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**Establishment of the new automotive production plant with
participation of a foreign investor in the Slovak Republic**

**A Master's Thesis submitted for the degree of
“Master of Business Administration”**

**Supervised by
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Žilina, Slovakia, 15th January 2011

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Affidavit

I, **Ing. Marek Branicky**, hereby declare

1. that I am the sole author of the present Master's Thesis,
"Establishing of the new automotive production plant with
participation of foreign investor in Slovakia ", 79 pages, bound, and
that I have not used any source or tool other than those referenced or
any other illicit aid or tool, and
2. that I have not prior to this date submitted this Master's Thesis as an
examination paper in any form in Austria or abroad.

Vienna, 15.01.2011

Signature

ABSTRACT

I have decided the topic of my Master Thesis because of current movement of the production capacity from Western to Eastern Europe and especially from Asian countries to the mid-Europe developing states.

Eastern Europe is interesting for the foreign investor mostly due to the low labour cost, skilled work force and additionally for the Asian investors' access to the EU market, low logistic cost and no custom duty. Slovakia is also interesting because of introduction of Euro currency in 2009. Decision of the location mostly occurs after „Race to bottom” between central European countries such as Slovakia, Czech, Poland or Hungary. Government in Slovakia usually promises a lot of incentives to foreign investors unfortunately not all are realistic to fulfil and this can cause disappointment and problems to the future successful cooperation with overseas investors. In my thesis I focus on the problems related to establishing of the new automotive production plant or operation from the side of a foreign investor before and mainly after decision of the factory location. During my 8-year practise, I have been facing several significant problems especially when the foreign investor began to realize its investment in Slovakia. I have structured my thesis into separate units with logical continuity of processes which each foreign investor has to go through before and during the implementation of its investment. Slovak legislation together with local authority decision delaying creates a very complicated situation mostly for the Asian investors without appropriate experiences. Many consulting companies are making profitable business regarding this uncertainty in the Slovak legislation. The investor can lose a lot of money and also suffer terrible time delay on starting of the production as a consequence of wrong decision on consulting company.

My thesis will show the problems and solutions on above mentioned situations with examples from my experience. At the end, my recommendations should help foreign investors better understand Slovakia's specificities related to new automotive production plant establishment, save time and money as well as to avoid wrong decisions before starting of the volume mass production.

Key words: automotive industry, permission procedures, state authority, project, designer, laws and regulations, interested parties, building and operation permit.

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LIST OF ABBREVIATIONS (IN ALPHABETICAL ORDER)

BAT	best available technology
BO	building office
BP	building permit
CE	Communauté Européenne
CEEC	central and east European candidate
DB	distribution box
DFI	Direct foreign investment
EIA	Environmental Impact Assessment
EU	European Union
FDI	foreign direct investment
FIDIC	International Federation of Consulting Engineers
GD	general designer
GDI	gross domestic product
IIA	Investment Incentives Act
IMF	International Monetary Fund
INEKO	Institute for Economic and Social Reforms
IPPC	Integrated Prevention and Pollution Control
NBS	National Bank of Slovakia
MoE	Ministry of Environment
OECD	Organization for Economic Co-Operation and Development
OEM	original equipment manufacturer
POP	permanent operation permit
PP	planning permit
REA	Regional Environmental Authority
SARIO	Slovak Investment and Trade Development Agency
SEI	Slovak Environmental inspection
SR	Slovak Republic
TI	Technical Inspection
TOP	temporary operation permit
TÜV	Technischer Überwachungs-Verein
WB	World Bank
WTO	World Trade Organization

1. INTRODUCTION

1.1 Slovakia and its importance for foreign investors

Slovakia is an open, export-oriented economy with the considerably limited material resources and a small domestic market, the comparative advantage of membership in the EU, OECD, IMF, WB, WTO and other international (economic) institutions. The membership not only allows SR to identify global trends and their relevance for the Slovak economy, but also engages it in initiatives and projects of international institutions. It also enables potential of SR in ensuring sustainable economic growth and competitiveness of Slovakia's economy in a global environment.

Table 1: Basic data about Slovakia (October 9, 2010) [8]¹

Unemployment rate	11.39%
Employment rate	59.9%
GDP per capita (in USD)	3,950
GDP per capita in PPS (purchasing power parity), EU 15 = 100	44.7
Share in GDP	Services 64.5%, Industry 25.8%, Construction 5.3%, Agriculture, Forestry, Fishing 4.4%

The current global financial and economic crisis confirms the importance of mechanisms that ensure economic and social stability and security. Slovakia cannot rely only on its geopolitical position, but may focus on means to achieve success in global economic competition and it is the knowledge of ongoing processes of organizational and technical management and utilization.

Therefore, a key source of economic growth and innovation performance of the SR growth are foreign direct investments. Significant inflow of foreign investment in SR contributes to a decline in the unemployment rate, growth in living standards and consumption by households, which attracts new investors in the provision of

¹ www.euroinfo.gov.sk/redirect-7e3.html#ekonomika

services. Direct foreign investments (DFI) in the automotive and electronics industry and related development of subcontracting relationships are currently the engine of the economy of SR.

Slovakia's attractiveness for foreign investors is given by being:

- low transaction costs based on the integration of Slovakia into the euro zone;
- the euro conversion, entry into the Schengen area;
- political stability;
- favourable tax treatment and investment aid;
- low labour costs;
- qualified and skilled workforce.

According to [9]² in the last decade the central and eastern (post communist) Europe increased interest from foreign investors. The automotive industry is dynamically developing sector in Slovakia, driving development of the country's economy and carry out the conversion of the former role of the armaments industry in the Slovak engineering. The share of the automobile production in industrial production exceeds 25%, in automotive exports 30% of total exports. In 2004, Slovakia produced the most cars per inhabitant.

Slovak's economy increasingly resembles that of a so-called developed country. With the highest sustained GDP growth in the European Union, reporting 10.4% in 2007 and the highest rating from V4 countries, the Slovak economy has considered a tiger economy known as the Tatra Tiger. Slovakia has been an EU member state since 2004 and adopted the euro currency at the beginning of 2009. Its capital, Bratislava, is the largest financial centre in Slovakia. Unemployment has fallen considerably, although long-term unemployment remains stubbornly high. In the long term, improving education outcomes, including by reducing the impact of socioeconomic background on outcomes, will be central to sustaining high economic growth and social cohesion. GDP per capita at purchasing power parity was \$22,600 in 2008, which is 70% of the EU average.

² http://en.wikipedia.org/wiki/Economy_of_Slovakia#Foreign_investments

1.1.1 Foreign direct investments in Slovakia

According to [10]³ from January 1, 2008, the Investment Incentives Act (IIA) is valid in Slovakia, under which the state provides the regional investment aid and employment assistance for investment projects, or expansion of industrial production, etc. Generally, Slovakia is attractive for foreign investors because of low production costs and wages, until recently, developed infrastructure, availability of the almost entire European market and not least educated population and workforce skill - potential employees. The area of foreign investment is very extensive, the bulk of gross domestic product of the Slovak Republic, is the automotive industry.

Volkswagen Slovakia, the first foreign automobile factory, started its operation even in time of the Czechoslovak Federal Republic, and operates in Slovakia since 1991. The second one, the Trnava's PSA Peugeot Citroën, began with its car production in 2006. The third major automotive plant is Kia Motors Slovakia in Teplice nad váhom. Kia plant near Zilina is also the first European plant of South Korean's Kia Motors Corporation which decided to build it in accordance with the steady increase in sales and growing market share in Europe. The plant employs over 3,000 employees and its production capacity is 300,000 cars per year.

Major foreign investors in Slovakia remained and many of them, such as Volkswagen, Kia, Sony and Samsung extend their investments. FDI, despite the growth in 2006, began to decline when in 2007 and 2008 it even achieved the lowest level since 1999, in relation to GDP. According to the National Bank of Slovakia (NBS) in 2006 came to Slovakia in the form of FDI equity capital and reinvested earnings of EUR 3.3 billion USD (97 billion Skk) – 5.9% of GDP, in 2007 in the amount of EUR 2.1 billion USD (52 billion Skk) – 2.8% of GDP and in 2008 to EUR 2.2 billion USD (47 billion Skk) – 2.3% of GDP. This trend reflects the decreasing number of investment projects mediated by the Slovak Investment and Trade Development Agency SARIO and the Ministry of Economy of the SR. Slovakia was in the period from 2002 to 2006 (excluding 2005) at the top of the V4 countries in FDI relative to GDP, but in the first 6 months of 2008 lapsed in the last place.

