3 kg

Table 1: Limits for lifting and carrying burdens⁴⁵

By occasional limit is mentioned the period of constant lifting and carrying of burdens, which does not exceed 30 minutes in an average eight-hour shift.

In provision of § 50 there are to be found **specific hygienic requirements for displaying units** as this is very typical for administrative works within the university education environment.

The screen of the display unit must:

- be free of vibration, swimming or hopping character lines, changing brightness etc.,
- have **easily adjustable** the brightness and the contrast between the characters and the background in relation to the particular conditions,
- be constructed as to **allow moving and tilting** as employee needs,
- be **positioned** as to **avoid reflections** from lamps or other sources, such as window openings, light walls, furniture etc.,
- **not be closer than 40 centimeters** from eyes of the employee,
- have the **brightness not less than 35 candelas** per square meter.

The keyboard must be **separated from the screen** to allow employees to choose the most suitable working position. Open area between the front edge of the table and the bottom of the keyboard must allow **resting employee's hands and wrists**. Keyboard surface as well as working table and other equipment should be matte to prevent occurrence of reflexes.

⁴⁵ Processed by autor based on provisions of § 29 Government Regulation No. 361/2007 Coll. Laying down the conditions for the protection of health at work.

Letters, numbers and symbols on the keys should be **well-readable** and in contrast to the background.

Proportions of the working table must be chosen in that way so as the screen, the keyboard and other equipment ought to have **changeable configuration**. Documents holder must be placed as closest to the screen, as head and eye movements were kept to minimum. A rest for the legs must be provided to any employee, who requires it.

Frequently discussed issue is the matter of temperature on the workplace. The answer is placed in enclosure to this Regulation, where there are described types of works classified to several classes. For typical **administrative works** under class I. there is in the Table number 2 set the temperature as the range **from 20 °C to 27 °C**.

The workplace must be supplied with drinkable water sufficiently to drinking needs of employees and for ensuring premedical assistance and with warm water for ensuring staff's personal hygiene. Pursuant to provision of § 54, article 6 of this Regulation the toilet for employees must not be farer away from workplace than 120 meters and on the workplace up to 5 employees could be established just one common toilet.

1.2.5 Professional competence in risk prevention

The employer is obliged to manage OSH by himself or by internal or external professionally qualified staff, which is depended on number of employees employed by employer:

- up to 25 employees employer could manage OSH **by himself**, if the employer **dispose of the necessary knowledge**,
- from 26 up to 500 employees employer can perform the tasks in risk prevention by himself **only if employer is a professionally qualified** or by one or more persons with professional qualification,
- from 501 employees the OSH tasks **must always be** ensured by one or more professionally qualified persons.

Prerequisites on professionally qualified person in risk prevention are as following:

- to have at least **secondary education with a school-leaving examination** and professional **experience** of at least **3 years**,

- to have **bachelor's or master's degree within the OSH field**⁴⁶ and professional **experience** of at least **1 year**.

By professional experience is meant **the experience in the field** in which the tasks in the prevention of risks will be performed, or straight **the activities in the area of OSH**. Professional qualification is valid for 5 years from the date, when the exam have been successfully passed.

The exam consists of two parts. First one is to write an essay on a selected topic in recommended extent of 10 to 15 pages. In this essay shall be presented knowledge of the applicable legislation in the identification and assessment of risks and related practical skill. Analysis of the essay is then part of the oral exam, when the essay is being defended. Above the defense of the essay there are given three questions to be answered in opened way from the compilation of approximately 90 questions.⁴⁷

1.3 Other important acts and consequential aspects

The area of university education is regulated by the Act No. 111/1998 Coll., University Code, where there is in provision of § 62, article 2 stated, that the student, who is undergoing education and practical experience, is subjected to general regulations on ensuring the OSH, as there are **no specific bylaws managing this area**.

Studying National Action Programme for 2013 - 2014 period⁴⁸ of OSH national policy⁴⁹ author found under priority IV., point 9 **obligation of preparation draft legislation in the**

⁴⁶ The matter what is and what is not considered as relevant education depends on the discretion of the body accredited for conducting the exam. Author has been personally noticed by Safety Research Institute, v.v.i., that his bachelor's degree in „*Protection and Safety of an Organization*“ from Private University College of Economic Studies, s.r.o. is sufficient. Safety Research Institute, v.v.i. generally considers as sufficient education as well bachelor's degree from Faculty of Safety Engineering, Technical University in Ostrava and even master's degree in „*Security Technologies, Systems and Management*“ from Faculty of Applied Informatics, Tomas Bata University in Zlín.

⁴⁷ More information about the exam for example here: Zkoušky z OZ v prevenci rizik. *Výzkumný ústav bezpečnosti práce, v.v.i.* [online]. 9. prosince 2013 [viewed 2014-02-15]. Available from: <http://www.vubp.cz/index.php/odborna-zpusobilost-v-prevenci-rizik/zkousky-z-odborne-zpusobilosti-v-prevenci-rizik>.

⁴⁸ Národní akční program bezpečnosti a ochrany zdraví při práci: pro období 2013 - 2014. In: *Český Focal Point pro bezpečnost a ochranu zdraví při práci* [online]. prosinec 2012 [viewed 2014-03-02]. Available from: <https://osha.europa.eu/fop/czech-republic/cs/systems/nap-bozp-2013-2014.pdf>.

field of safety and health of university students, including evidence and documentation of injuries during the study. So author may conclude, the area of university education has no specific regulation as it is just being prepared.

1.3.1 Labour Inspection Code

State Labour Inspection Office is subordinate body of Ministry of Labour and Social Affairs established in order **to supervise and to impose *in eventum* sanctions**, but this office is active as well in advisory, in consulting and in educational field having **preventive impact on society**. Typical preventive - and in my opinion very rewarding project - is called "Safe Enterprise" as a voluntary application for private organization leading to implementation of the OSH management system corresponding to Czech legal order, but also to the requirements across the EU. Whole project starts by **requesting** one of eight inspectorates and asking for current **manual**, then continues in conducting own **internal audit** using control checklist and for questions. Where it is not possible to answer "fulfilled", the reality must be **rectified** according to requirements. As soon as the management of a private organization considers all the requirements met, then could be **submitted application for inspection findings** to get know if the conditions were met. If finding goes well, the company is certified by "Safe Enterprise" award together with an authorization for using the logo showed below. This certification is valid for 3 years and during this period the State Labour Inspection Office could conduct random checks focused on changes. Certification holder is every year obliged to process internal audit.



Figure 3: Logos of Safety enterprise certification⁵⁰

⁴⁹ Národní politika bezpečnosti a ochrany zdraví při práci České republiky. In: *Český Focal Point pro bezpečnost a ochranu zdraví při práci* [online]. červen 2008 [viewed 2014-03-02]. Available from: https://osha.europa.eu/fop/czech-republic/cs/systems/files/narodni_politika_CR.pdf.

⁵⁰ Bezpečný podnik: Systém řízení bezpečnosti a ochrany zdraví při práci. In: *Státní úřad inspekce práce* [online]. 2012 [viewed 2014-03-02]. Available from: http://www.suip.cz/_files/suip-36d1353e7d223eb1af8b4b45482b5427/bezpecny_podnik_duben_2012.pdf.

As mentioned above, the State Labour Inspection Office is control body in the exhaustive field of work-related issues like for example supervisory of working hours, remuneration for performed work and as well OSH, where could be committed an offense or an administrative offense⁵¹, caused mostly by violation of any requirement given by Labour Code.

Under provision of § 9 Labour Inspection Code any **controlled entity is obliged to create conditions for control performance**, to provide necessary material and technical support for inspection, to come for discussing inspection results and of course **to cooperate with** an inspector during the control like providing truthful and complete information, proving the identity, putting forward relevant documents or providing copies of it, asking employees without presence of any other persons on matters related to the purpose of the control.

1.3.2 Public Health Protection Code and Specific Health Services Code

For the field of OSH is the Public Health Protection Code especially important in relation to categorization of works regulated under its provisions of § 37. The main purpose of works categorization is **to recognize risk factors** of work. On the basis of recognizing risks and their extent there are works divided into **four categories**. If employer does not include an employee to any category, the employee is considered to be under first category, where performed work has probably not any affect to the employee's health. The employer should make a decision about including any activity to second category, where could be expected, that performed work has "rare effect" to the employee's health - especially on the susceptible employees. This decision of employer should be immediately reported to the authority of public health protection, which has the competency to decide about the inclusion of work to third or fourth category.

As the Labour Code is in provision of § 224, article 1 mentioning the employer's duty of ensuring **health preventive care** in accordance with *lex specialis*, there has been referenced on the Specific Health Services Code, which is laying down the requirement of every employer **to have signed contract with medical doctor** in conformity with the provision of § 54, article 2, letter a), but if the employer is running just works included to

⁵¹ Offense could be generally committed by a person - entrepreneur's entity and administrative offense could be committed by business company, but the fine is regarding OSH in the same range between CZK 300 000,- to CZK 2 000 000,-.

first category, employer should ask medical doctor of the employee to provide examination of health status. But other services of health advisory focused to protection of health and to prevention of occupational accidents, occupational diseases, first aid training and regular surveillance in the workplace must be still provided with medical doctor, who is contracted by the employer. From others employer's requirements could be noted, that employer is obliged to **equip** employee with **health examination application** containing information on the type of work and working conditions before dispatching employee to medical doctor and should **dispatch employee** to extraordinary medical examination **on demand** of the employee. The **conclusions** from the medical records **are binding** for employer especially when assigning employee to work.

1.3.3 Fire Protection Code

To ensure overall occupational safety, this legal act can not be disregarded, because protection against fire is **usual task solved by OSH experts** as well, but always **depends** on fire **risk extent** and on **the scope** of the organization. In provision of § 1, article 2 is stated similar general obligation as in provision of § 106, article 4 Labour Code: *“Everyone is obliged to act so as not to cause a fire, endanger the life and health of people, animals and property (...)”*,⁵² which author personally consider to highlight on the occasion of employee training as a part of employee fire awareness. On the other hand, the employer must be aware, if is or is not running any activity with **increased or high fire danger** on the workplace according to provision of § 4 Fire Protection Code, where are described all the factors causing risks. Attention should be focused especially on dangerous substances, combustible dust, open fire operations, height of the building, number of people gathered in premises, people with reduced mobility, underground premises or on the question of random fire load.⁵³

Fire Protection Code is in provision of § 5 determining **duties of employers** like obtaining firefighting and fire protection equipment, with regard to the risk of fire, maintaining free access to emergency exits, electricity, gas and water locking devices, providing safety

⁵² „Každý je povinen počínat si tak, aby nezavdal příčinu ke vzniku požáru, neohrozil život a zdraví osob, zvířata a majetek (...)“; source: Česká republika. Zákon o požární ochraně. In: *Sbírka zákonů*. 1985. Available from: <http://portal.gov.cz/app/zakony/zakonStruct.jsp?idBiblio=36808&nr=133~2F1985&rpp=15#local-content>.

⁵³ With this question is dealt in practical part of this diploma thesis.

markings *et cetera*. Further obligations according to provisions of § 5, § 6 and § 6a should employer fulfill only if on the workplace has been assessed any fire risk factor with potential of increased or high fire danger pursuant to provision of § 4 Fire Protection Code. Except the level of “*without fire risk danger*”, the inclusion to the particular category of fire risk danger must be provided by the person with professional competence in fire protection or by fire protection engineer.⁵⁴ Fire brigade as the surveillance body of requirements regulated by Fire Protection Code should punish non-issuance of appropriate fire documentation set by the provision of § 15 Fire Protection Code, respectively § 27 Fire Prevention Regulation. When dealing with this question author prefer to **cooperate with person with professional qualification** in accordance to provision of § 11 Fire Protection Code, because incorrect inclusion can not be an acceptable reason for endangering the life, health and property.

1.3.4 Specific implementing legislation

After general knowledge given by OSH legislation stated in previous codes should be everyone with interest or in need to widen the knowledge by studying further implementing legislation.

Always depends on characteristic of particular entrepreneur’s activities or on any specific matter, because above stated legal basis should not be enough to fulfill all requirements and the knowledge basis of OSH responsible person need to be amended by specific regulations described in many further legislation. There were chosen some of these with practical use in tertiary sector and put them in the following table including keywords describing its area and reference to the legislative act.

SPECIFIC MATTER OR ACTIVITY	LEGISLATION
building	Government Regulation No. 591/2006 Coll., Stating further minimal OSH requirements within construction zones
chemical substances measurements,	Law No. 59/2006 Coll., Serious Accidents Prevention Code Law No. 350/2011 Coll., Chemical Code

⁵⁴ Pursuant to provision of § 40 Regulation of Ministry of Interior No. 246/2001 Coll., Fire Prevention Regulation.

labouratory practice	Government Regulation No. 406/2004 Coll., Laying down further requirements for ensuring OSH in potentially explosive atmospheres
pregnant women, adolescents	Regulation of Ministry of Health No. 288/2013 Coll. Establishing work and workplaces, that are prohibited for pregnant women, breastfeeding women, mothers until the end of the ninth month after childbirth and adolescents, and the conditions under which adolescents may exceptionally perform this work due to occupational training
handling with wastes	Law No. 185/2001 Coll., Waste Code
work in heights	Government Regulation No. 362/2005 Coll., stating detailed requirements for OSH at workplaces with risk of falling from a height or to a depth
explosive atmosphere	Government Regulation No. 406/2004 Coll., on detailed requirements for ensuring OSH in potentially explosive atmospheres
operation and use of technical equipment	Government Regulation No. 378/2001 Coll., laying down detailed requirements for safe operation and use of machinery, technical equipment, instruments and tools

Table 2: Examples of further OSH legislation

1.4 OSH principles resulting from legislation

From applicable legislation there are resulting some **basic principles** applicable across the companies as following:

- liability for ensuring OSH is given to employer, the care for safety is an integral part of managers at all management levels and employees are obliged to behave safely,
- employer has to provide safe and healthy working environment and working conditions,
- costs associated with ensuring the OSH are to be always paid by the employer,

- staff safety training must be conducted, so the staff is aware of risk regarding their appropriate work tasks,
- in case of more than 25 employees employer has to ensure tasks connected with safety management by person with professional competence in risk prevention,
- drinking of alcoholic beverages, smoking and consuming of addictive substances is forbidden,
- risk management has to be ensured including provision of PPE,
- work accidents need to be investigated and related documentation and reporting must be performed,
- work accidents and occupational diseases are to be compensated by employer to employee,
- employer should evaluate if to include any employee to one of four categories of works, where work would have negative impact on health,
- employer needs to have signed contract with medical doctor,
- control activities of OSH compliance are conducted by State Labour Inspection Office.

Important issues to be solved out by employer are expressed in following figure.

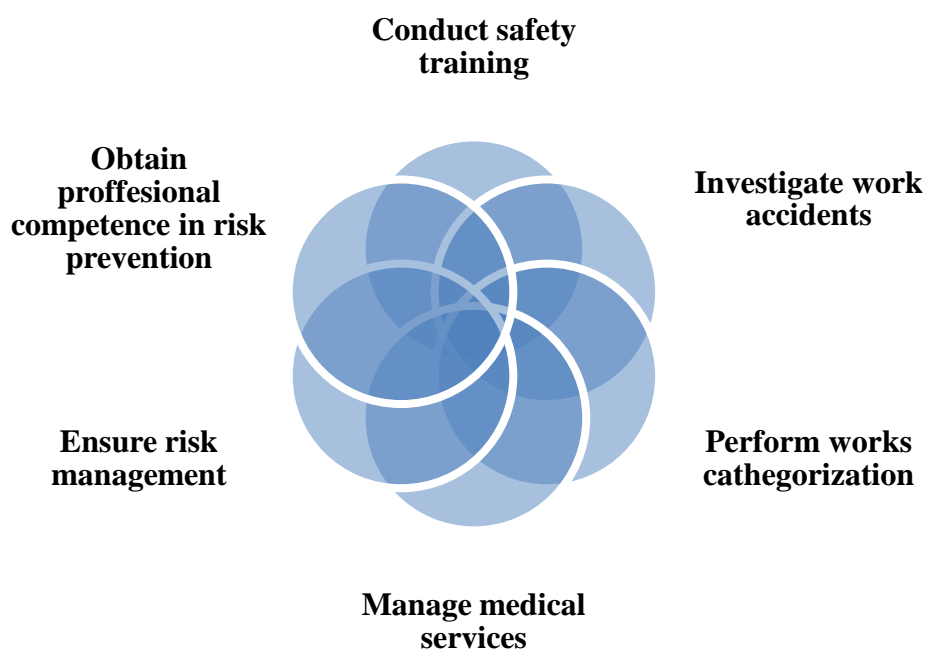


Figure 4: Important tasks resulting from legislation to be fulfilled by employer

2 NORMATIVE REQUIREMENTS FOR OSH SYSTEM

“No safety, no business.”⁵⁵

Generally taken, **normative requirements are not mandatory** for organizations. Its importance is primarily in know-how as to help with implementation, maintenance and improvement of the OSH management system and - if the system complies with particular standards - then as a good preparation for reaching the ability of further successful certification, which means **betterment of organizational public relation and its prestige**. But author considers the most valuable advantage in demonstrated **proactive approach**, which enables to identify negative moments before anything serious happens.