³ http://staff.bath.ac.uk/ecsjgs/Research/Phani/AEVol36_2004.pdf

An important factor affecting the inflow of foreign investments since 2009 has been the world economic crisis. In addition to the crisis, there are other factors worsening the conditions for business. The Slovak government adopted several measures detrimental to investors: limited profits of Health Insurances, resulting in today Slovakia faces international arbitration, significantly reduced fees for asset management in the second pension pillar, which, according to NBS, do not cover the running costs of pension fund management companies, enforced law prohibitive to board monopolies to propose changes in regulated prices without the consent of the general assembly. The government also abolished fees for the exchange of euro coins by banks, adopted measures restricting the operators of underground gas storage facilities to handle the gas during the crisis and has repeatedly verbally attacked for foreign investors in the automotive industry, energy, healthcare, retail chains, banks and the pension scheme.

Table 2: Foreign direct investment of SR in billion USD (Skk billions) [11]⁴

FDI inflow	2005	2006	2007	2008	2009	2010***
Equity capital	1.16 (37)	0.72 (22)	2.16 (64)	1.11 (27)	1.34 (29)	0.43 (13)
Reinvested earnings	1.61 (52)	0.87 (27)	1.11 (33)	0.99 (25)	0.84 (18)	-0.16 (-5)
Subtotal as % of GDP*	2.77 (89) 6.5% HDP	1.59 (49) 3.3% HDP	3.27 (97) 5.9% HDP	2.10 (52) 2.8% HDP	2.18 (47) 2.3% HDP	0.27 (8)
Other capital**	0.26 (8)	0.84 (26)	1.42 (42)	1.17 (29)	1.23 (26)	-0.53 (-16)
Total	3.03 (98)	2.43 (75)	4.69 (139)	3.26 (81)	3.41 (73)	-0.27 (-8)

* INEKO calculation

** For example, inter-credit operations

*** Data from January to June, calculated at the rate of USD 1 EUR = 1.45 USD

Foreign direct investment in Slovakia has gained significant importance over the past decade as a tool for accelerating growth and development of economies in transition.

⁴ http://www.ineko.sk/sluby/sluby_dokazy.php?id_slub=136

It is widely believed that the advantages that FDI brings to the standard of living and prospects for economic growth of the host nation largely outweigh its disadvantages. Its purpose is to establish trans-commercial relations and at the same time exert a noticeable managerial influence over a foreign company. It also serves as an important means by which the central and east European candidate (CEEC) economies such as Slovakia economy in transition can continue to deviate from its communist legacy.

1.2 Motivation

During construction phase and later permission stage of Kia Motors Slovakia plant, I experienced several serious problems related to authority proceedings and foreign technology installation on the Slovak market, which already belongs to the EU market. Particularly, in relation to the lack of knowledge of local laws and complex legislative situation by suppliers of production technology and equipment adequately prepared for the technical inspection process, my team was facing significant time delays regarding authority permission procedures. Also, fair cooperation with governmental agencies and prolongation of the agreed contract conditions especially related to land acquisition resulted into overcharged investment budget, negative public opinion and other negative impacts on Kia.

I find out, that main reason of this problem was not only existing bureaucracy and wrong knowledge of local laws, but also very complicated administrative proceedings.

Therefore, necessity of simply, exact and complex methodology guiding the efficient way for foreign investors through administrative proceedings with several usable tools for authority permission management was essential to develop not only for internal corporate purposes.

1.3 Definition of the main research problem

In Slovakia, there is not sufficiently and comprehensive simple methodology available explaining the basic requirements for realization of investment projects involving foreign investors from the stage of area decision up to getting valid operation (occupation) permit. Due to the lack of information related to authority proceedings, smoothly starting of the production process including testing operation becomes very hard especially for Asian investors, where significant differences in the state authorities approval procedures are being held.

1.4 Hypothesis, aims and structure of the thesis

A foreign investor can proceed through the permission procedures based on available laws and regulations, methodology guidance and their own experience, which is mostly time consuming and results into many mistakes with impact on time, quality and cost of their investment intention. Also, they can employ professional consulting company and handover all permission works related to their project in order delegate most complicated issues to experts.

If the external consulting support is too expensive, the best way is to employ own experienced local staff and use simple guidance, which I will propose in my thesis. This methodology is tailored for most companies from the automotive sector whose will realize their investment in Slovakia.

In the theoretical part of the thesis, I will explain existing and available procedures as well as methods.

In the practical part of the thesis, I will show and propose different solutions for the same proceedings with easy-to-understand diagram's, tables and schemas with fit-on-purpose for a foreign investor and examples from my practise with problems and critical points related to authority proceedings. Also, I will explain practical contribution and most important values which will be achieved by keeping the proposed management techniques.

1.5 Working definitions

Below working definitions are crucial for smooth and clear understanding of the figures and procedures further described in this thesis:

SARIO - Slovak Agency for Investment and Trade is a governmental institution established in Slovakia in 2001, subordinated to the Ministry of Finance of the Slovak Republic. It is composed of three sections, each of which is responsible for other tasks:

- Section FDI
- Foreign Trade Section
- Section of European Union Structural Funds

EIA - Environmental Impact Assessment: The systematic, reproducible and interdisciplinary identification, prediction and evaluation, mitigation and management of impacts from a proposed development and its reasonable alternatives. Sometimes EIA is known as environmental assessment.

PP - Planning permit: A Planning Permit Application (also known as a Development Application) is an application for permission to develop or use land for a particular purpose.

BP - Building permit: building (construction) permit is a permit required for a new construction, or adding on to pre-existing structures, and in some cases for major renovations. Generally, the new construction must be inspected during construction and after completion to ensure compliance with national, regional, and local building codes. Failure to obtain a permit can result in significant fines and penalties, and even demolition of unauthorized construction if it cannot be made to meet code.

IPPC - Integrated Pollution Prevention and Control: is a set of measures aimed at preventing pollution, reducing air emissions, water and soil, to limit waste and the

recovery and disposal in order to achieve a high overall level of environmental protection.

TOP - Temporary operation permit: When the building works are completed, the applicant and the Qualified Person shall apply to the Commissioner of Building Control for a Temporary Operation (Occupation) Permit (TOP). The building can only be occupied when a TOP is granted.

POP - Permanent operation permit: Completed building or its part ready for use can be used for permanent operation only after getting permanent operation permit. Permanent operation permits authorizing the use of a building for the intended purpose and if necessary, determines the conditions for use of the building.

1.6 Main research questions

Resulting from definition of the main research problem, following research questions shall be asked:

- 1) How to proceed effectively in the pre-investment period, negotiation with Government, SARIO? (4.1)
- 2) How to effectively proceed through the negotiations with state authorities? (4.2)
- 3) How to proceed effectively through EIA procedure? Hereby, comparison of the initial status and proposed status will be stated. (4.3)
- 4) How to effectively proceed through planning permit procedure? (4.4)
- 5) How to effectively proceed through building permit procedure? (4.5)
- 6) How to proceed effectively through IPPC procedure? (4.6)
- 7) How to proceed effectively through operation permit procedures? (4.7)
- 8) How to fulfil operation conditions and requirements set by authorities after getting permanent operation permit? (4.8)

2. BACKGROUD INFORMATION

2.1 SARIO

According [12]⁵ if you are concerning to invest in Slovakia, you should contact SARIO staff, department of foreign direct investment (FDI), who can provide you consultation and help service about the Slovak legislative, taxes, foundation of a company, grant state aid for capital projects, search for appropriate location and real estates for your capital project, sub-suppliers, joint-venture partners and also assistance in negotiations with municipality and government institutions. Every company or investor gets its own project manager which is a SARIO representative and contact officer. SARIO also offers you information about potential suppliers and partners from Slovak companies which are very essential. You can get all the information necessary for decision making from SARIO for free.

The Slovak investment and trade development agency is a state agency intended to support development of the Slovak economy and amelioration of life quality in Slovakia. These goals should be reached through presentation and highlighting of the Slovak economic scene for overseas investors and also by development of investment projects. The goal of SARIO is to decrease the unemployment, support export activities of Slovak entrepreneurs and administration of the European Union structural funds.

Key activities of SARIO are:

- forming of business – friendly capital scene in Slovakia;
- solutions of investment projects with overseas investors and help service;
- conveying consultations and solutions in field of the individual state aid for investors and the elaboration of state aid appliances;
- monitoring and creating databases of available real properties and industrial parks;
- conveying assistance and help service with joint ventures creating;

⁵ www.sario.sk

- small and medium enterprises export and business overseas facilities searching service;
- providing service for municipality, small and medium enterprises which are applying for European union structural funds in competence of SARIO agency and assistance with realization of their projects.

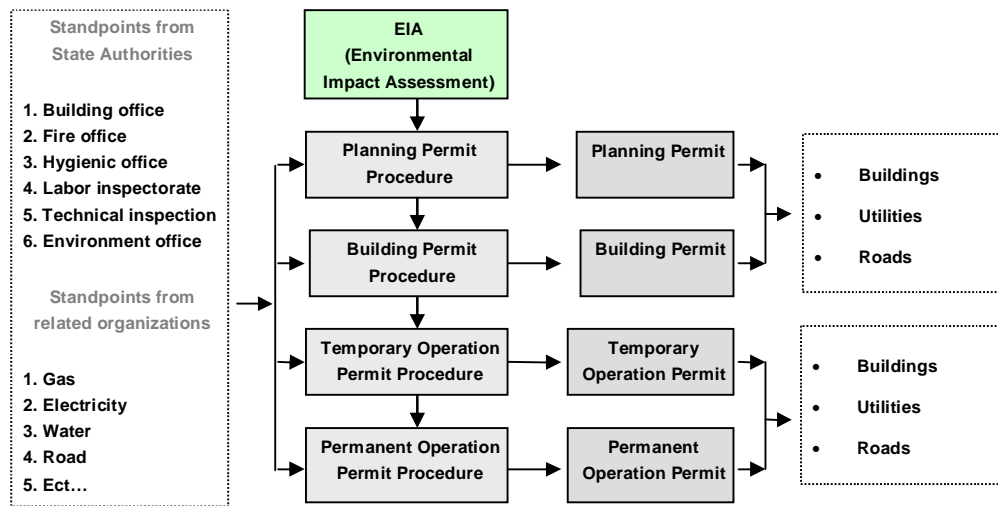
Table 3: State aid approval procedure in Slovakia [13]⁶

No.	State aid approval procedure	Legal period for response
1.	Presentation of the capital project by investor to the Ministry of Economy of the Slovak Republic.	-
2.	SARIO conducts consultant expertise and deliver it to the Ministry of Economy of the Slovak Republic.	Less than 30 days
3.	Grantors of capital incentive (Ministry of Economy and Ministry of Labour of SR) make an opinion about capital project.	Less than 30 days
4.	Ministry of Economy of SR certify in writing that project satisfy standards requested by law for grant state aid. Ministry of Economy also elaborates a bid of capital incentive for investor.	Less than 30 days
5.	An investor has to react to a received bid by formal application for initiate capital incentive.	Less than 60 days
6.	Approval of state aid by the Government of the Slovak Republic.	-
7.	Approval of state aid by the European Committee (If it is necessary).	-

In the Scheme 1, you can find generalized permission procedure in Slovakia for the new construction projects.

⁶ www.sario.sk/userfiles/file/sario/pzi/statna/Handout_incentives_sk_2010.pdf

Scheme 1: Generalized permission procedure in Slovakia ⁷



2.2 Environmental Impact Assessment

According to [14]⁸ Environmental impact assessment is considered to be one of main instruments of international environmental policy of sustainable development. In developed countries it has been implemented for more than three decades already. At present the Act No. 24/2006 Coll. on environmental impact assessment and on amendments to certain acts applies, which entered into force on February 1, 2006. It regulates comprehensively the environmental impact assessment, strategic documents assessment and impact assessment of constructions, installations and other activities on the environment. The requirement to adopt the Act No. 24/2006 Coll. on environmental impact assessment and on amendments to certain acts ensued from the fact that the European Union has adopted recently other directives concerning environmental impact assessment, namely:

Directive of the European Parliament and of the Council 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment.

Directive 2003/35/EC of the European Parliament and of the Council providing for public participation in respect of the drawing up of certain plans and programmes

⁷ Kia permit presentation internal source

⁸ <http://eia.enviroportal.sk>

relating to the environment and amending with regard to public participation and access to justice.

Directive 2003/4/EC of the European Parliament and of the Council on public access to environmental information and the Slovak Republic as the Member State is obliged to harmonise the Slovak legislation with the above-mentioned directives.

EIA is based on following principles:

- complexity of the assessment of expected impacts of a given activity and a strategic document on the environment before the decision on their permission;
- impacts assessment is carried out by experts from various spheres;
- wide and active public participation in the assessment process;
- alternative solutions;
- assessment process does not replace the permission process of the given activity.

Immediate objectives of EIA are to:

- improve environmental design of the proposal;
- ensure that resources are used appropriately and efficiently;
- identify appropriate measures for mitigating the potential impacts of the proposal;
- facilitate informed decision making, including setting the environmental terms and conditions for implementing the proposal.

Long term objectives of EIA are to:

- protect human health and safety;
- avoid irreversible changes and serious damage to the environment;
- safeguard valued resources, natural areas and ecosystem components;
- enhance the social aspects of the proposal.

Standard EIA procedure consists from below steps:

- submission of a preliminary environmental study in case of EIA;
- decision on the scope of the assessment and the time table;
- development of the environmental impact statement EIA;

- comment procedure and public hearing of the environmental impact statement;
- development of the expert review;
- development of the final record.

EIA should address, as necessary and appropriate:

- all relevant environmental impacts, including land use, social, cultural, economic, health and safety effects;
- cumulative effects and area-wide, ecosystem-level and global changes that may occur as a result of the interaction of the proposal with other past current or foreseeable activities;
- alternatives to the proposal, including design, location, demand and activity alternatives and this also in comparison with the zero alternative;
- mitigation measures for each of the main impacts identified;
- sustainability considerations, including the effects of depletion of non-renewable resources, of exceeding the regenerative and assimilative capacity of renewable resources and of reduction of biological diversity, taking account of relevant international agreements and commitments.

EIA should result in:

- systematic identification of the views and inputs of those consulted, including the balance of opinion on major issues and areas of agreement and disagreement;
- comparison of the impacts of the main alternatives considered with an environmental justification for the preferred option;
- best estimate prediction and evaluation of the potentially significant residual effects that cannot be mitigated;
- feasible, cost-effective measures to mitigate the main impacts identified (often called an environmental management plan);
- preparation of an EIA report that presents this information in form that is clear, understandable and relevant for decision-making, nothing any important qualifications for the predictions made and mitigation measures proposed.

The scheme of EIA procedure in Slovakia can be found in Attachment 1.

Structure of preliminary environmental study according to EIA [1]⁹

Basic data about Investor

- Name;
- Identification number;
- Seat;
- Name, surname, address, telephone number and other contact data about the authorized representative of proponent;
- Name, surname, address, telephone number and other contact data of a contact person, from whom it is possible to get relevant information about the proposed activity and place for consultation.

Basic data about preliminary environmental study

- Name;
- Purpose;
- User;
- Nature of the proposed activity (new activity, change of the activity, etc.);
- Localisation of the proposed activity (region, district, municipality, cadastral territory, plot number);
- Transparent situation of location of the proposed activity (scale 1:50 000);
- Date of commencement and completion of construction and operation of the proposed activity;
- Brief description of technical and technological solution;
- Explanation of the reasons why the activity is required in the locality (pros and cons);
- Total costs (approximately);
- Affected municipality;
- Affected self-governing region;
- Affected authorities;
- Permission authority;
- Resort authority;
- Type of required permission of the proposed activity according to specific regulations;
- Statement on supposed over boundaries impacts of the proposed activity.

⁹ Law No. 24/2006 Coll.o posudzovaní vplyvov na životné prostredie a o zmene a doplnení niektorých zákonov, IURA Edition, 2006, annex 9

Basic information about the present state of the environment in the affected area

- Characteristics of the natural environment including protected territories [e.g. proposed protected bird territories, territories of European importance, continuous European system of protected areas, national parks, protected land territories, protected water management territories];
- Landscape, scenic aspects of the landscape, stability, protection, scenery;
- Population, its activities, infrastructure, cultural and historical values of the area;
- Current state of the quality of the environment.

Basic data on the presumed impacts of the activity on the environment and possible measures to mitigate them.