OHSAS standards have **international character**, because should be applied to conditions of any legal order, size or type of organizations and within any social or geographical conditions with the **aim of supporting good OSH practices**.

In order to set basics of well-working system, author decided to describe the core of two normative standards for OSH management and then the core of one standard focused on ensuring guidance on managing auditing activities.

ČSN OHSAS 18001:2007 setting the **basic requirements** has been developed in response to demand of organizations for the OSH standard, which would **be in position of example for assessing and certifying OSH management systems**. This standard specifies requirements for OSH management systems to enable organizations preparation and implementation of safety policy taking into account information about risks and legal requirements.

Significant improvement against first edition of the standard from 1999 is in **better compability** with other management system standards - especially with ISO 9001:2000 for quality management and with ISO 14001:2004 for environmental management. And the emphasis on health is greater - as it in OSH standard should be.

ČSN OHSAS 18002:2008 is **supplementing OHSAS 18001 by relevant guidance** and is intended to provide not binding assistance for establishment, implementation or improvement of OSH management system. OHSAS 18002 is typical example of **non-certifiable guideline** processed as understability supplement of guide for general

⁵⁵ 40 Free Safety Slogans For the Workplaces. *Safety and Risk Management* [online]. 2011 [viewed 2014-02-08]. Available from: <http://www.safetyrisk.net/40-free-safety-slogans-for-the-workplaces/>.

requirements, which has been probably made as thinner as possible to maintain good orientation.

ČSN EN ISO 19011:2011 is also mentioned and described as a standard for **auditing** at the end of this chapter.

2.1 Model system according to OHSAS 18001

According to OHSAS 18001 standard, the optimal system should be working on several steps, which are graphically described on the picture below. This OSH management system model is built on the **Plan-Do-Check-Act methodology**.⁵⁶ This is a process, that should be followed when need to make any change and which will enable you to plan, to test and to incorporate feedback before you commit to implementation.⁵⁷

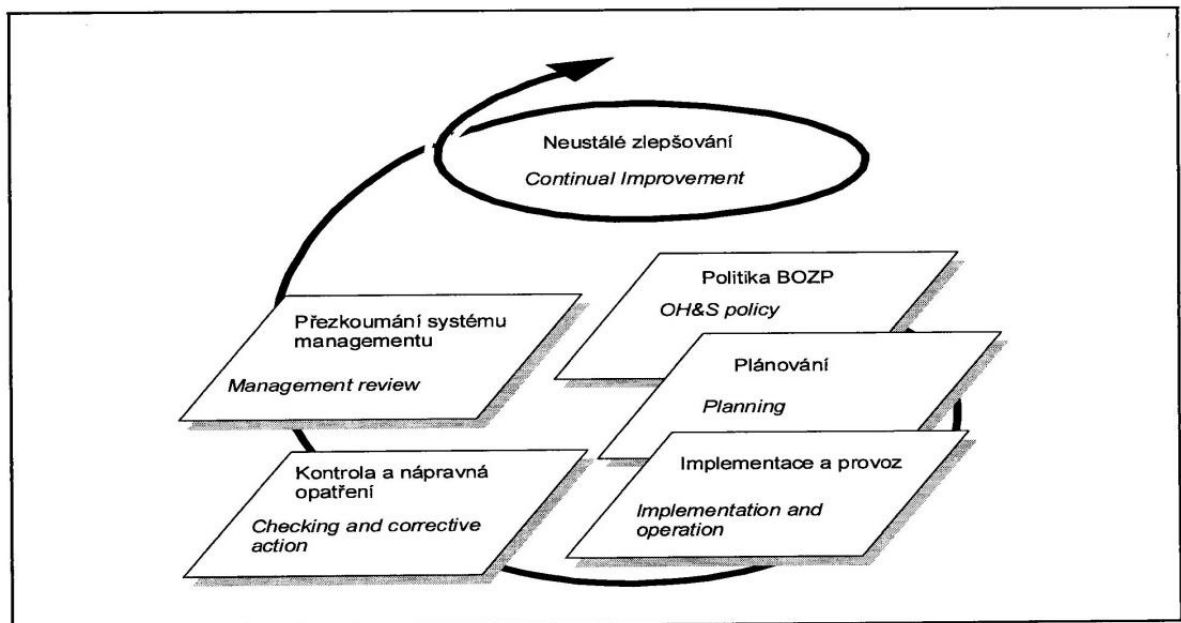


Figure 5: OSH management system model⁵⁸

Particular steps of the process have further meaning. First of all it is needed to set up the rules and express the will for safety in the **safety policy**. By „plan“ is mentioned setting targets and processes to be in compliance with the safety policy, where should be all the needed requirements contained. By „do“ is meant introducing some of these steps to the

⁵⁶ Also known as the PDCA, the PDCA Cycle, or the Deming Cycle.

⁵⁷ Plan-Do-Check-Act (PDCA). *Project Management Tools* [online]. 2012, č. 1 [viewed 2013-11-15]. Available from: http://www.mindtools.com/pages/article/newPPM_89.htm.

⁵⁸ Occupational health and safety management systems - Requirements. *ČSN OHSAS 18001: idt BS OHSAS 18001:2007*. Praha: Český normalizační institut, Praha, 2008, p. 9.

reality.⁵⁹ In „*check*“ step you should observe and compare practical processes from reality and theoretical targets given by the safety policy - this step is in fact comparison of previous „*plan*“ and „*do*“ steps of the PDCA model. And finally by the last step called „*act*“ is about taking measurements in order to improve OSH management system.

2.1.1 Safety policy

The matter of existence any factually ruled OSH management system within the organization is depended on the response for the question: *“Is there any top management decision called safety or security policy and associated managing guidelines?”* Document of safety policy should chiefly contain **the will of the top management that the company has the interest on safety** as one of the highest priority and so it should includes at least following ideas:

- proportionality to nature and range of risks within the company,
- commitment to prevention of accidents and occupational diseases,
- commitment to fullfilling applicable legal requirements,
- continual improvement of OSH management system.

Safety policy should be reviewed, accessible, documented, continually implemented or kept updated and should be communicated across the organization.⁶⁰ Safety policy could be **communicated in many diverse forms** such as internal directives or posters and in many more ways, but must be always clear. In my opinion, **the accessibility** should be at the best maintained by publishing the policy on the organization webpage and on the occassion of the initial training of employees. It is not neccessitated to have safety policy worked out separately, unless **it might be united** and well-coordinated **with other policies**.

Czech legal order does not require an obligation of safety policy, but having such a document is highly recommended, because safety could not be achieved from the bottom. Generally it is considered as an add-on demanding a bit more than compliance with legal order. As for the certification process, the safety policy is higly needed document as **it**

⁵⁹ So called „pilot implementation“.

⁶⁰ ŠENK, Zdeněk. *Bezpečnost a ochrana zdraví při práci: prakticky a přehledně podle normy ČSN OHSAS 18001:2008*. 1. vyd. Olomouc: ANAG, 2009, 279 s. Práce, mzdy, pojištění. ISBN 978-80-7263-551-1., p. 19.

establishes general direction and involvement of the whole organisation. For illustration author attached safety policy of organisation, on which is focused the practical part of this master's thesis.⁶¹

2.1.2 Planning

After setting rules by the management, it depends on organizational and planning abilities of OSH field responsible person or department.⁶² Following above mentioned essentials in safety policy, this specialist or department is supposed to create, to implement and to maintain procedures in order to **permanently identificate threats, conduct risk evaluation and to prepare preventive countermeasurements** by determining and implementing of controls. As seen in the below stated picture, OHSAS 18002 stresses also the importance of change management.

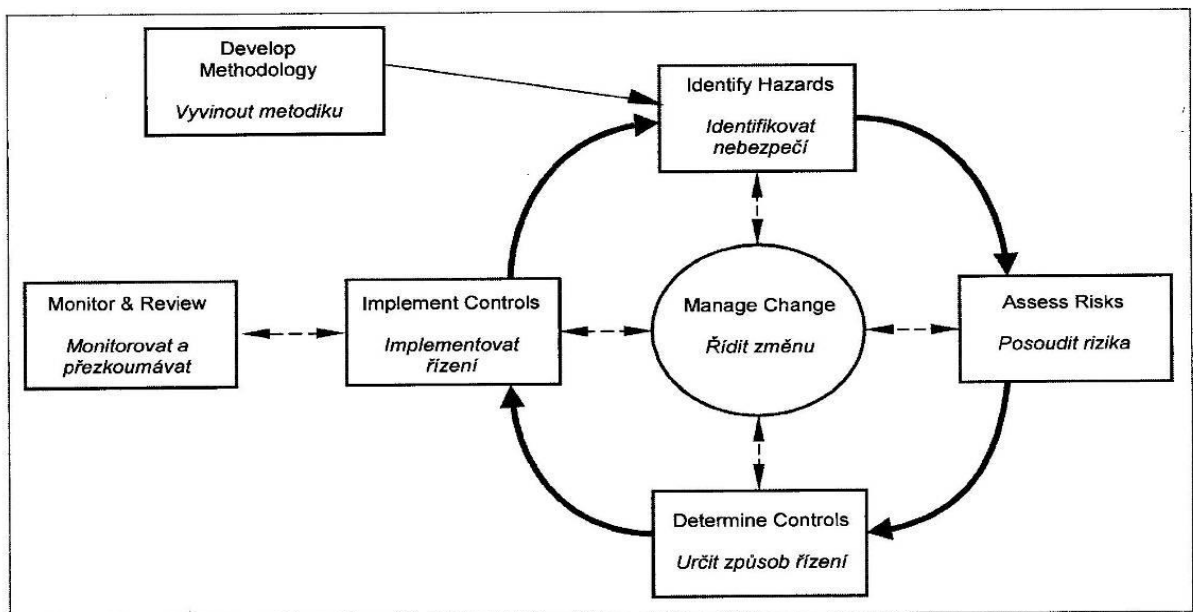


Figure 6: Overview of the risk assessment process⁶³

Procedures of risk management must take into account all the **usual and extraordinary** activities including activities of all employees and other visitors⁶⁴ having permission to

⁶¹ See Appendix IV. called as Safety policy memorandum.

⁶² Depending on the size and on the activity of the organization this person or department should be responsible as well for others safety or security fields like fire, physical or technical security, for quality or for environmental management.

⁶³ Occupational health and safety management systems - Guideline for implementation. *ČSN OHSAS 18002: idt BS OHSAS 18002:2008*. Praha: Český normalizační institut, Praha, 2009, p. 26.

access the workplace. Then is needed to count with the very risky phenomenon generally specified as **human behaviour, outer threats in close surrounding** to the workplace, which could influence situation on the workplace or which are connected to the activities of the protected organisation.⁶⁵

2.1.3 Implementation and operation

Pursuant to OHSAS 18001 standard, the implementation and operation is the next step specifying, that organization shall **appoint a member of top management** with specific responsibility for OSH.⁶⁶ Reasons for this act are to ensure, that organizational system is in compliance with OHSAS 18001 specification and that reporting activities for top management reviews leads to improvement. The situation should be solved in the way the appointee may delegate duties to the subordinate specialist, while retaining the responsibility.

This step consists of setting competences - especially ensuring, that important persons influencing the OSH management system have professional competence - providing of safety trainings and building up safety awareness across the whole organization. To effectively manage this issue, there is **need of functional communication, will for participation** and consultation across the organization. Consideration shall be as well focused on required documentation and its internal management.

Operation control is about determining operations and activities connected with previously identified risks, which should be put into operation and well maintained in order to make organization **emergency prepared and ready for possible response**.

2.1.4 Checking and corrective action

*“The organization shall establish, implement and maintain a procedure(s) to monitor and measure OSH performance on a regular basis.”*⁶⁷ By those procedures are mentioned monitoring and measurement of needs, effectiveness, compliance and evidence, which

⁶⁴ Visits of business partners, employees of cooperating contractors conducting deliveries or external activities within workplace like cleaning, plumbing etc.

⁶⁵ ŠENK, Zdeněk. *Bezpečnost a ochrana zdraví při práci: prakticky a přehledně podle normy ČSN OHSAS 18001:2008*. 1. vyd. Olomouc: ANAG, 2009, 279 s. Práce, mzdy, pojištění. ISBN 978-80-7263-551-1., s. 21.

⁶⁶ Occupational health and safety management systems - Requirements. *ČSN OHSAS 18001: idt BS OHSAS 18001:2007*. Praha: Český normalizační institut, Praha, 2008, p. 19.

⁶⁷ Ibidem, p. 22.

could be maintained even automatically by special technical equipment. From periodical activities of evaluating the compliance between the safety policy and the frame of reality should be **kept records**. This is very important especially regarding the extraordinary events, which are incidents and **accidents**, when investigation is conducted and records need to be processed in accordance with legal requirements.⁶⁸ In order to set all the deficiencies with ability to cause incident shall be built up and keep up to date all the procedures for analysing, recording and investigating incidents, which should be led immediately. Targets of internal audit are to figure out, if OSH management system and all the activities are in compliance to OHSAS 18001, if all the measurements have been correctly implemented and if the whole system is effectively meeting policy targets. Further information to the top management could be then provided.

2.1.5 Management review

This is the last issue representing the final task of the whole PDCA cycle. On the basis of outputs from periodical monitoring the situation within the organization, all the collected complaints, key issues from internal communication, corrective actions arising from investigations, evaluation of targets and reality and especially from outputs from internal audit, the **top management shall evaluate if the whole OSH management system is stick to the commitment** stated in the particular policy to lead the organization for further continual improvement.

2.2 Auditing and certification according to ISO 19011

ISO 19011 provides relevant **guidance of how to conduct both internal and external audit**. This standard also implements the risk management concept to auditing procedures.

Pursuant to ISO 19011 the audit as an activity is defined as: “*systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled*”.⁶⁹

On the question: “*What the certification is?*” is being offered following answer by Business dictionary: “*Formal procedure by which **an accredited or authorized person or agency assesses and verifies** (and attests in writing by issuing a certificate) the attributes,*

⁶⁸ As stated in chapter 1.1.4 of this master's thesis.

⁶⁹ Guidelines for auditing management systems. ČSN EN ISO 19011: idt ISO 19011:2011. Praha: Úřad pro technickou normalizaci, metrologii a státní zkušebnictví, Praha, 2012, p. 9.

characteristics, quality, qualification, or status of individuals or organizations, goods or services, procedures or processes, or events or situations, in accordance with established requirements or standards.”⁷⁰

By comparing those two definitions and their factual meaning, there is clear, that both processes are about **verification of any given requirements**. The result of audit is usually expressed by the **final report** - regardless the positive or negative findings, but certification has in the end the **certificate** only if requirements were met.

Audit is just a process, so unlike certification should be performed by **various parties** - ISO 19011 lists⁷¹ internal audits called as “first party audit” provided by the organization itself - maintaining independence by excluding the liability for audited activity, “second party audits” conducted by parties having an interest in the organization with an example of customers and “third party audits” processed by regulators, auditing organizations and of course by bodies awarding certification.

The system of **certification** is built on the principle of an integrated European accreditation system formed by national accreditation bodies, that operates under identical rules based on internationally recognized standards. National accreditation body is in the Czech republic represented by **Czech Accreditation Institute**⁷² providing accreditations to state and private organizations, which are then competent to award certification to the particular subjects asking for certification.

2.2.1 Benefits of the activity

Particular certification should be mostly requested when fulfilling contractual obligations, when applying for any funds or when endeavoring of any contract. But it could be also achieved preventively on own will of the company reaching this way its strategic plans.

If two specialists are solving the same issue, the result of their work should be different. Even if the OSH management system seems to be fully working, the audit connected with the certification could be a good tool **offering new angle of view**. Sometimes happens that

⁷⁰ What is certification? Definition and meaning. *BusinessDictionary.com* [online]. 2013, č. 1 [viewed 2014-03-15]. Available from: <http://www.businessdictionary.com/definition/certification.html>.

⁷¹ Guidelines for auditing management systems. *ČSN EN ISO 19011: idt ISO 19011:2011*. Praha: Úřad pro technickou normalizaci, metrologii a státní zkušebnictví, Praha, 2012, p. 9.

⁷² *Český institut pro akreditaci, o.p.s.* [online]. 2014 [viewed 2014-03-24]. Available from: <http://www.cia.cz/o-nas.aspx>.

by certification audit were detected problems caused by limited approach to the problematic from the side of responsible person, internal auditors or the top management without equating detected problems to their professional failure - so it is just about lack of another independent perspective.

Audit should of course **reveal real discrepancies** and different faults due to inexpert, improper or whatever else reason, whose findings have positive character as offering great possibility for further improvement.

The certification of implemented OHSAS 18001 system ensures, that auditee's OSH system has been compared with its best practices and found compliant. The fact that the certificate is issued by accreditation body acting like a third party, it should give employees, customers, business partners and other interested parties an **acknowledgement that auditee is proactively interested in protection** health and safety of workers.

2.2.2 Principles of auditing

Adherence to principles of auditing plays very important role in **helping the effectivity and reliability of audit findings**, which have the power of improving organizational performance.