- Requirements for inputs (e.g. taken land, use of water, other raw materials and energy sources, transport and other infrastructure, labour requirements, other requirements);
- Data about outputs (e.g. sources of air pollution, waste waters, other waste, sources of noise, vibration, radiation, heat and odour, other expected effects, e.g. needed investments);
- Data about the supposed direct or indirect environmental impacts;
- Assessment of health risks;
- Data about the supposed impacts of the proposed activity on protected territories [e.g. proposed protected bird territories, territories of European importance, continuous European system of protected areas, national parks, protected land territories, protected water management territories];
- Assessment of expected impacts from the point of view of their importance and the time course of their operation;
- Presumed impacts with transboundary effect;
- Dependent factors that may cause impacts, taking into account the current state of the environment in the affected area (with particular regard to the level of existing nature protection, natural resources and the cultural heritage);
- Other possible risks associated with the planned activity;
- Measures to mitigate the adverse impacts of the activity;
- Assessment of the expected development in the area if the activity is not carried out;
- Assessment of correspondence of the proposed activity with valid land use planning documentation and with other relevant strategic documents;

- Further procedure for assessment of the impacts with indication of the most important problem areas.

Comparison of variants (alternatives) of the proposed activity and proposal of optimal variant

- Including a comparison with the alternative if the activity was not carried out = zero alternative;
- Creation of set of criteria and determination of their importance for selection of the optimal variant;
- Selection of the optimal variant or setting of the order of suitability for assessed variants;
- Reasoning of the proposal of the optimal variant.

Maps and other graphic documentation

- Cadastre maps;
- Future lay out with existing surroundings.

Supplying information to the preliminary environmental study

- List of the text and graphic documentation prepared for the preliminary environmental study and list of the main materials used for preliminary environmental study;
- List of required statements and standpoints required to the proposed activity before the elaboration of the preliminary environmental study;
- Further supplying information about existing procedure for preparation of proposed activity and of the assessment of its presumed environmental impacts.

Place and date of working out of the preliminary environmental study

- Date;
- Place.

Confirmation of the correctness of the data

- Processors of the preliminary environmental study;
- Confirmation of the correctness of the data by the signature (stamp) of the processor of the preliminary environmental study and by signature (stamp) of the proponent's authorised representative.

2.3 Planning permit procedure

According to [2]¹⁰ planning permit is the first permission in a building permit hearing, it designates the extensiveness and location of the building, determines new use of an area as specified into the planning permit application.

Planning permit is issued by § 39 law no. 50/1976 Coll. of land use planning and building (building code) after antecedent administrative action in equity of law provisions §33-38 of building code. It is issued on behalf of proponent's proposal.

Planning permit is obligatory in case of:

- location of a building;
- making a change in exploitation of land area;
- protection of important land area interest.

Planning permit is a very important part of a land area planning of the municipality, city, region or state. It is a tool for room and utility exploitation of the land area. The land area planning determines any necessary networks, reconstruction, re-cultivation interventions into the land area and also determines the purpose of its other utilization. In the land area planning are also determined following:

- protected areas and protected objects;
- rules of the natural resources exploitation;
- the proposal of a building and land area utilization order;
- an evaluation of technical, environmental impacts of building.

Building permission process begins right after the applicable resolution about functional land area utilization and after an applicable resolution about building location through implements of land planning.

Implements of the land area planning are:

- planning permit documentation;
- planning permit.

¹⁰ JUDr. Miroslav Hodák a kolektív autorov: Príprava, vedenie a organizácia stavieb. Verlag Dashöfer, 2007, part 4/2, 4/3

Planning permit is not necessary in case of:

- buildings approved by municipality in land area planning;
- a building is located in a interior of closed area of existing building and the outer ground plan and height of the building will not be changed;
- small buildings according to building law;
- a building adjustment and maintenance;
- informational, advertising and promotional facilities;

In any other cases it is necessary to apply for a planning permit.

Process of planning permit application:

Investor has to address “The proposal for issuing of a planning permission” to a local municipal building office.

The proposal together with the annexes has to concern:

- name, surname (an commercial name) and address (the business headquarters) of the proponent;
- an object of the planning permission with brief characteristic of an area and the purpose of its former use;
- a list of all common building permit hearing participants;
- types and numbers of land sections in compliance with the real estate register,
- with adducing owners and other rights which are involved in the planning permission and land section numbers of neighbouring land parcels and buildings.

In case of proposal for issuing of a planning permit for a building location and area utilization, the agreement of the land area owner if a proponent does not have owner right or any other right and it is impossible to condemn a land area for proposed action, data about met requirements defined by municipal authorities, if these are purchased before registration of the proposal.

In case of proposal about issuing of a planning permit for line building location or extra large building with a big amount of hearing participants, planning permit about land area utilization, about protected area, building barrier, if they concern large land area, owners information are not included in the proposal instead of it there will be description of current land area borders.

Line buildings are: oil duct, gas conduct, highways, roads, over ground and underground current distribution conduct, water conduit and sewerage, telecommunication conduct, airports and docs.

According to [3]¹¹ the proposal for issue of the planning permit has to have attached:

- layout drawing of actual condition of land area on behalf of the real estate map with the object of planning permit and its location with marked links (effects) on the surroundings drawn in; if the object of proposal is building location, location utilization, building barrier, protected area, or protective band area it is needed;
- map document in scale from 1:10 000 to 1: 50 000 with marked borders of land area which is object of the planning permit process and with marked links (effects) to its surroundings; it is necessary to attach a layout drawing and map document in two copies;
- documentation for planning permit in two copies made up by entitled person; in case of mentioned in § 45 paragraph 6 letter a) it is sufficient to have documentation made up by person with adequate professional education;
- resolutions, standpoints, statements, agreements, considerations or other acts of other affected municipal and state authorities;
- standpoint of a municipality, if it is not a building office;
- the final statement about environmental impact of building or action or resolution from the investigation hearing if this is issued;
- documents about negotiations with planning hearing participants, if they take place before proposal registration;
- proposal with mentioned information about meeting of state authorities requirements applied before proposal registration;
- diploma of authorized architect;
- urban merger of the building in to the land area and proposal for building location;

¹¹ Doc.Ing.Bollová PhD, p.Brogyányiová, Ing.Ivanov PhD, p.Hlaváčová, Ing.Kaisler, Ing Klobušník: Unika-sadzobník pre navrhovanie cien projektových prác a inžinierskych činností, R-UNIKA, I.vydanie 2008, p:100-103

- location of building with marked distance from the borders of neighbouring land area and buildings with marked heights (all marked in scale 1:500);
- in case of a line building, or extra large building with a big amount of hearing participants, it is enough to attach layout drawing of current land area condition on behalf of real estate map and a map document concerning information mentioned in annex list;
- architectonical solution of building, its design and floor projection structure;
- detailed information in accordance with approved zoning decision documentation;
- basic information about construction – technical solution of the building in accordance with general technical requirements;
- information about water, energy supply requirements, sewage draining, transport connections, parking waste disposal, proposal for connection of the building in to the distribution and communication network;
- information about operation, production including basic technical parameters of proposed technologies and devices;
- information about types, categories and amount of waste (excluding communal waste) originated from the production and operation and proposal of waste disposal;
- information about influence of building, operation and production of the project on environment, public health, fire security and proposal for mitigation or removal of this negative influence;
- a proposal for foundation of a protected area;
- information about affected protected areas, historical reservations or zones;
- proposal for negative influence and effects preservation;
- information about suitability of geological, hydro geological conditions in a region;
- information about suitability in view of radon (and other natural radionuclide) radiation reduction requirements;
- a civil emergency planning requirements for building;
- proposal for design and arrangement of un-built and green object areas;
- size and organization of a building yard.

2.4 Building permit procedure

According to [2]¹² the building permit is an enacting administrative statement, which warrants an investor to realize a building or its adjustment. It does not make the investor obliged to build. It is a final objective administrative act issued in building permit hearing. The Building office authorizes an investor to build through building permit, if every legal condition is met.

The building permit is an initial document for starting a building. Before you start to build, you need to obtain an applicable building permit. Starting the building construction without the applicable building permit is illegal and can be demolished by the Building office. It is the second permission in building permit hearing, application for issuing of the builder applies Building permit after acquirement the validation of planning permit. As a part of the application, the project documentation is elaborated by an authorized designer including a building and technology part is included.

It is demanded to register the building permit in written form at a regional Building office with all required annexes and attached documents. Meeting all requirements and attaching all demanded documents will fasten the whole permission process.

It is necessary to define this information in the application:

- basic identity information about an investor and building;
- land area owners certificate: investor has to be an owner of a land area where they wants to initiate a building;
- copy of a real estate map with marked land area assigned for constructing purpose. It is only possible to initiate a building on a land area assigned for constructing purpose. In case a land area is not assigned for a constructing purpose but is assigned for an agricultural purpose, it is necessary to apply for an

¹² JUDr. Miroslav Hodák a kolektív autorov: Príprava, vedenie a organizácia stavieb. Verlag Dashöfer, 2007, part 4/5

exemption of this land area out of the agricultural land fund. As far as an exemption is applicable, it is possible to apply for a building permit;

- date of building initiation and completion date of building;
- approach in building realization;
- realization by a construction company;
- self-made realization with specialist jobs made by professional companies (It is obligatory to guarantee the building inspection (an authorized person with professional qualification) by investor in case of a self-made realization);
- information about neighbouring land areas and buildings;
- identity information about an architect and his/her qualification and diploma specification;
- identity of other building permit hearing participants;
- basic information about building and its structure, technical or production devices, future operation of the building and its impact on environment and people's health.

2.4.1 Project documentation for building permit

It is compulsory to attach three copies of project documentation for building permit. The documentation has to be in accordance with afore – project preparation.

The main purpose of project documentation has to prove that project meets conditions of:

- applicable and legal valid planning permit;
- building condition determined by municipality and building law;
- protection of public interests, environmental protection, protection of people health;
- technical requirements for usage of buildings by disabled person;
- basic construction requirements;
- general technical requirements for buildings and devices;
- civil defence requirements.

The project shows the drawing construction layout for construction installation works on site as required by the Building Act – separation from the land borders, distance from neighboured houses, distance from the street, buffer zones and connecting building connection for each engineering network.

In the sub-project parts there are designed respective construction parts: architecture and static, heating, electricity installations, sewage and drinking water distribution lines, fire protection, gas lines, etc. These drawings are in 1:100 scale, technical reports and diagrams. The designer or design organization is also attending the building permit procedure and they are obliged to submit the authorization of designer on design activity to application for building permit issuing.

According to [3]¹³ project documentation has to contain:

Letter with addition information with actual data about:

- building mentioned in the building permit;
- meeting planning and building criteria;
- executed surveys and measurements.

General technical report which has to clarify:

- proposed urban, architectonical and constructional solution of the building and of its parts, usage of adequate constructing components with respect to meet basic and general technical requirements for buildings;
- fire protection arrangements;
- information about water, energy supply requirements, sewage draining, transport connections, parking waste disposal, proposal for connection of the building in to the distribution and communication network;
- information about over ground and underground constructions;
- information about operational, production and technical devices, storage conception, solution of inter building transport and staff area, service and utility or requirements on execution of temporary operation after finishing the building;

¹³ Doc.Ing.Bollová PhD, p.Brogyányiová, Ing.Ivanov PhD, p.Hlaváčová, Ing.Kaisler, Ing Klobušník: Unika-sadzobník pre navrhovanie cien projektových prác a inžinierskych činností, R-UNIKA, I.vydanie 2008, p: 111-132

- information about meeting requirements established by state administration authorities if there are any requirements raised before registration of the application;
- in case of construction yard structure and procedures made for health protection at work on construction yard.

Methods for accordance of the health protection at work and safety of technical devices in the course of building and future operation of the building.

General location of the building (build-up area plan) in scale from 1:200 to 1:500 with marked:

- land area borders and their real estate registry numbers (including neighbouring land areas and buildings on these areas);
- underground networks and technical equipment devices;
- proposal of land area traffic and technical equipment connectors;
- protective bands;
- in case of line building (roads, highways, oil ducts, etc.), its marked track in map document in scale of 1:10 000 or 1:50 000;
- any other drawings are necessary if purpose or complexity of the building demand so.

Tracing drawings or necessary geometrical parameters marked in build-up area plan of the simply buildings.

Construction drawings of the building – floor projection, cuttings and views of the former and proposed condition (in scale of 1:100) containing:

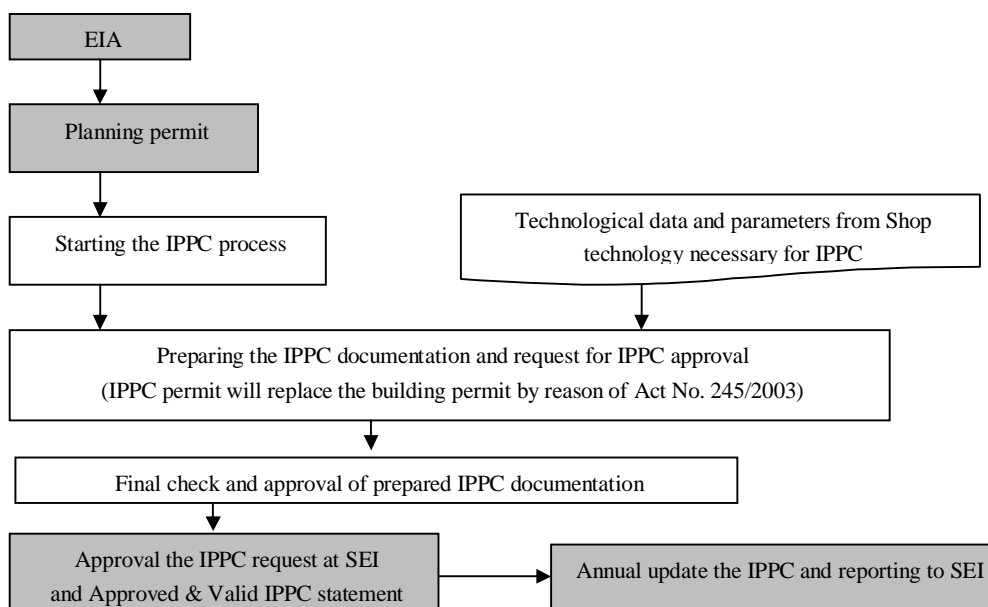
- whole construction parts and parts of the building; (footings, load-bearing constructions, stairways, etc.);
- location and height structure of the building and the structure of its room with purpose determination of all rooms;
- schematic drawings of inner distribution, systems (fire protection hydrants, current and heavy – current, gas and hot water system) and devices;
- modifications and solutions prescribed for particular purpose of the civil defence, fire protection and basic construction requirements;

- static examination of the building which proves mechanical resistance and stability of the load – bearing construction;
- proposal of the surroundings adaptation, also proposal for the green area protection in time of building realization;
- drawings with space location of operational, production and technical devices, including inter building communication.

2.4.2 Integrated prevention and pollution control (IPPC)

Integrated prevention and pollution control is a bunch of provisions aimed on the prevention of the pollution and reduction of the emission discharged to the air, water and soil. IPPC is also aimed on reduction of waste production and devaluation and de-fusion of waste with a goal to reach high level of environment protection. IPPC also determinates production conditions of dangerous substances. You can see permit procedure according the IPPC Law in the scheme 3.

Scheme 3: IPPC scheme (integrated prevention and pollution control) [16]¹⁴



¹⁴ www.sizp.sk/

Integrated admittance is an act which determines condition of execution in operation and allows new operation with aim to reach integrated environmental protection and its elements. It is also aimed to hold the pollution rate in quality standards of environment.

Beginning the proceedings, assessment of the completeness of the application, detection of circuit parties and authorities concerned.

After delivery and registration of the application, the Inspectorate is obliged to assess the completeness of the application, including attachments according to § 11 par. 1 and 2 of the IPPC and identify circuit parties and authorities concerned. IPPC Act does not specify a time limit for carrying out these actions.

According to [4]¹⁵ application includes:

§11 par. 1 and 2 of the IPPC Act

- information identifying the operator (corporate name or trade name of a physical person-entrepreneur, residence, identification number and the operator registered in the commercial register or other record of businesses provided by law and the certificate of incorporation or other records;
- details of the operation and its location;
- list of raw materials, auxiliary materials and other materials and energy which operation are used or produced in;
- a description of the operation places where emissions are produced and the data on the estimated quantities and types of emissions into the individual elements of the environment together with a description of significant effects of emissions and other impacts on the environment and human health;
- a description of the operation and characteristics of the environment in this place;
- description and characteristics of the use or proposed technology and other techniques to prevent emissions, and if it is not possible to reduce emissions;
- a description of the characteristics used or proposed measures for waste prevention and the priority of recovery of waste generated by operations;

¹⁵Law No. 245/2003 Coll. Zákon o integrovanej prevencii a kontrole znečisťovania životného prostredia a o zmene a doplnení niektorých zákonov, Forma, 2003, §8, §11.