According to author's opinion, the most significant difference between certification audits and other control activities like checks, inspections and corrective actions is, that certification audit is being performed by totally independent, free from bias and objective subject. Yes, but **independence** is just one of six principles for auditing.⁷³

Next feature is called **integrity** in the meaning of imposing requirements straight on personalities of auditors like honesty, diligence, responsibility, fair, being professionally trained and sensitive to influences exerting judgement of auditors. Exhausting list of further requirements including behaviour, knowledge and skills of certicators are quite illogically stated in chapter 7 of the standard.

Fair presentation gives emphasis on truthful and accurate reporting, which may reflects especially those audit activities representing great obstacles and diverging options between audited organization and auditors.

⁷³ Guidelines for auditing management systems. ČSN EN ISO 19011: idt ISO 19011:2011. Praha: Úřad pro technickou normalizaci, metrologii a státní zkušebnictví, Praha, 2012, pp. 13 - 14.

From author's view somewhat doubled feature with “integrity” is called **due professional care** and it consists in carefulness and right application of own judgement. Author considers **confidentiality** as a single principle for much more important, because security of information, its protection and inappropriate use should cause in contrary to previous feature harm.

As audit is described as a process of obtaining audit evidence, **evidence-based approach** is a need in the meaning, that evidence should be verifiable.

2.2.3 Description of the process

ISO 19011 is lying down very detailed process of auditing based on P-D-C-A methodology and preserves the same structure as OHSAS 18001. The process of certification should be divided into several steps, which have been graphically processed to the below stated picture.



Figure 7: The process of certification⁷⁴

Before **initiating the certification** there is standing an order, which might be accompanied by the statement of auditee's top management describing in which area is a certification requested, why is demanded and which objectives are to be reached. Initial communication

⁷⁴ Author's own processing with inspiration in: Guidelines for auditing management systems. ČSN EN ISO 19011: idt ISO 19011:2011. Praha: Úřad pro technickou normalizaci, metrologii a státní zkušebnictví, Praha, 2012, p. 28.

between auditee and auditors shall be focused on setting contractual requirements, preparing time schedules and organizational issues like accessing relevant documentation and protection of handovered or detected information. If there are any specific conditions on workplaces - for example in relation to local OSH conditions - the auditing team should be aware of that in advance by auditee. At the end of this step is appropriate to clarify all the audit objectives and to define, if those should be reached. Study of feasibility should consider factors of availability the appropriate information base, adequate time and resources and entertain the level of cooperation with auditee.

When **preparing audit activities** there is a strong need of preparing the relevant documentation review, where is later recommended to consider if information are complete, correct, consistent and current.⁷⁵ Importance of this substep is in possibility of preparing work documents for recording audit evidence as checklists, forms for information recording, audit findings or meetings records. The audit plan shall be established in this phase by the team leader, when attention should be paid on non-interferencing to regular activities of the auditee and consequential risks arising from presence of auditors. This plan should be based on applicable methods as stated in following table.

Extent of involvement between the auditor and the auditee	Location of the auditor	
	On-site	Remote
Human interaction	Conducting interviews. Completing checklists and questionnaires with auditee participation. Conducting document review with auditee participation. Sampling.	Via interactive communication means: <ul style="list-style-type: none"> - conducting interviews; - completing checklists and questionnaires; - conducting document review with auditee participation.
No human interaction	Conducting document review (e.g. records, data analysis). Observation of work performed. Conducting on-site visit. Completing checklists. Sampling (e.g. products).	Conducting document review (e.g. records, data analysis). Observing work performed via surveillance means, considering social and legal requirements. Analysing data.

Figure 8: Applicable audit methods⁷⁶

⁷⁵ Guidelines for auditing management systems. ČSN EN ISO 19011: idt ISO 19011:2011. Praha: Úřad pro technickou normalizaci, metrologii a státní zkušebnictví, Praha, 2012, p. 59.

⁷⁶ Ibidem, p. 58.

In case of participation of an audit team it is needed to assign tasks, responsibilities and generally brief every single audit team member.

When **conducting the audit** it is recommended to initiate a meeting with auditee's top management to inform about starting the certification, to introduce auditing team and their roles. By this meeting shall continue the initial communication and at this occasion should be clarified all the *ad futurum* questions like informing about reporting to auditee, about feedback system or about the closing meeting. After that is performed the document review based on former preparation as auditors should have at disposal all the requested documentation, analyse it, compare it with requirements in order to determine conformity or to gather new information for audit findings. Periodical communication shall be led during the audit to inform about certification progress, because there should happen situation, when audit evidence indicates audit objectives are not reachable, so both parties should take appropriate actions or modification of audit plan or termination of the whole process. Immediately threatening and significant risks are to be reported without delay. ISO 19011 also allows assigning roles of guides and observers, which may follow auditors, but must not influence the process. Their roles are to represent for example the authority of regulator, but may act as witnesses on behalf of the auditee. Guide has a role of assisting the auditors, arranging accesses, ensuring that OSH rules are respected by auditors and providing clarifications. Because only verifiable information should be accepted as an audit evidence, there is following the step of collecting and verifying information. The standard literally recommends collecting information by sampling, which is a "*process of selecting less than 100 % of the items within the total available data set to obtain and evaluate evidence about some characteristic of that population, in order to form a conclusion concerning the population*".⁷⁷ This method is applicable on cases, when it is not cost-effective or seems to be very time demanding to examine all the available information. Information are to be collected by means of interviews, observations and reviewing of documents⁷⁸ and are to be verified as shown in following schema.

⁷⁷ Guidelines for auditing management systems. ČSN EN ISO 19011: idt ISO 19011:2011. Praha: Úřad pro technickou normalizaci, metrologii a státní zkušebnictví, Praha, 2012, p. 59.

⁷⁸ ČSN ISO EN 19011 also offers verbal guidance on information sourcing, visiting the auditee's location and even on conducting interviews.

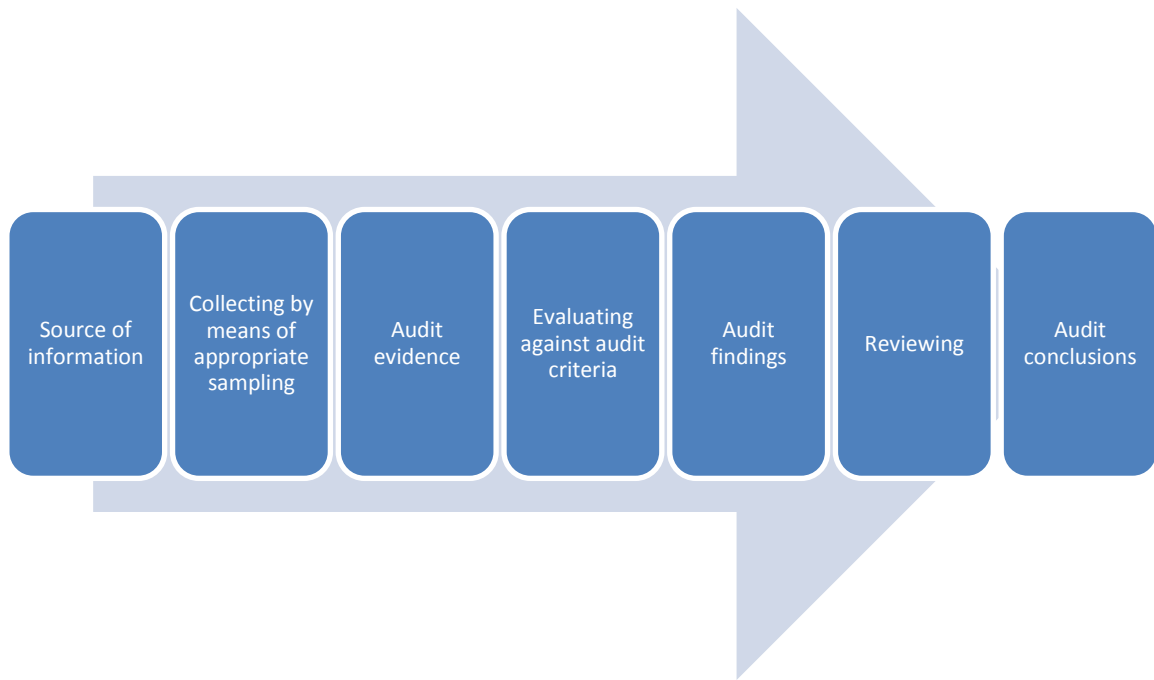


Figure 9: Process of collecting and verifying information⁷⁹

Audit findings are to be generated comparing audit criteria and audit evidence, which should result in conformity or nonconformity record with connected recommendation for improvement. Nonconformities may be consulted with an auditee to confirm accuracy of evidence and to understand it. Then should follows interphase of preparing audit conclusions, when only the audit team should meet and proceed audit findings against audit objectives, submit audit conclusions and prepare recommendations. Then could takes place the closing meeting attended as well by auditee's top management and eventually even by persons responsible for audited area. At this point are to be presented and discussed audit findings in understandable way together with suggestion for improvements. In case of irresolvable disagreement with findings by the auditee, those are to be written down.

According to the standard, part of **distributing the audit report** involves processing of *complete, accurate, concise and clear* report including:

- the objectives, the scope and the criteria,
- identification of auditee and auditor,
- dates and locatins of conducting audit,

⁷⁹ Guidelines for auditing management systems. ČSN EN ISO 19011: idt ISO 19011:2011. Praha: Úřad pro technickou normalizaci, metrologii a státní zkušebnictví, Praha, 2012, p. 37.

- audit findings and associated evidence,
- extent of fulfilling the audit criteria,
- audit conclusion.

The final report may be dated and distributed to recipients and by its handovering the certification is usually supposed as completed. But there shall possibly occurs situation, when audit conclusions are demanding corrective or improvement actions, when auditee is given to do so in particular timeframe. Therefore at the end of the whole process is included the moment of **completing the certification** as a somewhat formal step.

2.3 OSH principles resulting from standardization

To provide short recapitulation of **normative** chapter there are subsumed those **principles**:

- OSH management system is recommended to built on **PDCA methodology** stressing principle of **continual improvement**,
- whole system is based on **safety policy** as an obligation of top management,
- **communication** is an integral part of working OSH system,
- preferring **proactive approach** than reactive one in typical example of implementation near-misses reporting,
- employer has to ensure **realization of internal audits**, which should have characteristic of independence, integrity, fair presentation, due professional care, confidentiality and evidence-based approach.

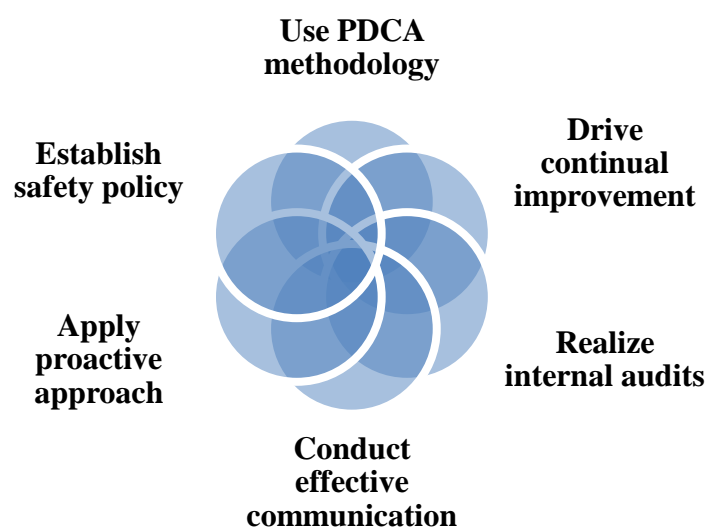


Figure 10: Important tasks resulting from standardization to be fulfilled by employer

3 RISK MANAGEMENT

„Learn from others mistakes; don't have others learn from you.“⁸⁰

As stated in chapter 1.1.1 among basic provisions, the employer has to conduct searching for dangerous factors and processes. As this activity is considered to be **an integral part** of risk management process, this chapter is dealing with connected issues like best-practices and methods of searching and evaluating risks.

Paleček⁸¹ defines risk as **a combination of threat possibility and severity of its consequences**. Smejkal⁸² explains the risk as **threat extent of an asset or the extent of danger, that threat applies and unwanted outcome occurs resulting in damage**. For an asset is generally considered everything with any value, but regarding the topic it is definitely health and life of employees.⁸³ Threat is specified as a power, an event, an activity or a person, which has unwanted influence on safety or is eligible to cause the damage. Vulnerability is a lack, a weakness or a condition of analysed asset, which might be exploit by threat for bring to bear of its unwanted influence. Countermeasurement should be usually procedure, process or technical mean or whatever similar specially designed for reducing or elimination of threat effect.

3.1 What to avoid and what to think of

There are several groups of factors, which should be generally paid attention for. The reason of its importance is, that those groups of factors are very oftenly inflicting damages. Many handy remarks and practices are introduced straight in legislation, in standards and author intend to note some facts, which should be helpful for the risk management.

New dangers and threats generally arisen due to so called **change management** in various processes are just the section of specific risks with reduced ability to fight against, because of lack the experiences with them or because no knowledge about their occurrence. But as the motto of this chapter is mentioning, **we could learn from others** and source

⁸⁰ 40 Free Safety Slogans For the Workplaces. *Safety and Risk Management* [online]. 2011 [viewed 2014-02-08]. Available from: <http://www.safetyrisk.net/40-free-safety-slogans-for-the-workplaces/>.

⁸¹ PALEČEK, Miloš. *Prevence rizik*. Vyd. 1. Praha: Oeconomica, 2006, 257 s. ISBN 80-245-1117-7, p. 14.

⁸² SMEJKAL, Vladimír. *Řízení rizik ve firmách a jiných organizacích*. 2., aktualiz. a rozš. vyd. Grada, c2006. ISBN 80-247-1667-4, p. 83.

⁸³ But as shown on *Figure 11* in chapter 3.2, the employer is just forced to behave safely.

information from similar environment. There should **not be a problem to ask any similar subject** to compare evidences of risks. Yes, of course that similar subject could react in the way, that those information considers as a *business secret* pursuant to provision of § 504 Civil Code and is not willing to hand those information over. Author should oppose, that we have common enemy, which are injuries and occupational diseases and this information exchange should have potential to enrich both subjects. This idea is anyway supported by OHSAS 18002 in recommendations for threat identification.⁸⁴

Second remark is focused on general human tend to underestimate or to directly ignore risk presages of accidents, which sometimes might have fatal consequences. Principle of this note is to point out on feeling that **as long as nothing bigger happens, everything is supposed to be fine and in best condition**. Only appearance of big catastrophe has the force to toughen rules or to take strong counter-actions. In my opinion this phenomenon should be caused by routine and irresponsible approach to fulfilling work duties and it is of course the fault of the management, because of missing training, lack in motivation of reporting discrepancies and so called *near misses accidents* or inadequate supervising activity of OSH responsible person or department.

In the overall company structure the safety specialist or safety department should be placed as high as possible in the whole organizational structure, so that is **capable to control the greatest range** of the organization.

When formulating any rules, the management must be aware, that the user simplicity is more than comprehensive system, where is everything, but it is too complicated and may be unclear - even Labour Code stresses the information on ensuring OSH should be **clear to all employees**.

Then there is another group of factors with more likely psychological character touching the work and those are not regulated by any specialized implementing legislation in detail. Representing example should be the order on the workplace. The employer is under provision of § 134, letter e) Labour Code obliged to ensure regular maintenance and cleaning. **Adequate order on every single workplace** should not be maintained by charwoman, but **by employee**. It is said, that clutter on the desk of the employee is a proof of his inability to organize work than to be a scale of how much of work does particular

⁸⁴ Occupational health and safety management systems - Guideline for implementation. *ČSN OHSAS 18002: idt BS OHSAS 18002:2008*. Praha: Český normalizační institut, Praha, 2009, p. 28.

employee has. Within the workplace should remain only tools and materials needed for current work task, because aggregation of many issues leads to distraction and is excessively burdening psyche, which may react by occurrence of headaches. **Untidy desk** after finishing the work gives **impression of large amount of work load** next day.⁸⁵ Employer should let employees to arrange their working environment as they feel comfortable.

Therefore **cooperation, awareness, responsibility, organization, rules transparency and order** should be another important attributes of OSH system with reduced tendency to risks appearance.

3.2 Acceptable level of risk

Safety theory says, that the term of being “*safe*” does not equal to the status being “*without risk*”.⁸⁶ That is because **risk always exists**. It is impossible to surely and responsibly declare, that there is no imminent threat, because the risk is present in smaller or higher extent. And because it is recommended⁸⁷ to not risk more, than could be lost, finding out the answer on the key question: “*How to set the acceptable level of risk?*” seems to be necessary.

Decision about acceptable level of risk as about a **potential loss, which organization is willing to accept**, shall be made in the moment, when organization is evaluating any particular risk and is taking countermeasurements. If there is present any evaluated risk and the organization is not doing any steps against its negative influence, the risk has been accepted. And the risk is accepted as well in cases, where has not been identified.

As mentioned before - the most common solution how to prevent risk occurrence is to comply with the legal requirements - so in general the boundaries of occupational safety risk level acceptability are **given by an imaginary line, which is determined by legislation**.

⁸⁵ NEUGEBAUER, Tomáš. *Bezpečnost práce v administrativě*. 1. vyd. Praha: Pragoeduca, 1997, 116 s. ISBN 80-85856-44-1, pp. 25 - 26.

⁸⁶ PALEČEK, Miloš. *Prevence rizik*. Vyd. 1. Praha: Oeconomica, 2006, 257 s. ISBN 80-245-1117-7, p. 6.

⁸⁷ SMEJKAL, Vladimír. *Řízení rizik ve firmách a jiných organizacích*. 2., aktualiz. a rozš. vyd. Grada, c2006. ISBN 80-247-1667-4, p. 108.

Enforcement of the law threatening with fines, expenditures for work accidents or occupational diseases and losses on potential damages are **driving the mechanism that shall push employers to keep the level of acceptable risk as low as possible.**



Figure 11: Factors reducing the level of OSH risk

3.3 Methodology for risk identification and risk assessment

In order to get know about possible risks are needed any means of **how to acquire information about** and possibly to assess them. There are several selected following methods with their basic descriptions.

3.3.1 Safety spot check

Simple safety check is a basic method established on **observation and physical examination** including interviews with staff across the company or its particular organizational unit. The spot check is being conducted by an individual or by an expert group with experiences and knowledge within operations and safety field. The target is **to identify conditions and circumstances leading to incidents or accidents** resulting to health or life hazards. Spot checks are focused on determining, whether particular operations are carried out in compliance with its regulations.

Output from safety spot checks should be a written description of detected irregularities and connected corrective actions in order to elimination imminent hazards.

In order to not forget any important step for evaluation seems to be quite handy using next mean of risk identification.

3.3.2 Checklist

This method should be defined as a **set of items or steps to verify the functionality or particular state** of examined subject or process. The list is consisted of questionnaire and positive or negative answer or any predetermined options. It might be especially used in operationally or emotionally demanding situations in order not to forget about anything important or to evaluate any divergences. Typical example should be for example preflight checklist used within air transportation field before takeoff to assure about performing of all the necessary operations.

Checklist should be created by specialist, but could be practically performed **quickly and easily** and by not as much experienced or qualified staff, but on the other hand, there must be counted with a kind of mechanical form filling without thinking. Therefore it is needed to think about its content by the safety specialist, to review and to update them again and again - at the best to review it with other colleagues - having together more knowledge and ideas.

3.3.3 Simple semi-quantitative spot method

This method has been based on the Guidance o risk assessment at work⁸⁸ published by Public Health and Safety at Work Directorate in Luxembourg **to provide advice and to help** the European Union employers **fulfilling the risk assessment duties** based on European Union Directive 89/391/EEC and on several others methods in order to create an easily applicable, not demanding method with outputs having sufficient informative value and good understandability so as could be used even by managers, which are not specialized within OSH field.

There are assessed three factors with classification scale from 1 to 5:

- **risk probability**

where is considered the reality of threat occurrence on the following scale

⁸⁸ *Guidance on risk assessment at work*. Luxembourg: Office for Official Publications of the European Communities, 1996, 57 p. ISBN 92-827-4278-4.

rating	meaning
1	random
2	improbable
3	probable
4	very probable
5	clear

Table 3: Scale of risk probability

- **severity of probable consequences**

as to mirror possible harms and effects caused by evaluated risk

rating	probable consequence
1	injury without working incapacity
2	injury with working incapacity
3	serious injury with hospitalization
4	occupational disease
5	fatal injury

Table 4: Scale of probable consequences

- **expert opinion**

reflects all other matters like the number of endangered people, risk exposure time, findings from observation, the level of staff discipline and their habits, probability of assuming error, inexperience in performing occasional work activities, workplace isolation, ability of proper supervision, qualification, experience and skills of individual employees, OSH management level, age and condition of assessed object (technological equipment or building), maintenance level, accumulation and dynamics of risks, organization of first aid,

the influence of working environment and working conditions, psychosocial risk factors, or other factors potentiating the risk.⁸⁹

In order to get risk indicator are above mentioned factors **multiplied**. After ordering from the highest value to the lowest one should be expressed **the urgency of taking measurements** to reduce risk.

3.3.4 What if

The principle of this method is based on **brainstorming** in occasions of meetings with creative spirit. It is based on modeling of expected and unexpected events, evaluating them, thinking about possible consequences and looking for preventive recommendations and counter-measurements to be taken against occurrence of risk. Typical question “*What if ...?*” beginning each question gave this method a name.

On those meetings should participate staff familiarized with this method and focused on keeping the line of the examined problem and closely related issues. But before those participants meet have to be prepared all the accessible materials, a basic schedule of issues needed to be passed through including several underlying questions. The meeting might be started by introduction to problematic. Then may follows the brainstorming with writing down all the important points.

It should be more likely used the following method to gain more detailed and structured results.

3.3.5 HAZard and OPerability study

For identification of risks on complicated systems is used this method based on a well-ordered and systematic procedures of:

- hazard analysis - in the meaning of identification of dangerous aspects,
- operability study - with purpose of risk evaluation.

The core is methodological **identification of divergences** using the keywords applied to particular nodes. The list of keywords with its logical meaning and example is shown in the table below. There is defined any range considered as safe, where the values should be

⁸⁹ Metody hodnocení rizik: Část 2. Jednoduchá bodová polokvantitativní metoda. *BOZPinfo.cz* [online]. 09.01.2012 [viewed 2014-03-12]. Available from: http://www.bozpinfo.cz/win/knihovna-bozp/citarna/tema_tydne/hodnoceni_rizik120104.castdve.html.

in those bounds and significant deviations from the specified range are considered dangerous.

Keyword	Logical meaning	Example
IS NOT	full negation of primary function, failure	failure of cooling system
IS BIGGER	quantitative increase of any value	increased flow
IS SMALLER	quantitative decrease of any value	decreased flow
ALSO, AS WELL, TOO	quantitative increase	penetration of water into the reactor
PARTIALLY	quantitative decrease	partial flow
REVERSION	reverse function	reverse flow of water
OTHER	full replacement	presence of other substances

Table 5: List of keywords for HAZOP method⁹⁰

As an **output** of this work is a **table** identifying sources of risk, operational troubles and recommendations for improving the situation.

With respect to the complexity of this method author further refers to the *ČSN IEC 61882* standard representing an application guide for HAZard and OPerability study.

3.3.6 Event tree analysis

Simply described this method is based on estimated **development of events**. Event on the top of the tree is the final event, from where are described reasons of its occurrence to the tree roots.

The procedure of creating such an analysis is founded on:

- **identification of event** on the top,

⁹⁰ PALEČEK, Miloš. *Prevence rizik*. Vyd. 1. Praha: Oeconomica, 2006, 257 s. ISBN 80-245-1117-7, p. 58.

- step by step identification of **actions foregoing** of this event, which should have influenced this and its **failure or success**,
- **evaluation** of the tree, comparison with reality and taking preventive measures.

It is necessary to identify all possible initiating events. Due to the possibility of omitting any important action, it is recommended to review the event tree in the team.

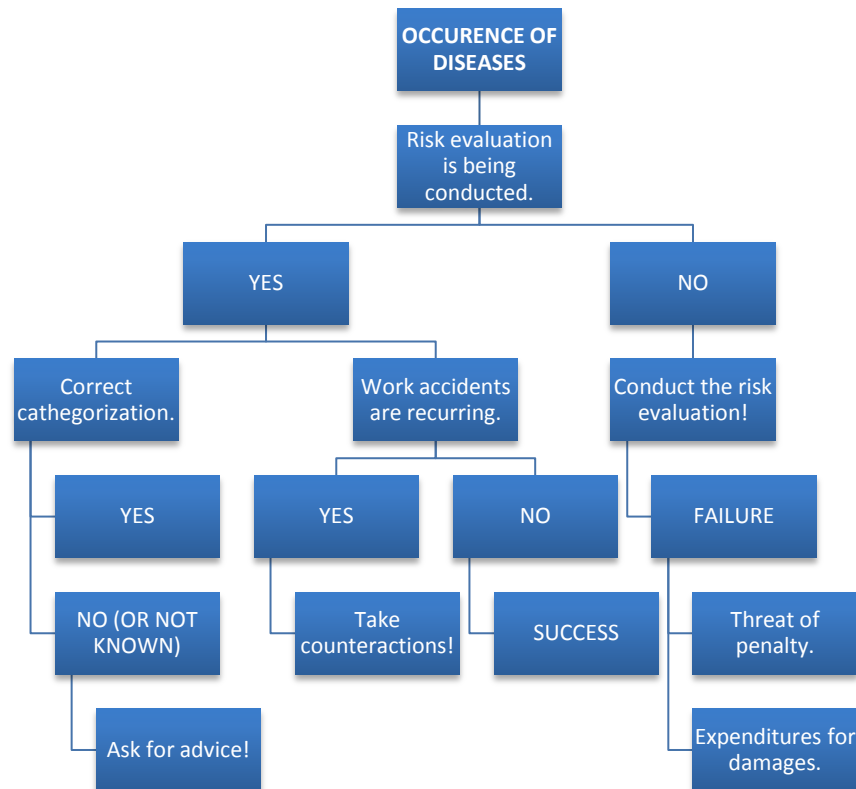


Figure 12: Example of fault tree analysis

3.4 Risk treatment

Regarding OSH every **employer must follow general precautionary principles** pursuant to provision of § 102, article 5 Labour Code. Those rules are described on following figure. In conformity with conception of the figure, mentioned principles are to be applied to practice in step by step order from the first item to the last one.

As seen from the last one item, Labour Code **does not rely on the human factor** at all and instead of that gives emphasis on technologies and organization of work.

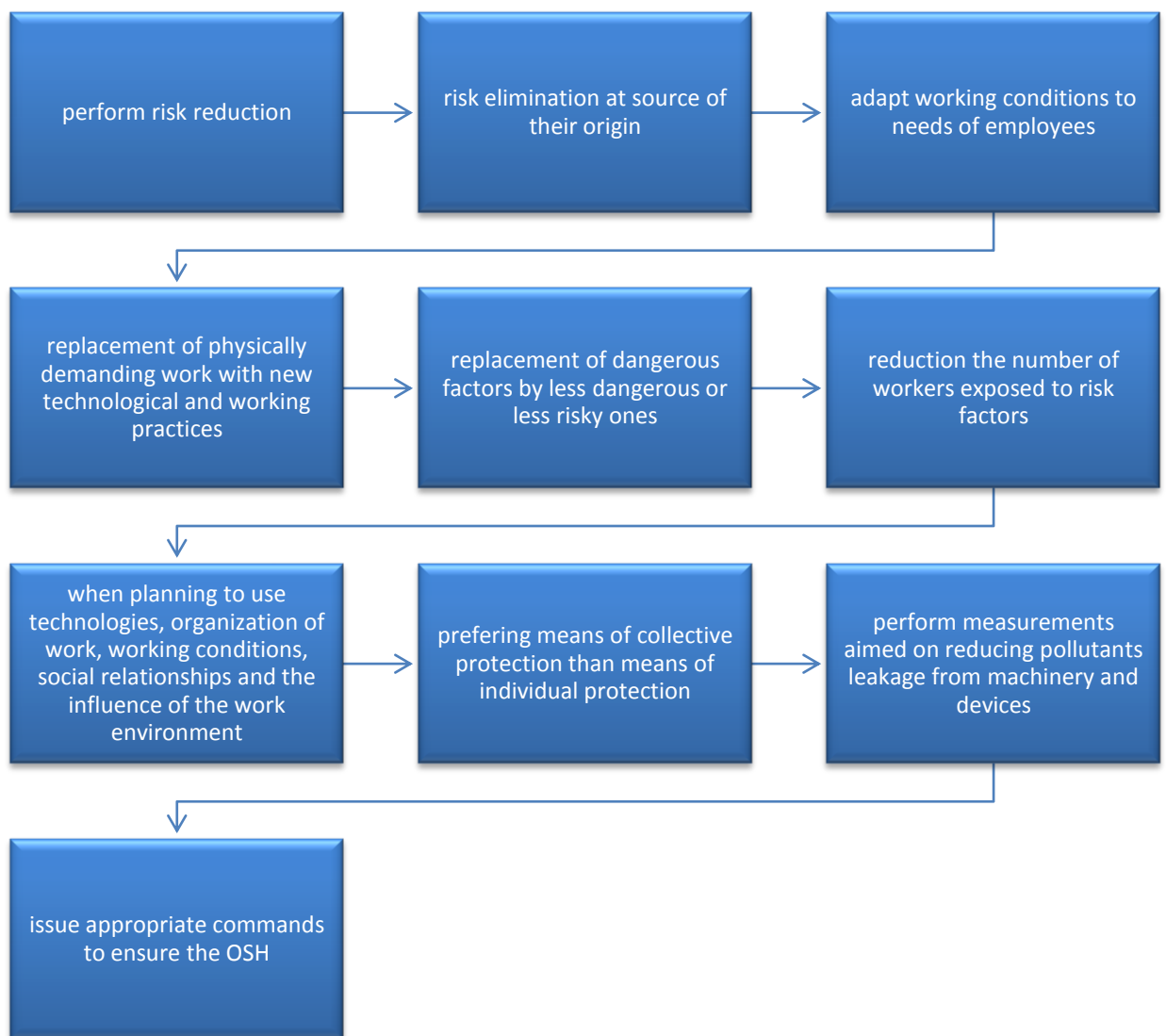


Figure 13: General precautionary principles⁹¹

3.4.1 Retention

This method of risk treatment is based on the fact that the organization **accepts the risk** and parallelly prepare funds for compensation of associated losses. This approach is applicable for dynamic and hardly predictable risk with low levels of negative impacts.

Conscious retention is an expression of resignation the management on resolving the risk by any mean of protection usually for reasons that any countermeasurements would be

⁹¹ Česká republika. Zákoník práce. In: *Sbírka zákonů*. 2006. Available from: <http://portal.gov.cz/app/zakony/zakonPar.jsp?page=1&idBiblio=62694&recShow=114&nr=262~2F2006&rp=p=100#parCnt>.

more cost or organizationally demanding than the effect, which would particular countermeasure have.

Sometimes should as well occur the situation of unconscious retention. It refers to cases, where the risk has not been identified and response of the organization leads to involuntary retention with passive reaction.

Great mistake should arise from wide application of this method to all risks in the organization with comment, that nothing happens anyway.

3.4.2 Elimination or reduction

Risk reduction and risk elimination is **the most used mean** with offensive character of how to deal with risk recommended by general precautionary principles. There should be aimed on causes of risk origination or on unwanted risk consequences.

Countermeasurements may require single-action or repeated activities leading to suppression of risk or risk reduction at source of its origin.

3.4.3 Other methods

Another methods are applicable more likely on many different situations, but not on OSH field as for example **insurance** as a typical method with defensive character, when the risk is transferred for money to an insurance company. The principle is, that the uncertainty is exchanged for the certainty or not as large uncertainty in dependence to exclusions and fulfilled terms. Insurance has an advantage, that the body does not need to hold reserves for covering potential loss.

Risk **transfer** is usually based on a contract as well, but enables displacement of the risk on any entity, which is not an insurance company and this process is not exchanged in money. Typical example should represent selling of claim, when seller receives money and buyer receives the right and risk of unenforceability.

By **diversification** is mend spreading the risk on several smaller groups or not relying on one particular emplacement, so if risk occurs it probably will not affect all assets. Diversification is typically applied on investments in the meaning of typical English proverb: *“Don't put all of your eggs in the same basket.”*⁹²

⁹² SMEJKAL, Vladimír. *Řízení rizik ve firmách a jiných organizacích*. 2., aktualiz. a rozš. vyd. Grada, c2006. ISBN 80-247-1667-4, p. 132.

II. ANALYSIS

4 MODEL STRUCTURE

„Yes! Safety is our business.“⁹³

This part of master's thesis consists of the basic information about the subject of particular University. There is described the scope of the business and which tasks are mostly carried out. Risks are evaluated and OSH management system is later designed in this chapter.

4.1 Factors with significant meaning for OSH management

When analysing each OSH system, it is needed to write down **a summary of all activities, environmental facts and conditions**, which would have significant meaning for the whole OSH management system.

Model structure is built on the basis of **private educational organization** being present on the market of university education for about three years employing **12 employees** on the full employment contract. Others employees are employed on part-time employment and their number is variable in time.

From the view of OSH the applicable law is stating, that if private organisation contracted on full employment less employees than 25, there is no need of managing OSH by the certified person only if the employer disposes of the OSH knowledge.⁹⁴

To grant students the best lecturers and to save costs in once, the University is mostly employing pedagogical staff on **part-time contracts**. Author's practical question of *How to solve the question of health examinations in cases of part-time employment on certain period, which are employed every year?* has been with reference to source of Czech Ministry of Health answered⁹⁵, that it would be fully sufficient to ignore the period of discontinuation and conduct just the periodical examinations.

Regarding OSH regulations there is important, that in this type of education there are **not laid down any extra conditions** by presence of chemical laboratories, student's workrooms equipped with tools or not even a gym or a playground. But study plans of several University programmes contain subjects connected with informatics, which means

⁹³ 40 Free Safety Slogans For the Workplaces. *Safety and Risk Management* [online]. 2011 [viewed 2014-02-08]. Available from: <http://www.safetyrisk.net/40-free-safety-slogans-for-the-workplaces/>.