- a description of the characteristics used or planned measures and technical equipment to monitor traffic and emissions into the environment;
- analysis of the comparison operation with the best available technology (BAT);
- a description and characteristics of other planned measures in operation, in particular measures for the economical use of energy, to prevent accidents and to limit their possible consequences;
- a description of traffic termination and measures to eliminate the risk of possible pollution of the environment or human health hazard from the operation after the completion of its activities and operations at the site to a satisfactory state;
- a brief summary of the data and information referred to in points stated up, generally understandable way for publication;
- draft of the permit condition's description of the parties who are entrepreneur known, apply to authorities a foreign country (hereinafter "foreign authority concerned") if the existing operation or new facility has or may have a significant adverse environmental impact of this law (hereinafter referred to as "transboundary impact").

The application's attachments are:

- an extract from the land cadastre on which it is or should be the operation, which is subject to integrated permitting;
- the decisions and statements issued by public authorities before the application, relating to the operation;
- final statement of the process of assessing the environmental impact if the operation requires;
- a draft waste management plan or waste management program;
- a safety report if the operation requires by the construction of a new operation or the proposed change in the existing operation or facility [paragraph 11.] is the operator of a Category B obliged to submit a safety report, together with the consent of the District Office under paragraph 7 as part of an application for a building permit or a change in the use of the building under special regulations;
- list of principles and regulations of the zoning plan, if the plant is inside zone, which the land use plan of the zone was prepared on;

- planning permit, if it is a new operation or extension of existing operation;
- documentation and building project to the extent necessary for building permit proceeding, if the building permit proceeding is a part of integrated proceeding, except for decisions, approvals, statements, opinions and advice of the relevant authorities in the integrated permit;
- payment record of administrative fee and also pursuant to § 58 of the Building Act no. 50/1976 Coll. and § 8. 1 and 2 of the implementing regulations of the Building Act no. 453/2000 Coll.

§8

An application for building permit contains

- name, surname (title) and address (headquarters) of the builder;
- the type, purpose and location of construction, expected completion date of construction and by the temporary construction time of its duration;
- parcel numbers and types (cultures) of construction land indicating ownership or other rights under the land cadastre and parcel numbers of adjacent lands and adjacent structures or other land to be used as a construction site;
- the name, surname (title) and address (headquarters) of the designer;
- information if the construction is being performed by a subcontractor or by a builder itself;
- basic information about the site, its structure, technical and production equipment, future operation and its impact on environment and human health and related measures;
- list of participants in building proceedings, which are known to the investor, if the line construction and the very large construction with a high number of participants in building proceedings, the list of participants is not required to elaborate.

An application for building permission to attach

- evidence which shows that the investor owns the land, or building, or that they have other rights to this land or building, which entitles them to establish a building or land required to proceed to the construction or maintenance work on it;

- the design of buildings (construction) prepared by an authorized person in three copies, in the case of buildings according to § 45 par. 6 point. of the Act, sufficient documentation prepared by a competent professional education;
- decisions, opinions, statements, consents, assessments or other measures of the government bodies and municipality;
- evidence of negotiations with the parties to civil proceedings, if held before the application;
- a copy of the regulation on the approval of the zoning plan, if planning permission is not required;
- if the construction is self-constructed, declaration or construction supervision of a qualified person that will provide professional management of the building performance.

2.4.3 Related statements of other participants of BP hearing

According to [2]¹⁶ participants of the building permit hearing are all people and institutions that can be effected by building or its realization. On behalf of project documentation for building permit make their statement all other participants of building permit hearing. The list with all statements has to be a part of building permit application. An investor is also obliged to apply municipality to make its statement to building permit.

Other participants:

- municipality;
- distribution network controllers;
- fire and rescue corps office;
- land area neighbours;
- work safety inspection office;
- state health-officer;
- hygienist.

¹⁶JUDr. Miroslav Hodák a kolektív autorov: Príprava, vedenie a organizácia stavieb. Verlag Dashöfer, 2007, part 4/2.2

2.4.4 Penalties according to building law

According to the building law [5]¹⁷ actionable torts in field of building are always sanctioned by money penalty. The amount of the money penalty depends on relevance of the unlawful act. The amount of the money penalty is delimited by maximal amount. The administrative bureau is obliged to levy a fine on detected actionable tort.

Competent authority for administrative hearing in case of the building law

Competent authorities for administrative hearing in case of the building law are according to local venue:

- Building office (municipality);
- Special Building office;
- Military Building office or appropriate ministry;
- Slovak Building Inspection.

All these institutions can levy a penalty according to the relevance of the unlawful act. The penalty can be levied within 3 years of committing an actionable tort.

First group – in the first group of relevance it is possible to levy a penalty in maximum amount of 13,277.57 € for following torts:

- unreported realization of simply or tiny building, reconstruction or utility works, which has to be reported;
- unauthorized realization of land or mining works that need to be permitted by the Building office;
- realization or usage of advertising, informational devices without demanded permit or such usage of these devices that is in collision issued permit;
- absence of maintenance works, even after recall of the State Building Inspection or the Building office;

¹⁷Law 50/1976 Coll. Zákon o územnom plánovaní a stavebnom poriadku (stavebný zákon), IURA Edition, 2010, §98 ~ §107

- restraining of inspecting duty of the State building Inspection, avoiding inspection, insufficient or no action executed, even when the Building office ordered to does an action.

Second group – in the second group of the higher relevance is possible to levy a penalty in maximum amount of 66,387.84€for following torts:

- usage of inappropriate building material;
- non-execution of temporary building devices out of construction yard after the finishing of the building;
- realization of the building in collision with the cause and ambit of the building entrepreneurs activity;
- modifications of a finished building realized without building permission or modification that are in collision with the building permit;
- removal of a building without authorization by the Building office;
- missing documentation necessary to order indispensable reconstructions after time limit expiration, or non-performance of reconstruction works if they are ordered;
- degradation of environment by breaking the time limit for building finishing.

Third group – in the third group of the biggest relevance it is possible to levy a penalty in maximum amount of 165,969.59 €for following torts:

- execution of such actions that can be realized only through planning permit, without planning permit or such execution, that is in collision with the building permit;
- realization of new building without the building permit or with collision with the building permit;
- usage of a building without building inspection or usage that is in collision with the building inspection;
- people's health or life threat caused by deficient maintenance of a building;
- non-performance of secure works ordered by the Building office, if there is no serious reason for non-performance;
- non-performance of obligatory building removal, ordered by the Building office, in determined time limit.

Administrative office of the second level - appellate office

An investor has the option to appellate on an appellate office after levied penalty of the local Building office. The appellate office has competency to change or cancel the former decision, approve the former decision and cancel the appellation, cancel the former decision and return the affair back on the Building office for new hearing.

2.5 Construction work

Regarding tender procedures and contracting the construction work, it is recommended to adopt the FIDIC conditions especially if there is international tender. However, in case of local construction companies, it is recommended to use local contracts which are usually stricter than FIDIC. Every time it is recommended to input the design responsibility by construction (construction company is responsible for executing drawings) and lump sum price for construction, these can prevent delaying of the construction and overspending of budget. It is not recommended to start with the constructing without building permit (breaking the Building Act), but most of the project start without a building permit in Slovakia and the investor risks the penalty which is usually lower than financial lost in case of construction delay. In this situation, it is necessary to have a good relationship with the local authorities and mayors which cadastre is the construction project being realized in.

The International Federation of Consulting Engineers (FIDIC) [17]¹⁸

FIDIC aims to represent globally the engineering consulting industry by promoting the business interests of firms supplying technology – based intellectual services for the built and natural environment. FIDIC is well known in the consulting engineering industry for its work in defining Conditions of Contract for the Construction Industry worldwide.

FIDIC is charged with promoting and implementing the industry's strategic goals on behalf of 74 national Member Associations. Member firms endorse FIDIC's statutes

¹⁸ www.fidic.org accessible on: 01/09/2010

and policy statements and comply with FIDIC's Code of Ethics which calls for professional competence, impartial advice as well as open and fair competition.

Advantage of consulting engineering firms' exploitation

Consulting engineering firms offer multidisciplinary independent expert advice on the feasibility, funding and management of projects: they develop concepts into detailed designs, procure contractors and suppliers, administer contracts, supervise construction and installation, and monitor as well as review outcomes.