⁹⁴ In accordance with provision of § 9, article 2, letter a) Code on Ensuring OSH.

⁹⁵ KLOUB, Josef. *Bezpečnost práce v regionálním školství včetně dotazů a odpovědí*. Praha: ASPI Publishing, 2005. ISBN 80-7357-065-3, p. 65.

practical training on software installed on personal computers, which represents the most risky study activity.⁹⁶

4.1.1 Safety management

The University is willing to ensure the highest level of safety within the organization and as a proof of this concern the top management issued **safety policy memorandum**.⁹⁷ Managing Director concurrently placed **the position of Safety & Compliance Officer** as high as possible to the overall management structure⁹⁸ of the University to cover safety and legal compliance operations both on the line of academic line, which is managed by the Dean and on the line of University supporting activities managed by the Operations Manager.

The role of Safety & Compliance Officer further ensures risk assessment and evaluation, designation of countermeasurements in order to lower risks including issuing all related internal guidelines, provision of OSH trainings, investigating accidents and managing administration, communication with state authorities, conducting safety checks and controls, taking actions on preparation to certification, cooperation on OSH audit activities led by Managing Director and maintaining register of legal requirements up to date.

Substitutability of safety responsibilities is ensured by the role of Operations Manager.

4.1.2 Safety documentation

University internal documentation on ensuring the OSH consists of following documents:

- Internal occupational rules - further elaborating the rights and obligations of employees and the employer, especially stressing basic OSH functions,
- Safety policy - with planned targets, obligations of preventing injuries and occupational diseases, continual improvement or compliance with legislation,
- Legal requirements registry - summarizing all important regulations for compliance operations,
- List of forbidden work activities, processes and places - laying down for example forbidden access for all employees excluding janitor to the roof and to the cellar,

⁹⁶ On the work with imaging units are subjected requirements described in chapter 1.2.4 of this master thesis.

⁹⁷ Included under Appendix IV. of this master's thesis.

⁹⁸ See Organisational diagram of the University under Appendix V. of this master's thesis.

- List of PPE and working activities with obligation to use PPE - mostly concerns cleaning and maintenance tasks,
- Accident book and Accident report - used for documentation and reporting of work accidents,
- Safety training documentation - including especially lists of OSH training attendance, OSH training outlines and related knowledge verification,
- Risk analysis register - as a documentation of identification, assessment of risks and designed countermeasurements,
- Annual safety review record⁹⁹ - for evaluation of passed period, comparison with the previous one and fulfillment of improvement and reviewing the OSH system,
- Book of extraordinary events - summarizing near-miss incidents, physical attacks, damages to property, floods, fires and similar not ordinary events,
- Confirmation of including activities under „without fire risk danger“ level - issued by person with professional competence in fire protection,
- Guideline on using company vehicles - laying down authorization of chosen employees for driving, their obligations and behaviour during business trip,
- Guideline on removing icicles - defining safe procedure of this activity,
- Guideline on content of first aid kit, its placement and maintenance - ruling the appropriate legislation on content, placement and responsibility for maintenance,
- Contract with medical doctor - containing commitment of providing health examinations of employees, giving advices and visiting the workplace.

4.2 Applied risk analysis

4.2.1 Used methodics

Author found as appropriate method combination of those described under chapters of 3.3.1 and 3.3.3 of this master's thesis, taking into account recommendations from standards and searching some inspiration in connected literary sources. **Safety spot check** including observing the University environment and **interviewing the staff and students** should be

⁹⁹ Annual safety review record is analyzed under chapter 5.1 of this master's thesis.

adequate risk detection tool to the assessed working environment. The risk assessment has been then provided by **semi-quantitative spot method** based on advices from a special guideline.¹⁰⁰

Overall process of risk elimination or reducing its effects shall consist of following steps.

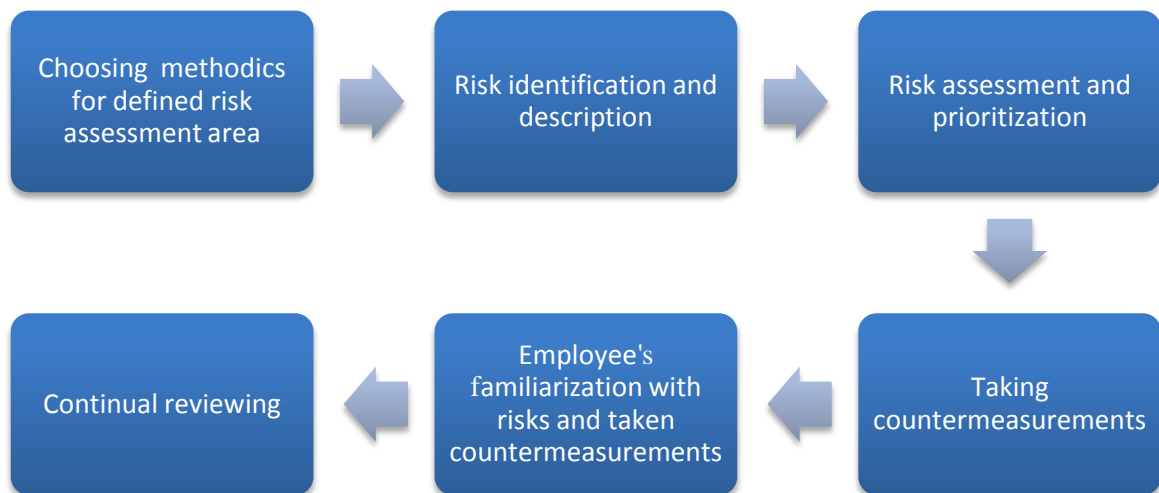


Figure 14: Overall process of risk elimination

4.2.2 Risk identification

OHSAS 18002 recommends to determine list of sources, situations and activities representing risks. Pursuant to Annex C of the standard those risks are divided to physical, chemical, biological and psychosocial containing particular examples of specific risks, which should be well used as checklists as one of methods from chapter 3.3.2.

Literature from the field of pre-university education¹⁰¹ is describing following risk factors as those appeared most frequently during the risk identification:

- broken and leaky outdoor walkways, damage of the pavement,
- worn and torn carpeting, carpet edges missing,
- broken or cracked glass in windows and doors fillings, sunblinds missing,

¹⁰⁰ NOVOTNÝ, Karel. *Soubor vzorů hodnocení pracovních rizik možného ohrožení bezpečnosti a zdraví zaměstnanců*. první. Rožnov pod Radhoštěm: RoVS - Rožnovský vzdělávací servis, 2000.

¹⁰¹ KLOUB, Josef. *Bezpečnost práce v regionálním školství včetně dotazů a odpovědí*. Praha: ASPI Publishing, 2005. ISBN 80-7357-065-3, p. 61.

- inappropriate and unsecured thresholds,
- missing railings and handrails on stairways, low railing,
- lack of distinction of the first and the last step, damaged edges of steps, unmarked reduced height of the ceiling,
- inadequate lighting in classrooms, inadequate shade, missing covers and fluorescent bulbs, dirty lamps,
- uncovered outlet of electrical wiring, missing cover in sockets,
- no marking of shelves capacity and missing the shelves anchoring,
- lack of protection of radiators, missing control knobs,
- missing revision of electricity, of lightning conductor, of gas, of fire extinguishers,
- missing marking of main closures of water, gas, electricity, heating and marking of the access to the main closures,
- inadequate equipment of first aid kit.

Author focused on above mentioned risks when conducting findings processed for every single premise located within the University.

4.2.2.1 University premises

Premises of the University are located in the centre of the town in old building from 19th century. The building has four floors without elevator, cellar and attic premises. The building is equipped with water, electricity and gas supply. From the view of **fire safety risk categorization**, after consultation with external fire safety specialist, there has not been found any reason for inclusion to high fire danger. Just for the case of library has been taken measurement of dividing the library into two smaller ones and diffract the risk of fire. Confirmation of including University activities under „without fire risk danger“ level is a part of overall safety documentation.

The edifice stands **on the edge of the flood line**. The river basin is roughly 1 200 meters away from the University. Based on summer 2013 floods experiences reported by inhabitants two streets closer to the river has been on the sewerage network **preventively installed device preventing the sloop to get up to the premises** of the University.

Education is provided just in the seat of the University, where the whole rented building is **absolutely under control** of University. No one could enter these premises without previous approval of University and in the whole building is residing just this one company.

Building of the University is a part of a building block neighboring from both sides with regular apartment buildings. **In the close or farther surrounding is not present any evident risky activity.**

Within the object of the University is installed **intrusion and hold-up system** in order to detect and signalize the violation of calm of secured premises and fire detection. The main and secondary entrance, main hallways in every floor and access to the office of bursar, where is placed a safe-deposit box, are protected by **CCTV surveillance** for continuous monitoring and protection of property. On the main entrance¹⁰² and in every floor there are placed information tables informing incomers about CCTV monitoring and recording. First floor is also preventively protected by massive **grids** in order to intimidate any offender, who would intend to climb in the object through a window.

Each student or employee owns a **smart card** for unlocking the main entrance, which is anyway watched from the office of janitor, who is secondarily serving as an information service. Janitor has in the upper part of University an apartment, where he lives.

The request given by provision of § 3, article 3, letter g) *Government Regulation No. 101/2005 Coll. Laying down detailed requirements for the workplace and work environment* stating, that the workplace shall be secured against unauthorized access even outside working hours, is accomplished.

4.2.2.2 Students

Within University there are being lectured approximately around **300 students** in fields of communication, psychology, management and economics with further specializations in both daily and distance learning form. Students are being taught in bachelor's, master's and doctoral's degrees.

From the legal view of provision § 132, article 2 Labour Code, the student is typical example of category the **University has obligation to ensure OSH for**. In practice it means ensuring initial training provided as a part of introductory lesson by Safety &

¹⁰² This information table is supposed to have preventive impact to the potential offender.

Compliance Officer or by Operations Manager, to have signed safety documentation and if needed, to investigate work accidents.

Students have **in disposal still water** for free and they should buy hot beverages like several varieties of coffee, tea or hot chocolate. It is also possible to gain energy purchasing some refreshment like baguettes, bars, chocolate, waffles or any similar kind of goods from vending machines. Those devices were placed in University premises not only because of student's well-being, but especially **to prevent faintness, headaches and all the poor health conditions** caused by hunger or by thirst.

4.2.2.3 Administrative and teaching tasks

Characteristic of administrative tasks on University rests on processing needed administration connected with studying matters as evidence of grades, processing applications, compilation of timetables, providing teacher's support, on ensuring issues connected with managing the University, financial and accounting tasks.

Those activities are processed in **seated posture**. Retentive wrong sitting should permanently harm the spine or cause headaches or chest pains.¹⁰³ The right sitting posture is represented on the picture below.

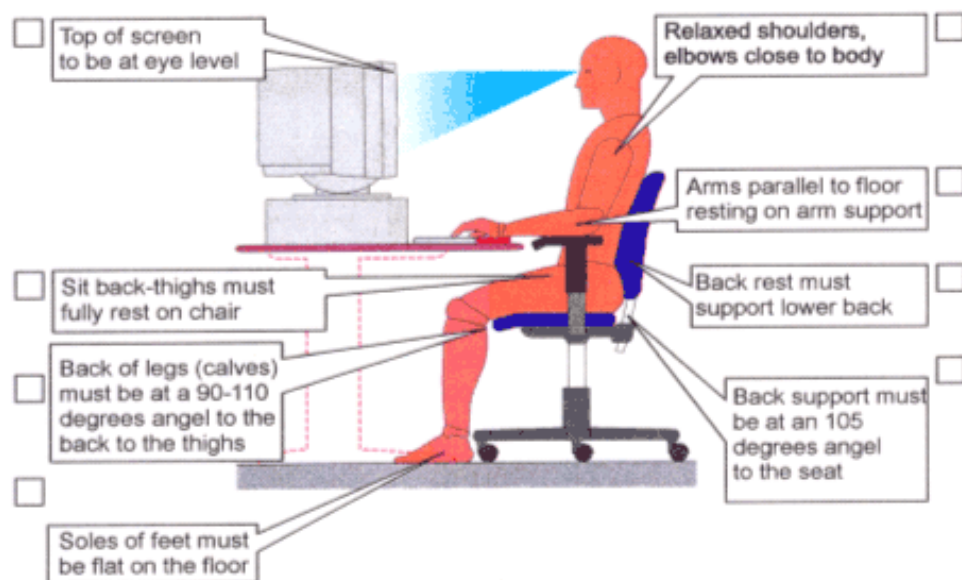


Figure 15: Right sitting posture¹⁰⁴

¹⁰³ NEUGEBAUER, Tomáš. *Bezpečnost práce v administrativě*. 1. vyd. Praha: Pragoeduca, 1997, 116 s. ISBN 80-85856-44-1, p. 38.

Preferred is so called *dynamic sitting*, when an employee makes from time to time minor posture changes. As preventive measurements are recommended to **have short walk**, to **perform stretching and relax exercises** or to simply arrange things purposefully like that to force employee walking - typical example is a printer located in the hallway.

It is worth to use **arm support** for writing on the keyboard, because if hands are that like not bended in wrists so much, the risk of **carpal tunnel syndrome**¹⁰⁵ is minimized.

Another risk factor while sitting could be **back pain**, which should be caused not only by bad sitting, but also by inappropriate chair. It is recommended¹⁰⁶, that **chair** should have as many adjustable features as possible and meet following requirements:

- made of solid and stable construction,
- allowing *dynamic sitting*,
- area of sitting must have adequate size (approximately 40 - 50 centimetres x 40 - 50 centimetres) having rounded front edge,
- seat must be shaped so as to support the proper pelvic tilt and correct curvature of the spine,
- equipped with arm supports unburdening shoulder girdles and sustaining lateral stability.

Teaching tasks are in addition to above mentioned very demanding on **vocal cords**. For keeping vocal cords in good conditions may help **drinking a lot of water** when lecturing and maintaining of **adequate temperature** in the lecture room with more likely moist environment. In bigger lecture hall it is sufficient to **use microphone**. If it is not possible, warming up the voice before the performance would be good inspiration for teachers from actors. And at least, author can not forget to mention **sleeping** as the best restoring power for vocal cords and to recommend not to smoke, because cigarette smoke - no matter if it's first-hand or second-hand - is seriously drying cords.

¹⁰⁴ Right sitting posture. In: *Safety Services: Ergonomics* [online]. 13. June 2010 [viewed 2014-03-14]. Available from: <http://www.weizmann.ac.il/safety/ergonomics.html>.

¹⁰⁵ Carpal tunnel syndrome is currently the most common occupational disease of damaged nerves passing through the loof.

¹⁰⁶ NEUGEBAUER, Tomáš. *Bezpečnost práce v administrativě*. 1. vyd. Praha: Pragoeduca, 1997, 116 s. ISBN 80-85856-44-1, p. 38 - 39.

In order to prevent damages on spine, eyesight and vocal cords, should be those endangered parts of body supplementary examined by contractual medical doctor on the occasion of **special medical examination** held every two or three years.

Regarding PPE, this work is considered as “*clean*” according to Enclosure number 4 to *Government Regulation No. 495/2001 Coll., Laying Down Further Conditions on PPE* and therefore every teacher and administrative employees should be furnished with at least **100 grams of cleaners** per month and at least **two towels** per month.

In view of the fact teaching and administrative activities are operations, where it is necessary to use the brain, it is necessary to take into account **the prevention of psychical diseases** and defects like alcoholism, schizophrenia, manic-depressive disorder, sensorimotor disorders and others. In my opinion psychical disorders generally occur as a result of unbalanced ratio between work and personal life. Factors preventing formation of psychical diseases should have following characteristic:

- having varied work tasks and convenient working environment,
- realistically assess own strengths and possibilities,
- good time-management,
- taking holidays continuously,
- changing mind when having interests outside work,
- thinking positively, sense of humor.

When suspicion of psychical disorder should be of course sought professional psychological or psychiatric examination.

4.2.2.4 Cleaning and maintenance tasks

According to job descriptions of charwoman and janitor their responsibilities are as following.

Janitor sets up, arranges or moves furniture, paints rooms, performs cleaning tasks, which are not part of daily maintenance and provides that like routine maintenance activities connected to building and its equipment, especially reparations. This person ensures and monitors building security performing such tasks as locking doors after operating hours and in case of suspicion provides possible checks of in-house security during night.

Seasonally removes snow from sidewalks, from driveway, from parking area and removes icicles from the roof. From janitor are reported needs of larger reparations and requests for supplies of cleaning and maintenance needs. In case of need janitor sprays insecticides and fumigants to prevent insect and makes preventive actions against presence of small rodents. He drives vehicle to replenish stocks and is responsible for general technical responsibility of all the company cars.

Charwoman cleans all the building floors by mopping, sweeping, wiping, scrubbing, or vacuuming them. Gathers trash from trash cans and passes it to waste containers for paper, plastic and glass. Cleans, polishes and dusts off furniture, windows, glass partitions, and mirrors preferably using soapy water.

According to the literature¹⁰⁷ there are recommended some PPE regarding the work of cleaning and maintenance workers and some of them were used in applied risk analysis.

PPE	RISK DESCRIPTION
safety belt for working at heights	mechanical - falls
shoes with non-slip soles	mechanical - falls, slips
goggles	chemical - liquids, splashes
rubber gloves	chemical - liquids, immersion
cotton apron	chemical - liquids, splashes
protective footwear with steel toe	mechanical - hits, cuts, bumps, crushes
single-fingered leather gloves	mechanical - stabbing and cutting wounds, scratches
winter hat	heat - cold
winter shoes	heat - cold
raincoat	health - chill

Table 6: Overview of recommended PPE

As this work is considered as *less clean* according to Enclosure number 4 to Government Regulation No. 495/2001 Coll., Laying Down Further Conditions on PPE, therefore their

¹⁰⁷ KLOUB, Josef. *Bezpečnost práce v regionálním školství včetně dotazů a odpovědí*. Praha: ASPI Publishing, 2005. ISBN 80-7357-065-3, p. 61.

monthly claim to PPE of at least **100 grams of cleaners** and at least **two towels** is extended of **300 grams of cleaning paste**.

4.2.2.5 Business travels

In the property of the University there are **three company cars** in total overview. The only persons having almost fully in their disposal company cars are the Owner and Managing Director in one person and the Dean. Those cars are serving mainly for representative purposes. Janitor and Operations Manager are sharing one pick-up mostly for technical purposes.

Professional training of driving the company cars has been passed just by abovementioned persons, because others employees are not using company cars as frequently and this training would be expensive for the University and almost useless for the rest of employees. Therefore internal guideline on using company vehicles is stating, that if Safety & Compliance Officer, IT Specialist, Vice Dean for Study Matters, Bursar or possibly any other employee would - with the prior approval of their manager - need to travel for work anywhere, vehicle must be driven by Janitor, although those persons are holders of driver's license. The person of Janitor is besides competency to drive company car the only one with adequate technical skills to drive any company car and is anyway **responsible for the general technical responsibility** of company vehicles.

According to abovementioned internal guideline is **employee, who overtook the company car** and has valid professional training, in relation to maintain OSH **is obliged to**:

- ensure the car is always equipped by a spare tire, a warning triangle, a first aid kit, a jack, set of bulbs, a wheel wrench, a tow rope and a safety vest,
- keep proper records on the vehicle operation in a "log book" for every time the car has been used,
- take proper care for the vehicle as it especially remains adequately washed, vacuumed and in satisfactory technical condition: bigger and even probable defects must be immediately reported to the service, minor defects not interfering the construction or electrical parts must be maintained by driver,
- respect all the traffic rules pursuant to valid legislation,
- not make any adjustments of the car,

- not to transport any persons having nothing in common with the work task,
- always use the safety and security equipment of the vehicle,
- prefer guarded parking in the occasion of overnight business trips.

The same document further describes description of procedures during an **emergency stop** and during **involvement on a traffic accident**.

Using of own **personal cars** for working purposes is **forbidden**.

4.2.3 Risk assessment and its prioritisation

After conducting safety spot check and asking the staff about most risky situations, activities or near misses, have been all the possible threats from University premises and activities transferred to **Risk analysis register**¹⁰⁸. Particular threats were assessed in conformity with choosen methodics, from which resulted risks values, which have been prioritized and marked in accordance with following table.

Risk range	Risk level and color	Awareness
1 - 19	low	regular
20 - 49	medium	increased
50 - 125	high	extra

Table 7: Prioritization of risks

At first risk analysis of threats within University there took place the column indicating the priority of taking prior countermeasurements instead of the awareness column, so threats with highest risk level were solved at first. Now it is the matter of overall awareness, because University **staff and students have been familiarized with risk analysis findings**, especially with those, where is necessary to pay extra or increased awareness.

As seen from the risk analysis register, **against all** the negative consequences of identified threats, even in cases of low risk value, have been designed and implemented safety countermeasurements. Those **risks with ability of its elimination at source of its origin** have been eliminated before in compliance with first provisions of general precautionary principles.

¹⁰⁸ Included under Appendix VI. of this master's thesis.

Upcoming graph represents six risks with the highest awareness.

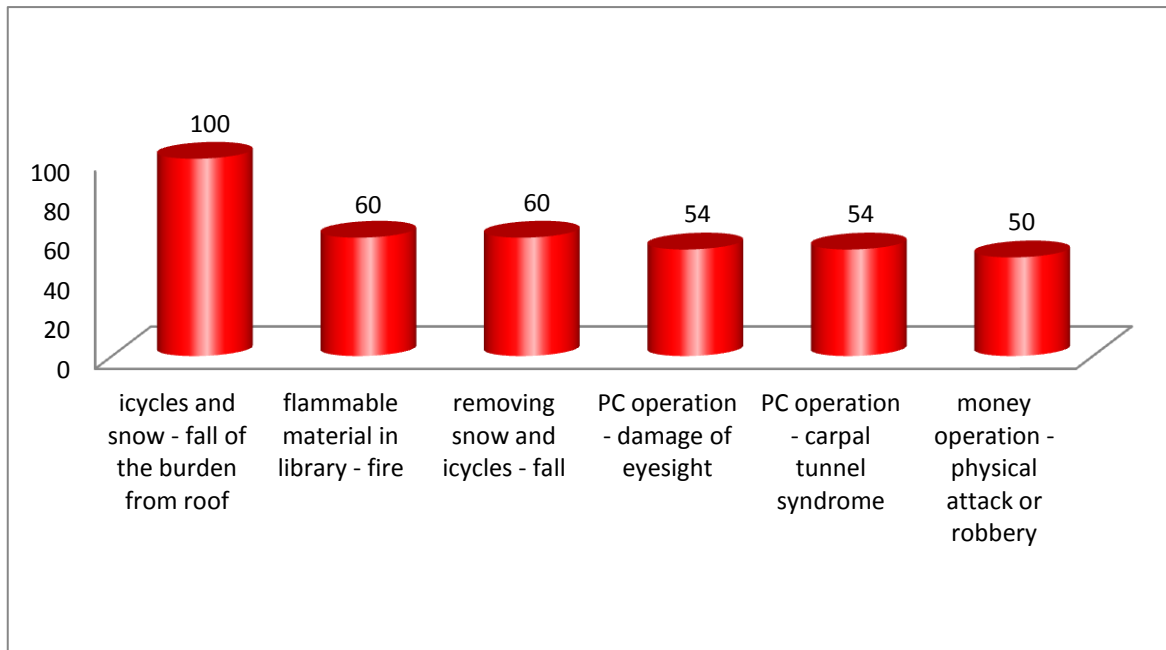


Figure 16: Risks with extra awareness priority

The seasonal risk of **falling icycles and snow** from the roof has been evaluated as the greatest risk, because of great probability of its happening, because of hitting by icycle to anyone's head causes death and this risk concerns large number of endangered people. **Removing of such a risk** demands maintenance activity based on work in height, where is needed to use safety belt and to perform this task with anyone supervising the worker conducting the removal. On the same risk level remains threat of **fire in the library** given by the amount of flammable material, therefore there are placed fire alarm with fire extinguishers and as mentioned before, the original library has been relocated to two rooms separated by one room in the middle.

Then there are evaluated two risks resulting from PC operation tasks. First one is possible occupational disease of **carpal tunnel syndrome**, which should be prevented by equipping keyboards with arm supports enabling employees to rest hands and wrists, by abiding the right sitting posture and by having suitable chair, wherewith might be prevented back pain as well. To prevent second one risk resting in **damage of eyesight** it is recommended to take short safety breaks every two hours and to keep safe distance of 40 centimeters from monitor and should be respected orientation of displays in the way that avoids light reflections.

Last risk factor with extra awareness priority relates to money operations, which are taking place at bursar's office bringing with possibility of **physical attack or robbery**. Although the probability of this act is generally quite low, it should bear fatal consequences and severity of this risk burdens the fact, that this operation has been once reported as near miss incident. For defense of health and life of bursar this person has in disposal pepper spray and has been trained in handling with it. To prevent money losses there are set cash limits and money above particular amount must be hidden in safe-deposit box, where should be held as well money to respective limit, whereafter those funds must be taken to the bank. The service of janitor, CCTV surveillance and CCTV marking are another supplementing factors acting against this unwanted phenomenon.

Next graph illustrates ten risks with increased awareness priority.

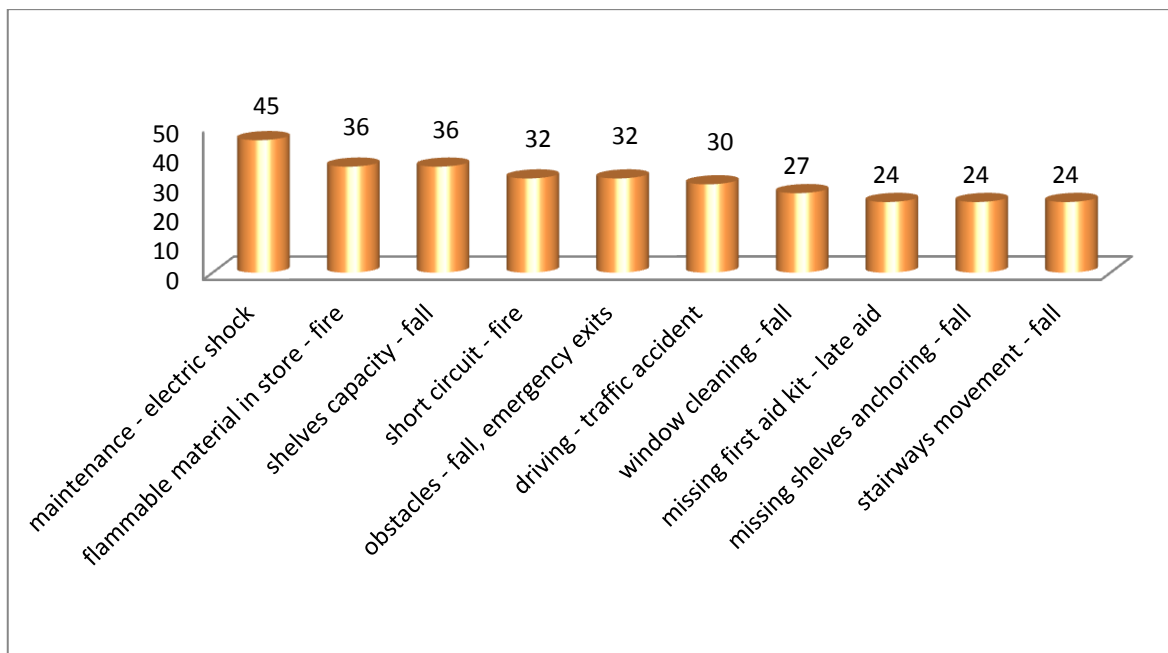


Figure 17: Risks with increased awareness priority

First risk on increased awareness level is represented by **maintenance of electrical equipment** including cleaning and repairment in ordinary extent, which may result in electrical shock. Therefore particular electric circuit must be always turned off and before first touch - for example when replacement of the socket must be always used the tester. Cleaning of lights in hallway requires using platform with railings as it serves as better protection against fall than ladder. As seen from previous graph, fall is generally very common risk within this category. Taken from the most largest risk of fall, which should occur in store - although it is often hard to estimate **weight of appropriate burden** - there

shall be observed limits, which are stated on shelves tags and placed things shall not protrude from single shelves. Single shelves must be **secured against unpredictable fall** by screws and struts. Further risky activity with possible fall - in this context in the meaning of employee's fall - is considered **window cleaning**, where is at first recommended to ensure that ladder is in good technical condition and when carrying cleaning out, then especially not to bend out of window and to conduct cleaning only from inner premises. Several times already happened, that students run up or down the stairs, stumbled and hurt themselves - of course without utilizing handrail. So except marking the first and the last step running in the premises of University has been prohibited. One of two remaining **risks of fire** should occurs in store, where is needed to place all flammable material far away from lights and its hot covers and where is closely prepared fire extinguisher. The second one may occurs anywhere as a consequence of short-circuit in electrical equipment, so employees are trained to take out the plugs of appliances from electrical network, devices are continually revised. Very special risk of missing first aid kit equipment with possible consequence of not helping in the right time has been treated by appointing responsible person.

The rest of risks with lowest priority is presented below.

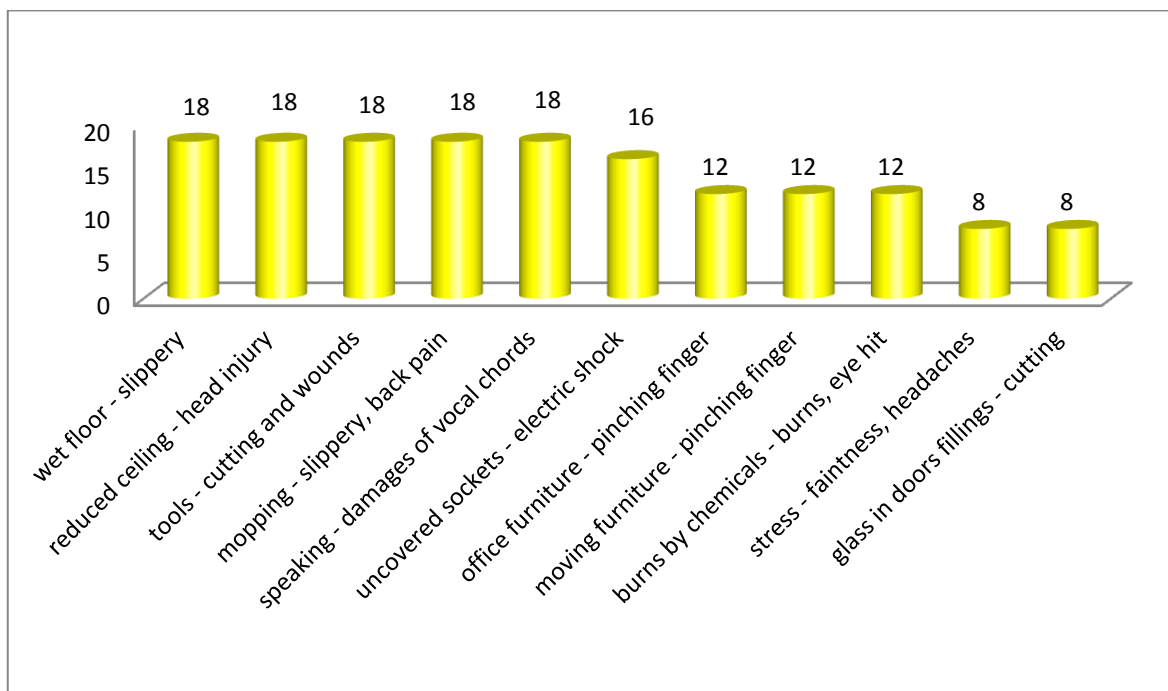


Figure 18: Risks with regular awareness priority

For prevention of negative influences resulting from specified risks were taken actions according to risk analysis register, notably with help of PPE.

4.2.4 Verification of preventive countermeasurements

By preventive measurements are considered activities with effect of risk removing or lowering its impact or any other activities pursuant to general precautionary principles.

The best verifactor of designed preventive measurements seems to be the time, because in the run of time should be seen, if a designed countermeasurement is effective and if there is or is not occuring work accident or occupational disease.

But respecting **preventive approach** there is in author's opinion important to take into account opinions of employees, to observe them when using PPE or when they are carrying out activities pursuant to issued safety guides and in the case of these appear not effective, not fitting or not adequate, then to immediatelly modify or to change appropriate countermeasurement.

5 INTERNAL AUDIT AND RECOMMENDATIONS FOR THE CERTIFICATION

„Yes! Safety is our business.“¹⁰⁹

One of the most important attributes of well managed OSH system is **continual improvement**. And continual improvement is generally depended on finding new information about potential risks and nonconformities of the system. Therefore auditing has great benefit to the life of the University.

In order to gain requirements and recommendations for improvement author have analyzed two documents. As first one has been researched the Annual safety review record, which is a part of safety documentation of the University representing findings with operational character and then there is looked into internal audit, which has been conducted as a preparation for probable certification audit.

From findings of those documents were on the end of this chapter pointed out resulting nonconformities leading to possible improvement.

Assessment is based on a checklist method with following evaluation:

- C = conformity,
- N = nonconformity,
- I = irrelevant in the meaning, that this requirement is not applicable.

5.1 Annual safety review for previous year

The aim of this audit has been to **review overall safety**, especially fulfillment of OSH tasks, compliance with University safety policy and applicable national safety legislation based on auditing principles of ISO 19011. It also assesses follow-ups from previous review.

Audit for monitored period of 1st January 2013 to 31st December 2013 has been led by Managing Director in close cooperation with Safety & Compliance Officer in order to maintain professional knowhow.

¹⁰⁹ 40 Free Safety Slogans For the Workplaces. *Safety and Risk Management* [online]. 2011 [viewed 2014-02-08]. Available from: <http://www.safetyrisk.net/40-free-safety-slogans-for-the-workplaces/>.