Advantage of using FIDIC in tender process

The FIDIC gives advice on tendering procedures for users of these contracts. The FIDIC presents a systematic approach for tendering and awarding of contracts for international construction projects. It is intended to assist the employer/engineer to receive sound competitive tenders in accordance with the tender documents so that they can be quickly and efficiently assessed. At the same time, an effort has been made to provide the opportunity and incentive to contractors to respond easily to invitations to tender for projects which they are qualified to implement. It is hoped that the adoption of this procedure will minimise tendering costs and ensure that all bidders receive a fair and equal opportunity to submit their offers on a reasonable and comparable basis.

FIDIC offers the model procedure which is suitable for tendering for most international construction work, but it may be adapted to suit the particular requirements occasioned by the size and complexity of a project, and any special conditions imposed by the established procedures of the employer or the financing institutions. It reflects good current practice.

2.6 Temporary and Permanent operation permit procedure

2.6.1 Temporary operation

A permission for temporary use of building (a permission for temporary test operation). It is issued by building authority on request from the investor if the execution of temporary test operation of finished construction is necessary, within

that it is verified the function of technology equipment of the whole construction in operational conditions and it is demonstrated if the preconditions for achieving the designed parameters are created, which are stated into the project documentation for building permit. At test operation demonstrates the preparedness of the machines and equipment to perform technological function as set into the design documentation as well as creating the conditions for permanent operation. Generally, the test operation is permitted for the time period of 1 year.

Basic legal requirements to receive the trial operation and permanent operation permit are in the Slovak laws, regulations according to [6]¹⁹:

- Building Law No. 50/1976 and last amendment;
- Water Law No. 364/2004 and last amendment;
- Waste Law No. 223/2001 and last amendment;
- Air Law No. 137/2010 and last amendment;
- Safety and health protection by work Law No. 124/2006 and last amendment;
- Technical requirements for products and Conformity assessment Law no. 264/1999 and last amendment;
- Fire prevention Regulation of the Ministry of Interior of SR No. 121/2002;
- Air pollution sources, emission limits, technical requirements and general condition of operating Regulation of the Ministry of the Environment of SR No. 706/2002;
- Assurance safety and health protection by works and safety requirements by technical devices Regulation of the Ministry of Interior of SR No. 508/2009;
- Monitoring of emission and air quality Regulation of the Ministry of the Environment of SR No. 408/2003;
- Minimal safety and health requirements by working with production technology Regulation of the Ministry of Interior of SR No. 392/2006;
- Details regarding technical requirements and procedures for Conformity assessment at production technologies Regulation of the Ministry of Interior of SR No. 310/2004.

¹⁹Prof. Ing. Gustav Kasanický, CSc. and Doc. Ing. Ján Podhorský PhD, Expert opinion No. 156/2009, 4th May 2009

2.6.2 Permanent operation

A permission for permanent use of building (permission for permanent operation) of already finished building object, eventually its part ready for individual using or that part of the construction, on which the change or maintenance work was executed, if the building permit is required for these constructions it is possible to use only under permanent operation permit. Conditions of the operating permit must be observed and fulfilled at all time. The permanent operation permit proceeding is conducted by the building office, which issues the building permit. A permanent operation permit proceeding begins with application by the builder; the application shall be reported in a written form.

Technical standard

It is an established norm or requirement. It is a formal document that establishes uniform engineering or technical criteria, methods, processes and practices. Technical standard can be (according to §3 Law No. 264/1999 Coll.):

- International standard, established by International Standardization Organization (ISO) is available to public;
- European standard, established by European Committee for Standardization (CEN) and is available to public;
- Slovak technical standard (STN), which established by SR;
- Foreign standard, established by foreign national standardization organization.

2.7 Legal requirement after Permanent operation permit

When the legal conditions in process of operation are to be met, it is important to implement and monitor adherence of these conditions. All implementing and monitoring activities are directing to continual compliance with legal and other requirements.

Law of Slovak republic related to the production plant according to [7]²⁰:

- Waste Act No. 223/2001 Coll. and executive regulations;
- Air protection Act No. 137/2010 Coll. and executive regulations;
- Water protection Act No. 364/2004 Coll. and executive regulations;
- Building act No. 50/1976 Coll. about land planning and building order;
- Regulation No. 508/2009 Coll. upon which the particulars ensuring safety and health protection during the work with technical equipment;
- IPPC Act No. 245/2003 Coll. (Integrated Prevention and Pollution Control) and executive regulations;
- Law No. 264/1999 Coll. about technical requirements on articles and about conformity assessment.

Legal conditions requirements:

- SR legal and other requirements relevant for environment
- EU legal and other requirements relevant for environment
- Municipal and government authorities requirements
- Monitoring plan for environment pollution's sources
- Previous environmental management review reports
- Previous internal audit reports
- Information and impulses from employees
- Ecological accident reports
- Environmental targets and programs
- Information and complaint from interested parties

²⁰ Ing. Martin Drozd: KSR-PR-FE-016 rev1 Facility Permission and Approval Management, Kia Motors Slovakia, s.r.o., 2008

3. DESCRIPTION OF METHODOICAL APPROACH

I have focused on literature study, Slovak laws and technical standards and available internet sources. Also, many interviews and meetings with state authority representatives both local and national was important part of my methodical approach.

In my research, I used the Microsoft project software as well. This tool was useful to prove the time schedule an electronic form which could be easy modified. The Microsoft project gave me a visual way to effectively manage permit procedures and to meet crucial deadlines for selecting the right ways. The management software delivers me new and intuitive experiences in collaborative permits management within individual tasks. Choosing the level of details is right for each permit process. Working with summary data initially, or drill down give me details overview for more complex phases. This was particularly useful in early planning when the details were still unclear.

This software save my time and effort and essential functions like text wrapping, filtering, auto-complete, scroll and zoom, and more, so I could quickly and effectively organize and analyze details.

With a completely new and visually enhanced timeline view, I had a clearer view of tasks, milestones, and phases. Expanded colour palettes and text effects help me make every timeline and plan to look their best.

The important part of my research was learning from the internal company sources and my experience, meetings with many specialists such as designers, engineers and consultants. From my point of view, most valuable knowledge for my work was provided be my team members with the experience in international company challenged many different projects. We have been working on the permission procedures for more than 6 years from the beginning of Kia construction project. Currently, we have already managed more than 5 extensive projects through the factory construction with the new engine shop as the last example.

4. RESEARCH RESULTS, ANALYSIS AND EVALUATION

4.1 How to proceed effectively in the pre-investment period, negotiation with the Government and SARIO agency?

When the investor decided about their future investment, it is the right time to start negotiations with the country government and a relevant investment agency. In Slovakia, there is a SARIO agency established to help foreign also domestic investors with technical details related to investment action. Of course, the investor has to follow national laws and regulations, but from the social point of view, often the Government does not meet 100% from agreed investment support. The more east-located investment action in Europe, the more local government fails to keep promises and time schedule, despite the fact that investor signed investment agreement or similar contract with government, or its agency.

Common phenomenon is that investor is intended to invest money and start with their project as soon as possible therefore they are pushing the government officers to proceed all contractual and approval work in reasonable time. Nevertheless, the government knows the positives of new investment such as growing local and regional economy, living standard, creating new jobs, income taxes to municipalities, etc. The problem is slow administration and approval process joined also with corruption. Secondly, there is lack of ability of government officers especially after election time and change of persons on state authorities. If investor's requirements are against valid laws and regulations the Slovak Republic, or there are unusual requirements, also the approval process can be delayed.

Therefore, the investor should be well prepared for many different problems and situations on investment planning period. He should establish task-force team (hereinafter TFT) and hire only skilled and professional people both with local and international experiences. Also hiring whole professional law consultant company experienced with government negotiations is one of the keys to successful investment realization.

4.1.1 Problems, solutions and recommendations

Property ownership could be spitted among many small owners without intention to sell it for a reasonable price. For example, on 100 000 m² there can be more than 100 single owners, mainly common people.

Engineering network connection to the property can be disabled or blocked by another private owner.

The government cannot fulfil its promises to construct the connecting networks and external infrastructure.

In the Table 4, you can find the possible solution to the problem caused by not handover property and external incoming infrastructure on time under future plant to foreign investor by the government.