5.1.1 Risk prevention review

Requirement	Evidence	Evaluation
OSH tasks are maintained by person with professional competence in risk prevention.	the University employs less than 25 employees	I
Risks are identified, described, evaluated and countermeasurements for its elimination or minimalization are designed.	risk analysis register	C
Risks are being continually assessed.	annual safety review record	C
Employees and students are aware and are reporting near-misses accidents.	awareness - initial training reporting - List of reported near misses, "NM" marking in Risk analysis register	C
PPE guideline has been processed.	List of PPE and working activities with obligation to use PPE	C
PPE are provided.	janitor, charwoman	C
Fire danger inclusion is provided.	activities of University and fire risk are included under "without fire risk danger"	I
Works have been categorized.	category 1 for all works	I
Contract with medical doctor has been undersigned.	Contract from 21. February 2013 valid for 2 years	C
Workplace is secured against unauthorized access.	electronic access cards, the service of janitor	C
All the devices have valid revisions.	documentation has not been found on all devices	N

Table 8: Questionnaire of risk prevention review

In the view of the University growth it is **recommended to undertake the exam for professional competence in risk prevention**. Current requirements on person authorized

by employer for managing the OSH issues are sufficient. Integration of this position to the whole University structure is adequate.

5.1.2 Safety documentation review

Safety documentation in extent of chapter 4.1.2 of this master's thesis has been found as **sufficient**. Further fire documentation is not required, because activities and conditions of the University are included under “*without fire risk danger*” level. This document has been issued by person with professional competence in fire prevention as required in previous audit for 2012 and it is a new part of overall OSH documentation. Previous audit also recommended conceiving of Legal requirements registry in order to set the basis for compliance and record for evidence of near miss accidents.

In the new **contract with medical doctor** from 21st February 2013 - which has not been a part of OSH documentation during previous audit - is stated, that medical doctor would visit the workplace and give a professional opinion on the content of first aid kits. For the next audit it is necessary to **ensure compliance with those provisions of the contract**, process enrollment of the medical doctor's visit and gain written professional opinion regarding first aid kits and its appropriate placement. Consulted should be as well further countermeasurements against occurrence of carpal tunnel syndromme disease and against vocal chords damages.

Next recommendation for further audit is to create **system of evidence all electrical devices** and the list with terms of its revisions, because on 25th of June 2013 has been detected failure on a kettle, which nearly flared. Incident report is attached.

5.1.3 Safety training review

University keeps in conducting regular OSH trainings for all employees in dependence to their work tasks and imminent risks based on previous risk analysis.

Students of the University are lectured on the start of every study programme by Safety & Compliance Officer. From the schedule of OSH trainings there is not clear, that so called training of “VISITOR” is intended for students. Visitors of the University are anyway not lectured as planned before. There is just applied the rule, that their movement in the building is accompanied by any employee, which dispose of valid OSH training. So mentioned **training is recommended to rename** on “STUDENT” programme.

Employee	Training	Evaluation
janitor	INITIAL, PERIODICAL, ELECTRIC, DRIVER, HEIGH	C
charwoman	INITIAL, HEIGH, ELECTRIC	C
operations manager	MANAGER, DRIVER	C
accountant	INITIAL	C
student 221-2-11, student 262-4-12	VISITOR	C
student 305-1-13, student 286-3-13	VISITOR	N

Table 9: Questionnaire of safety training review

Audit investigation found, that attendance list from initial OSH training for students dated on 12th October 2013 and on 14th October 2013 does not contains signatures of two students, which are recently studying the University. All others attendance lists although having gaps in signatures are complemented by further records stating, that trainings of those students were held additionally. Raised requested for remedy and check the agenda.

5.1.4 Work accidents and occupational diseases review

In the year of 2012 there were around **5 work accidents** of the staff without need of hospitalization. The number of near-miss accidents is unknown - because those has not been monitored yet. There are even not reported any occupational diseases from that period of time. Quantity of such a number is given due the fact of equipping the whole building by furniture and need of performing construction works.

For the period of 2013 the University registered only **2 work accidents** without need of hospitalization, no reported occupational diseases and 3 near-miss accidents. One work accident has been caused by reduced ceiling on cellar entrance with consequence of head injury, in the second case student stumbled when running downstairs and suffered just bruises. Near misses happened in the employee's restroom with a kettle as avised before, in the bursar's office nearly taken place a physical attack, and in the store a burden nearly felt on employee given by overloaded shelve. Appropriate investigation took place and adequate countermeasurements have been done.

5.2 Internal audit findings

On several next pages follows the most important requirements of OHSAS 18001 with collecting the audit evidence and its evaluation of conformity or nonconformity.

5.2.1 Safety policy

Requirement	Evidence and remarks	Evaluation
safety policy is appropriate to the nature and scale of risks	Safety policy from 18 th May 2012, risk analysis register	C
is consistent with the overall policy of the legal entity and its vision, and with the quality policy and environmental policy	General policy from 15 th September 2011	C
contains specific and clearly expressed commitment of the top management of the legal entity to assert adopted policy and to fulfill it in cooperation with employees	Safety policy from 18 th May 2012	C
includes a commitment to the prevention of accidents and of health damages	Safety policy from 18 th May 2012	C
includes a commitment to safeguard and to promote regulatory compliance of employees, as well as other concerned parties	for concerned party are considered students	C
includes a commitment to continual OSH improvement	Safety policy from 18 th May 2012	C
is documented and maintained with regard to the results of its appropriateness and adequacy review, dated and signed by the legal representative of the legal entity	Safety policy from 18 th May 2012	C

Table 10: Safety policy findings

5.2.2 Planning

Requirement	Evidence and remarks	Evaluation
to conduct an initial review of existing OSH management system in terms of its scope, adequacy and effectiveness and to determine the outcome of review objectives, targets and measurable indicators of OSH and processed plans to meet those	No evidence about initial review found. No measurable indicators and processed plans found.	N
to establish, implement and maintain documented procedures for the ongoing hazard identification and risk assessment	Does not exist any written methodic, but those tasks are performed.	N
methodics for identification and risk assessment prefers proactive approach and enables appropriate risk identification, prioritization and documentation	Threats are proactively searched, but the methodics is missing.	N
auditee's risk management decision is based on following priorities: elimination, substitution, engineering controls, warnings or administrative controls, PPE	Current priorities of general precautionary principles are given by Labour Code, which have the same priorities.	C
to establish, implement and maintain procedures for identifying and accessing legal requirements	Legal requirements registry is accessible through intranet even for students.	C
to establish a procedure describing the objectives and targets process involving each level and function in the organisation	Not processed.	N
to review objectives, targets and its programmes	No reviews done.	N

Tabulka 11: Planning findings

5.2.3 Implementation and operation

Requirement	Evidence and remarks	Evaluation
to provide accessible resources, to define and to document roles, responsibilities and authorities	Purchasing PPE, safety equipment, funding and establishing the role of Safety & Compliance Officer, which is further documented in job description and Safety policy.	C
to appoint representative for OSH	Managing Director is in the role of OSH management responsible person.	I/C
to ensure the training, to evaluate its effectiveness, to document and to retain associated records for employees to be aware of significant hazards, their roles and responsibilities	Provided by programme of trainings and by connected documentation.	C
to establish, implement and maintain procedures for internal and external communication and participation	Proofed by reported near-misses and consultation of OSH matters with employees.	C
documentation of OSH system consists of safety policy and objectives, OSH scope and main elements description, its interaction and reference to related documents	Documentation lacks of description of documents' relation and mutual references.	N
documents shall be accessible, approved prior to issue, review, updated and re-approved with identification of changes; obsolete documents prevented from use	From particular documents is not evident any reviews, updates or approvals. Documents are not approved prior to its issue.	N
to determine and to process operations and activities associated with identified threats	For example Guideline on removing icicles.	C

to identify potential emergencies, to create processes, to review it and to provide training and testing	Emergencies have been identified, but no guideline have been worked out.	N
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Table 12: Findings from implementation and operation

5.2.4 Checking

Requirement	Evidence and remarks	Evaluation
to establish procedures to monitor and measure OSH performance on regular basis	Within University are monitored just injuries, near missess and occupational diseases.	C
provide both reactive and proactive measures	Proactive measurements are conducted continually and after each accident or incident are taken appropriate actions.	C
to establish procedure for investigations of incidents	Content requirements of investigation process are not a part of documentation.	N
to kept records readable, traceable and protected against loss, damage or deterioration	Training records are kept within well protected HR database.	C
to ensure periodical conducting of internal audit	Internal audits are provided.	C
internal audits conforms requirements of OHSAS 18001 and to planned arrangements for OSH management system	Internal audits are provided in different way than is stated by the standard.	N

Table 13: Findings from checking

5.2.5 Management review

Requirement	Evidence and remarks	Evaluation
to review OSH management system at planned intervals including assessment of opportunities for improvement or need of changes	Management is not conducting any reviews.	N

Table 14: Findings from management review

5.3 Findings and recommendations for certification

From the part of Annual safety review should be stressed as **opportunities for improvement** recommendations for undertaking the exam for professional competence in risk prevention in the view of the University growth, enforcing obligations from recently signed contract with medical doctor and to consult issues regarding first aid kits and its appropriate placement as well as measurements against occupational diseases. Then has been ordered to process a system of evidence all electrical devices and its revisions as this is considered for possible system fault. The same situation occurred on safety documentation, where have been detected two nonconformities.

Also the part of Internal audit offered new perspective for improvement. Regarding Safety policy were all requirements met without any recommendations. But the **part of planning** is definitely the field of most common discrepancies. Passing connected requirements has not been for example found an evidence about initial review, although risks with ability of its elimination at source of its origin have been taken away. So recommended action is to additionally amend the report about initial review and to process connected feasibility plans of how to deal with risks. Further nonconformities rested on **missing required guidelines**. For example - although proactive tasks of hazard identification and risk assessment are being continually performed by safety spot check and by conducting interviews with the staff and students, there does not exist any written methodic on those procedures, which should be worked out together with a procedure of reaching targets and objectives in selected time-frames touching relevant responsible functions and levels within organization, which is missing as well and shall be written up in compliance with OSH policy.

Still remain at documentation, there will be needed of amending Internal occupational rules by schema stating relations between internal organizational regulations and description of system main elements. From University documentation is not evident any reviews, updates or approvals and documents are either not approved prior to its issue as required by OHSAS 18001, therefore suggestion of using following header to each internal managing document should be helpful.

LOGO	GUIDELINE NUMBER	PAGE-TOTAL x-x
	TITLE OF THE PARTICULAR GUIDELINE	VERSION x VALID FROM xx-xx-xxxx
prepared by:	approved by:	rewieved by:
<i>signature</i>	<i>signature</i>	<i>signature</i>
Name Surname	Name Surname	Name Surname
Job Title	Job Title	Job Title

Figure 19: Draft of document header

Within the University have been identified some possible emergencies, but no guideline have been worked out. As it is known the building of the University stands on the edge of flood area, it is recommended to do so regarding emergency situation of possible floods with consideration of evacuation training.

A guideline for investigation of incidents are as well not a part of safety documentation, but shall be - the reason is, that this procedure has to be conducted in a timely manner and if authorized person is left, this activity needs to be done by anyone else, who has to know how to conduct such an action.

Even **internal audits** are provided in different way than the standard states. This activity should be structurally reconsidered.

The lack of Managing Director's time causes, that top management of the University is not conducting any factual **management reviews** excluding familiarization with internal audit outputs and authorization of suggested measurements from Safety & Compliance Officer.

It is a shame, because University is reduced by another view how to improve overall OSH system and this attitude should change if the University top management takes seriously the plan of undertaking the certification audit.

As seen from aforementioned, further progress will involve especially **completing the missing documentation** and new review of conditions fulfillment. Most decidedly, by both processes were created many opportunities to improvement - as OHSAS 18001 notably requires. But in author's opinion this is definitely not the right time to ask for certification audit.

As soon as effective internal audit will be ensured within the University, there should be considered **complementarity of internal and external audit examination** and the certification might be then based on externally reviewed results from internal audit. Advantage shall be in saving the time, the budget and maybe in the quality, because sometimes reports from well-trained and motivated internal auditors are better than reports of external auditors due the fact they dispose of better knowledge of the particular organization.

Most appropriate recommendation of a general nature intended for all auditees is **to base the system of OSH management on OHSAS 18001 standard stright from the beginning** of its construction.

CONCLUSION

„No safety, no business.“¹¹⁰

Master's thesis focused on the field of ensuring OSH within university environment is generally divided to theoretical and analytical part.

First three objectives of this master's thesis task were to process an analysis of legislative and normative requirements and to formulate principles applicable within the OSH field. Therefore as a first issue of theoretical part there is **analysed national applicable legislation** starting with its roots beginning with the highest legal force continuing with provisions of Labour Code, Code on Ensuring OSH and connected regulations of Government or particular Ministries. Some tricky provisions of appropriate acts are explained using general practice of courts, when solving OSH based civil cases. Within selected field were not found any specific implementing regulations, but in national OSH policy has been found out, the field of university education is being prepared for further regulation.

Following chapter **researches normative area** of OHSAS 18001 lying down basic requirements on the OSH management system supplemented by ISO 19011 as standard for auditing. Standard 18001 recommends to manage OSH system based on safety policy and in conformity with PDCA cycle. Benefits of auditing, respective benefits of the certification process and its principles are further explained as well as the whole process of certification based on ISO 19011. Both legislative and normative chapter in its partial conclusions set requirements, which should be subsumed under **system of required activities** for ensuring effective OSH system presented on diagram placed in relevant enclosure.¹¹¹

The chapter of risk management takes place in this thesis before closing the theoretical part, because **handling with risk** is an elementary part of ensuring OSH. There are clarified connected basic terms, stressed additional characteristics of OSH system as cooperation, awareness, responsibility, organization, rules transparency and order. Mentioned is the phenomenon of acceptable level of risk, methods of risk identification, risk assessment and risk treatment in the end.

¹¹⁰ 40 Free Safety Slogans For the Workplaces. *Safety and Risk Management* [online]. 2011 [viewed 2014-02-08]. Available from: <http://www.safetyrisk.net/40-free-safety-slogans-for-the-workplaces/>.

¹¹¹ Included under Appendix VI. of this master's thesis.

The part of analysis then accomplishes the rest of objectives given by the master's thesis task. Those were to create a model structure of University, to analyse and to assess risks of its working factors, to design OSH management system and to process a system of requirements leading to certification.

That is why there have been hereafter depicted all the **relevant aspects of a smaller private University environment** with focus on size of the organization, organization of safety management and safety documentation. University environment is being closely introduced even in the chapter of **applied risk analysis**, which starts with description of the whole proces and choosen methodics, whereafter there are identified most common activities and greatest factors of risks within this place using a descriptive-analytical method. All the factors causing risks have been written down to so called "Risk analysis register" in order to identificate its most common premises or activities, its source of threat, the threat itself and to assess resulting risk by multiplication of risk probability, severity of probable consequences and expert opinion values. On prioritization of risks has been set three levels indicating appropriate extent of awareness to be paid by employees. Risks included to the levels with extra, increased and regular awareness priority were graphically presented, whereas two highest levels have been also appropriately commented in relation to taken countermeasurements. From the **safety analysis** based on annual safety review and on internal audit of the model structure subsequently resulted recommendations leading - better to say to improvement, than to possible certification - although the University is due mentioned safety analysis a step closer to the certification.

Thesis is logically structured, contains many reference links, is supplemented by connected enclosures and schemas and its important provisions are for better orientation highlighted in the text. Author considers the **greatest benefits** resulting from this master's thesis in further professional development, in great possibility of practicing and improving professional English, in possible improvement of OSH University system based on this proposal and in related preparedness to planned certification.

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LIST OF TERMS AND ABBREVIATIONS

Term or abbreviation	Explanation
VOCABULARY	
accident	unwanted event with damage to health or life
audit	systematic, independent and documented process for obtaining an audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled
auditee	examined subject of an audit activity
auditor	physical or legal entity conducting an audit
certification	externally conducted compliance procedure
conformity	requirement has been fulfilled
employee	physical person, a subject to be protected
employer	physical or legal entity, a subject ensuring the protection
incident or near miss incident	unwanted event with or without damage to health or life
nonconformity	requirement has not been fulfilled
OSH	organizational safety and health; conditions and factors that affect or could affect the health and safety of persons on workplace
University	subject of this master's thesis analytical part
PDCA	methodology of plan - do - check - act
PPE	personal protective equipment
risk	combination of the likelihood of an occurrence of a threat and the severity of its consequences
safety policy	top managing act governing OSH direction and its intentions
threat	possible risk factor, which may occur

work	procedure of creating values - usually for a money reward
workplace	particular place, where the work is being performed
STANDARDS AND LEGISLATION	
ISO 19011	guideline for auditing management systems; ČSN EN ISO 19011: idt ISO 19011:2011
OHSAS 18001	guideline stating requirements for occupational health and safety management systems; ČSN OHSAS 18001: idt BS OHSAS 18001:2007
OHSAS 18002	guideline for implementation of OHSAS 18001; ČSN OHSAS 18002: idt BS OHSAS 18002:2008
Civil Code	Act No. 89/2012 Coll., Civil Code
Code on Ensuring OSH	Act No. 309/2006 Coll., On Further Terms of OSH
Fire Protection Code	Act No. 133/1985 Coll., Fire Protection Code
Labour Code	Act No. 262/2006 Coll., Labour Code
Labour Inspection Code	Act. No. 251/2005 Coll., Labour Inspection Code
Specific Health Services Code	Act. No. 373/2011 Coll., On Specific Health Services

All the legal acts stated in this master's thesis are in “*as amended*” form if not noted any other particular version.

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APPENDIX I.: SCHEDULE OF TRAININGS

SCHEDULE OF OSH TRAININGS

REGULAR STAFF TRAININGS					
Name of the training	Focused on	Term	Conducted by	Content and documentation requirements	
INITIAL	each newly hired employee including temporary employees	on the day of start working	OSH representative (part one) and manager of the newly incoming employee or any other manager, which passed the OSH training for management (part two)	<ul style="list-style-type: none"> - part one: initial training consisted of presentation of Labour Code selected provisions and connected regulations with outputs of: - signed training record or attendance list - written knowledge verification - part two: getting familiarization with workplace and with hazards connected to work and workplace 	
PERIODICAL	all employees	regular employees: once per two years management: once per three years	OSH representative	<ul style="list-style-type: none"> - presentation of Labour Code selected provisions, connected regulations and possible legislative changes - signed training record or attendance list - written knowledge verification 	
MANAGER	all managers	till three months after start of conducting the work or from an appointment	OSH representative (or by subcontractor in specialized issues)	<ul style="list-style-type: none"> - presentation of Labour Code selected provisions, connected regulations and possible legislative changes - signed training record or attendance list - oral and written knowledge verification 	
VISITOR	all the persons present on the workplace with knowledge of the organization	upon entering the workplace or upon starting the work	manager of the appropriate workplace, where the work is to be done or any other manager, which passed the OSH training for management or OSH representative	<ul style="list-style-type: none"> - in dependence on the particular case, but generally information and guidelines to ensure OSH and the measures of „in case of emergency“ - signed attendance list 	
SPECIAL	all employees	when important change of the legislation, work character, work instruments, technologies or work processes	OSH representative and/or new manager of the employee	<ul style="list-style-type: none"> - in dependence on the particular type of change - signed training record or attendance list 	

SPECIALIZED STAFF TRAININGS

Name of the training	Focused on	Term	Conducted by	Content and documentation requirements
ELECTRIC	all employees operating electrical equipment	as a part of initial and periodical training	OSH representative and manager of the employee or any other manager, which passed the OSH training for management	<ul style="list-style-type: none"> - training for so called "familiarized workers" according to provision §3 of Decree No. 50/1978 Coll. - signed training record or attendance list - written knowledge verification
DRIVER	all employees using cars of employer or driving their own cars for the business purposes	before first drive and then periodically once per year	subcontractor - driving school	<ul style="list-style-type: none"> - particular provisions of Labour Code and Road Traffic Act (Act. No. 361/2000 Coll.), instructions for using vehicles - signed training record or attendance list - written knowledge verification
HEIGHT	all employees performing work at heights up to 5m	before first performance of work at heights and then periodically once per year	OSH representative	<ul style="list-style-type: none"> - training according to Decree No. 362/2005 Coll. including training in the use of means against falls from height - signed training record or attendance list - practical verification of skill

APPENDIX II.: ACCIDENT BOOK RECORD

ACCIDENT BOOK RECORD

about work injury resulting in:

- death
- hospitalization longer than 5 days
- working incapacity longer than 3 days
- no working incapacity

serial number: _____ / 2014

in Prague on _____

I. Information about the employer of employee affected by the injury:

<p>1. ID number:</p> <p>Business name of the employer:</p> <p>Registered seat:</p>	<p>2. The general place where the injury occurred*:</p> <p>3. Has been the place of an accident a regular workplace of injured employee? <input type="checkbox"/> YES <input type="checkbox"/> NO</p>
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II. Information about the employee affected by the injury:

<p>1. Name and surname*:</p> <p>2. Personal number:</p> <p>5. Performed activity, when the injury occurred*:</p>	<p>3. Date of birth:</p> <p>4. Subject of health insurance:</p>
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III. Information about the injury

<p>1. Date and time of the injury*:</p> <p>3. Type of injury (in the meaning of what has been caused)*:</p> <p>4. Injured part of the body*:</p> <p>5. Total number of injured employees*:</p> <p>6. Working incapacity: from _____ to _____</p> <p>8. What is the origin of the injury?</p> <ul style="list-style-type: none"> <input type="checkbox"/> vehicle <input type="checkbox"/> machine, portable or mobile equipment <input type="checkbox"/> fall, slamming, bouncing, impact or smothering of material, loads, objects <input type="checkbox"/> fall on the plain, from the height, from the depth, forfeiture down <p>9. Why did the accident happen?</p> <ul style="list-style-type: none"> <input type="checkbox"/> malfunction or defective condition of some of the sources of injury <input type="checkbox"/> bad or inadequate risk assessment <input type="checkbox"/> defects in the workplace <input type="checkbox"/> lack of personal employee safety including lack of personal protective equipment 	<p>2. Number of hours worked before injury happened*:</p> <p>7. Hospitalization: from _____ to _____</p> <ul style="list-style-type: none"> <input type="checkbox"/> industrial pollutants, chemicals, biological agents <input type="checkbox"/> hot substances and objects, fire and explosives <input type="checkbox"/> instrument, device or tools <input type="checkbox"/> people, animals or natural phenomenons <input type="checkbox"/> electrical energy <input type="checkbox"/> unspecified or other origin: _____ <ul style="list-style-type: none"> <input type="checkbox"/> infringement of OSH rules employer's instructions <input type="checkbox"/> unpredictable risk or human error <input type="checkbox"/> for other unspecified reason
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<p>10. Has been the injury affected by the presence of alcohol or addictive substances? <input type="checkbox"/> YES <input type="checkbox"/> NO serial number of inspection record: _____</p>
<p>11. Exhaustive description of an accident, description of the place, causes and circumstances under which the accident occurred:</p>
<p>12. What regulations were infringed in connection with the accident and by whom:</p>
<p>13. Measures taken to prevent the recurrence of injury:</p>
<p>14. Compensation for damages caused by the injury is by the employee: <input type="checkbox"/> REQUESTED <input type="checkbox"/> NOT REQUESTED</p>
<p>15. Enclosed photodocumentation: <input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>16. Based on this record has been processed and sent documentation to: <input type="checkbox"/> Police of the Czech republic <input type="checkbox"/> Regional Labour Inspectorate <input type="checkbox"/> Health insurance <input type="checkbox"/> other institutions: _____</p>

	Name and surname:	Signature
Injured employee:		
Witnesses*:		
This record has been written down on behalf of the employer by*:		
	Position*:	

**obligatory information given by Government Regulation No. 201/2010 Coll. About means of recording accidents, reporting and sending injury reports, as amended*

APPENDIX III.: SCHEDULE FOR REPORTING ACCIDENTS

Activity / Type of work accident	no working incapacity	working incapacity longer than 3 days	hospitalizati on longer than 5 days	accident causing death
to notify OSH responsible or employer of injured employee	Yes, immediately	Yes, immediately	Yes, immediately	Yes, immediately
to investigate and to make a record in Accident Book	Yes, immediately	Yes, immediately	Yes, immediately	Yes, immediately
to process the Report about accident	No	Yes, till 5 days from the date of getting know about	Yes, till 5 days from the date of getting know about	Yes, till 5 days from the date of getting know about death
to notify Labour Inspectorate	No	No	Yes, immediately	Yes, immediately
to report to Labour Inspectorate	No	Yes, send till 5 days from the date of getting know about	Yes, send till 5th day of next month	Yes, send till 5 days from the date of getting know about death
to notify Czech Republic Police	Only when suspicion of criminal activity, immediatelly			Yes, immediately and send till 5 days from the date of getting know about death
to report the health insurance of employee	No	Yes, send till 5 days from the date of getting know about	Yes, send till 5 days from the date of getting know about	Yes, send till 5 days from the date of getting know about
to notify the health insurance of employer	No	Yes, immediately	Yes, immediately	Yes, immediately

APPENDIX IV.: SAFETY POLICY MEMORANDUM

SAFETY POLICY MEMORANDUM

Our private University ensuring the tertiary education for students in bachelor's, master's and doctoral's degree within fields of management, communication, psychology, its various specializations and other professional learning and connected activities with, is hereby stating by its statutory representative, that the University in accordance with requirements of OHSAS 18001:2007 standard will be always:

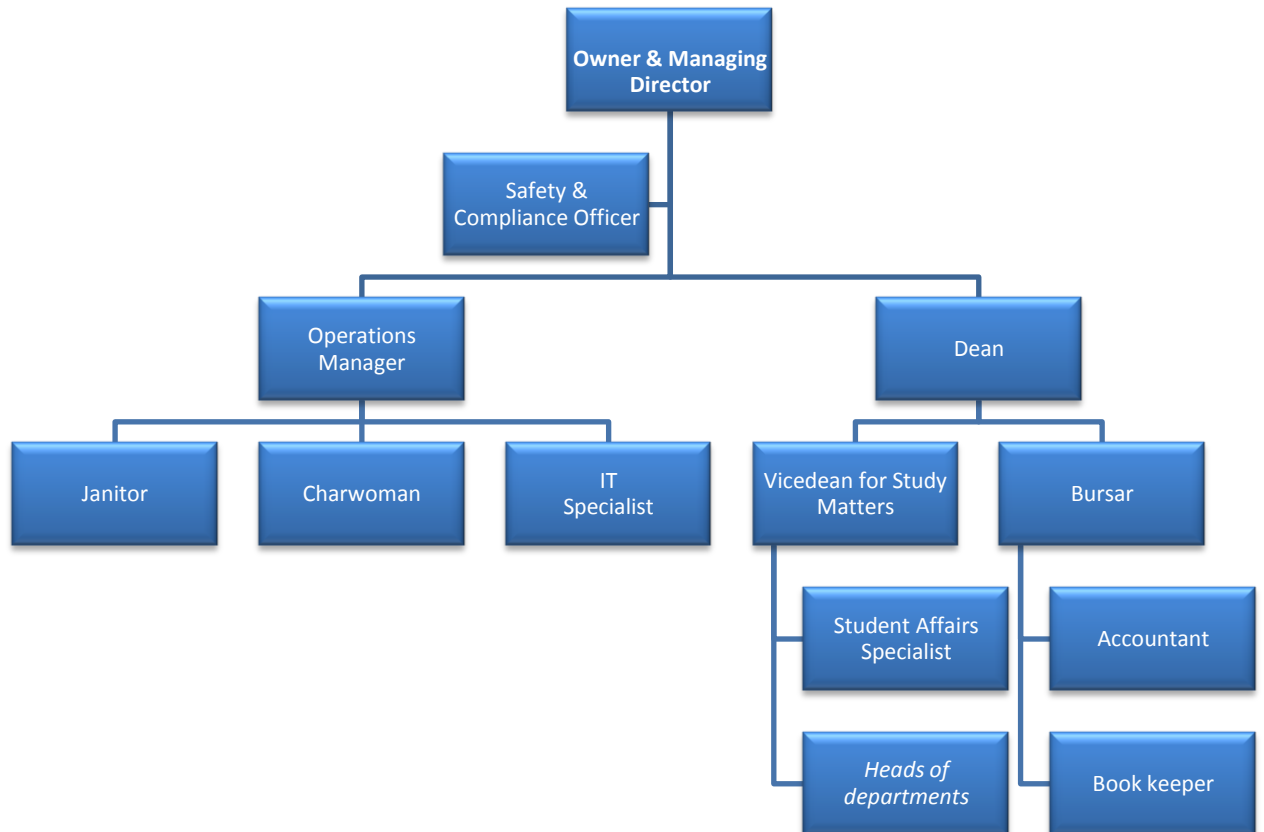
- preventing injuries and occupational diseases - especially by conducting periodical risk analysis and evaluation of those risks with further taking counteractions and in case of injury or occupational disease by analysing causes of the accident; in order to prevent injuries will be reported all the nearly occurred incidents,
- continually improving safety management by the hand of safety responsible employee in close cooperation with the staff and students, and its performance by evaluation of accidents and near-miss accidents with obligation to reducing those,
- complying with applicable safety legal requirements,
- reviewing OSH objectives as stated in the yearly safety objectives plan and ensuring it remains relevant and appropriate to the University environment,
- documenting, implementing and maintaining all the safety related documentation, which will be always available to all interested parties,
- communicating to all employees with the intent of their awareness about their safety duties.

Prague, 18th May 2012



Managing Director, m.p.

APPENDIX V.: UNIVERSITY ORGANISATIONAL DIAGRAM



APPENDIX VI.: RISK ANALYSIS REGISTER

RISK ANALYSIS REGISTER

Premises or activity	Source of threat	Threat identification	Risk assessment				Safety countermeasure	
			RP	SC	EO	RR		
	cleaning - wet floor	slippery - NM	3	3	2	2	18	cleaning is always carried out after classes, marking of cleaned place
	lights maintenance, electricity	fall from heights, electric shock	3	5	3	3	45	using platform with railings, particular electric circuit must be always off, before first touch always use tester
Hallways and passageways	obstacles	fall, hit, blocking emergency exits	2	4	4	4	32	removing all the barriers, maintaining free passageways
	stress	faintness, headaches, poor health condition	4	1	2	2	8	still water in disposal for free, vending machines with food,
Outer pavement	falling icicles and snow from roof	fall of burden - NM	4	5	5	5	100	regular weather surveillance and removing of snow and icicles accordingly to guidance
	icy pavement	slippery - NM	3	3	3	3	27	snow removal, sprinkling the sidewalk by technical salt

Cellar	reduced ceiling on cellar entrance	head injury - NM	3	3	2	18	photocell based light, luminescent safety marking, locked area, restricted access, PPE - safety helmet
	overloading of shelves	fall of burden to employee - NM	4	3	3	36	avoid jutting out of burdens from shelves, random spot checks of compliance the limit with shelves content
Store	missing the shelves anchoring	crash of burden to employee	3	4	2	24	anchor all the shelves by screws into ground or into ceiling and placing struts, where applicable
	flammable material	fire	3	4	3	36	close placing the fire extinguisher, flammable material must be placed as far as possible from the light cover
IT classes and administrative works	PC screen	damage of eyesight, repetitive work	4	4	3	54	recommended short safety breaks every two hours, keep safe distance from monitor (not closer than 40 centimeters), avoid light reflections
	uncovered sockets	electric shock	2	4	2	16	providing sockets by covers
	office furniture	pinching of finger, fall of the burden	2	3	2	12	prohibition of storage of unstable, bulky and heavy loads at heights
Stairways	PC operation	carpal tunnel syndrome, back pain	4	4	3	54	equipping keyboards with arm support, , practising exercises, a bidding right sitting posture, suitable chair
	movement	stumbling, fall - NM	3	4	2	24	safety marking of the first and the last step, ban of running, handrail

	short-circuit	fire - NM	3	3	4	4	32	taking out the plugs of appliances from electrical network, continual revisions, fire alarm installation
Employee's restroom	missing equipment of first aid kit	unability of giving quick first-aid help	2	3	4	4	24	continuous replenishment, appointing responsible person
	money operations	physical attack, robbery - NM	2	5	5	5	50	hidden safe-deposit box, respecting cash limits, the service of janitor, CCTV and CCTV marking, pepper spray
Libraries	flammable material	fire	3	5	4	4	60	fire alarm, close placing of fire extinguisher with appropriate filling, splitting one library in two smaller ones to the premises in the same floor separated by one room
	glass in doors fillings	glass breaking and subsequent cuts	4	2	1	1	8	soft rubber doorstop
Maintenance tasks	tools	cutting or stab wounds, lacerations, bruises, hitting the eyes by sawdust	3	3	2	2	18	using PPE - gloves, eye or face shield, placing first-aid kit into maintenance room
	removing icicles from the roof	fall over the railings, loss of balance due to height - fall	3	5	4	4	60	follow instructions of the guideline on removing icicles - especially using the safety belt and always perform this task in two employees
	furniture displacement	pinching of finger	3	2	2	2	12	using PPE - gloves

Cleaning tasks	window cleaning	fall from ladder, glass breaking and subsequent cuts, falling out of window	3	3	3	27	follow instructions from "HEIGHT" training - especially not bend out of window and conduct cleaning only from inner premises, always ensure that ladder is in good technical condition
	mopping	slippery, repetitive work, back pain	3	3	2	18	ensuring safety breaks, exercising, PPE - shoes with rubber soles
	bums by chemicals	bums, eye hit	3	2	2	12	stick to instructions on the cover, PPE - goggles, gloves, face shield
Teaching tasks	long and loud speaking	damages of vocal chords	3	3	2	18	drink continuously, avoid dry environment, sleep well, do not smoke, use microphone, special medical examinations held every 2 years
Business travels	driving vehicle, leaving the car in the traffic, getting tired	traffic accident	3	5	2	30	follow instructions from "DRIVER" training, obligation of wearing the safety vest, taking rest every two hours of the journey

Explanation: RP = risk probability

SC = severity of consequences

EO = expert opinion

RR = resulting risk

NM = reported near-miss accident

APPENDIX VII.: SCHEMA OF OSH SYSTEM ACTIVITIES