Table 4: List of problems and countermeasures caused by land and external infrastructure

No.	Problem	Countermeasure
1.	Property (landownership): without 100% of landownership Building office cannot start BP procedure.	Try to conclude with the leasing agreement with the owner, or agree do not interference by the construction and start construction without building permit.
2.	Building without building permit: Validity of issued authorities' standpoints is max. 2 years after the date of issuance. In case of legislation change with impact on installed production technology or buildings investor has to spend extra costs for engineering also for technology equipment and building modification in order to get BP.	To get BP within 2 years from the issuance of building permit standpoints by related parties.
3.	Warranties of the as-build project documentation, electrical and mechanical devices are limited. After contract due date investor have to execute all changes at own cost.	Extend the time of warranties and liabilities.

4.	Networks (external infrastructure): POP is not finished by government representatives therefore investor cannot start with POP procedure of internal networks (infrastructure) and buildings.	To get min. TOP for external infrastructure from government representatives. Negotiate with the authorities to receive the TOP even if infrastructures don't have TOP.
5.	Extra cost for engineering: Investor is employing the engineering company to get the POP. Engineering company shall have good relationships with state authorities to negotiate the POP within contractual period.	Mutual cooperation between contractual parties government, government representatives, investor and investor's representatives, state authorities and engineering companies are essential.

Where land is used for agricultural purposes, it must be first withdraw from agricultural land fund and changed to the construction land. This is possible only if land taken is to be included in the zoning plan as a future industrial zone. Otherwise, it must first change the land which takes about 3 months.

From my personal experience, an investor should never apply to government for non-financial investment support. It is better to receive direct finance and construct by itself in other case investor can lose ca. 50% of financial incentives by the government expenses with significant impact on project and construction time schedule.

4.1.2 Evaluation

- When the government provides the land property with infrastructure, it should be checked by authorized person in details – a general designer and a land surveyor. If they find any difficulties (many fragmented plots, complicated ownership rights, old environmental burdens, existing infrastructure belongs to private owner, etc.), the investor have to consider them with impact on their investment plan and time schedule. Consequently, the investment project can be relocated or whole investment may be cancelled;
- An investor in Slovakia should avoid receiving the financial grant expressed in services for their investment intention, rather they will negotiate to get it expressed in the form of direct money or tax allowances;

- In case of Kia second engine shop construction, we received the grant from the Slovak government as tax allowance.

4.2 How to proceed effectively through the negotiations with state authorities?

State authorities are state institutions, authorized for issuing of the standpoints, permissions, executes checking activity according to related laws or regulations. Without meeting these requirements ordered by authorities is not possible to realize any capital projects. In general, there is a rule that good relationship between a company and authorities, together with well prepared and requirements meeting project makes the whole permission process simpler and faster. Good relationship is not only an advantage while dealing with authorities, good relationship is a must for successful project finishing. For assurance of good relationship with authorities, it is necessary to meet obligatory and also voluntary rules.

Obligatory conditions of good relationship with authorities:

- meeting legal procedures and conditions mentioned in provisions of the planning permit and building permit (also when, dealing with other documents);
- regular measurements of dangerous substances level (ordered by the IPPC law);
- regularly taken measurements meet the legal requirements and also improve image of the company regarding to public relations, customers, partners, employees and also authorities. The result of the measurements is a company obliged to archive;
- issuing of documents with information about production, emission, storage and disposal of dangerous substances is ordered by law and its abstention is penalized.

Voluntary conditions of good relationship with authorities are not ordered by law but their practice makes negotiations with authorities easier.

Issuing of additional (non obligatory) documents about amount of produced emission, stored and disposed dangerous substances improves image of the company

regarding to public relations, customers, partners, employees and also improves company's negotiation status while dealing with authorities.

Cooperation during the inspection:

Even though that inspection is ordered by law, the rate of cooperation depends on a will of the company management. In case of cooperation, it is important to underline that the more cooperative company is the simpler, easier and faster process of inspection.

Public relations:

- introduction of the project to the authorities by a company architect. This action makes complex project easier to understand for authorities;
- pre inspection while dealing about a complicated project. Pre inspection means continuously made inspections by authorities with expressing their opinions during the building process before its ending. This way pre inspection helps detect and easier remove breaks of law, security, etc., before the finishing of the building;
- good relationship with authorities is often built easier when the company demonstrates respect to authorities and its staff. This demonstration can be realized through personal approach to the authority staff by sending New Year's Eve compliment cards, inviting authorities' staff for an official visit of the company, inviting for ceremonial events, etc.

List of most common authorities that a company has to deal with:

- The Ministry
- The Regional / District Environment authority:
 - Department of State Water Administration;
 - Department of Water Management;
 - Department of Nature and Landscape Protection;
 - Department of Air Protection;
 - Regional Administrative of Public Health;
- Slovak Environment Inspection:
 - Water Protection Inspection Office;
 - Air Protection Inspection Office;

Water Management Inspection Office;
Nature and Landscape Protection Inspection Office;
Integrated Permission Procedure and Checking Inspection Office (IPPC);
Regional Head Office of Fire and Rescue Corps;

- Technical Inspection (authorized body);
- Regional Municipality;
- Regional Building Office;
- Slovak Building Inspection.

4.2.1 Problems, solutions and recommendations

The government or authority representative's are nominated person: In Slovakia there is a public democratic election every 4 years. After the election, if there is a government change, also within 6 months mostly all head of authorities are changed.

An investor shall select an experienced general designer and engineering company with skilled people to carefully handle with state authorities. Both shall have appropriate relationships with local and regional authorities related to permission procedures of planned construction. For example, hiring foreign engineering company will be serious mistake because of different local environment, laws and regulations also no relationships with municipality officers.

According to my experience, the best way is to hire a local engineering company with already established relationship with local authorities.

4.2.2 Evaluation

- Good and trustworthy authority relationship is a key element to a successful permission procedure. The head of each authority is a key person and if permission period exceeds election period of voted persons, an engineering company will be prepared to establish new relationship on gently manner. Most probably, especially by the extensive and complicated construction project, changed authority officers will need the support and help from the side of the investor during permission procedures, here the mutual close cooperation is essential, for example explaining changes during construction before issuing

change building permit, or simply during approving of documentation for planning or building permit;

- From my personal experience it is necessary to monitor the changes at the local authority in order to react on possible changes in the organization;
- An general designer should be hired from local engineering company with ability to execute design in agreed cost and keep project time schedule;
- An appointed engineering company will have good relationship with local authorities with relation to planned construction. It is reasonable to join a design and engineering company, or hire one company in charge of both issues which are connected together. From other point of view, responsibility for design and engineering will bear only one subject because of more effective cooperation and coordination with the investor;
- It is not easy to confirm the experience and references of the engineering company, therefore I would recommend that an investor will check the satisfaction with their work result with another foreign investor, if it is possible.

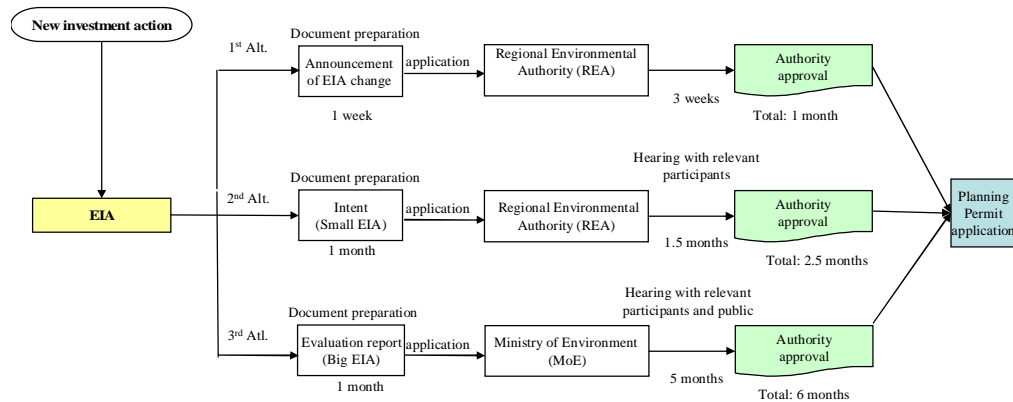
4.3 How to proceed effectively through EIA procedure – Comparison of the initial status and proposed status.

EIA procedure can be divided into 3 possible alternatives:

- Announcement to the EIA change by the small project which does have so much influence on the environment. This procedure is stated in the Scheme 4 (1st Alt.) This procedure can be possible used for a small building extension, or a simple construction project.
- Intent (small EIA) is used by most projects for automotive industry this procedure is stated in the Scheme 4 (2nd Alt.) possible to use for new construction of an automotive plant.
- Evaluation report (big EIA) is used by the production plant or another construction which has big impact on environment, this procedure is stated in the Scheme 4 (3rd Alt.)

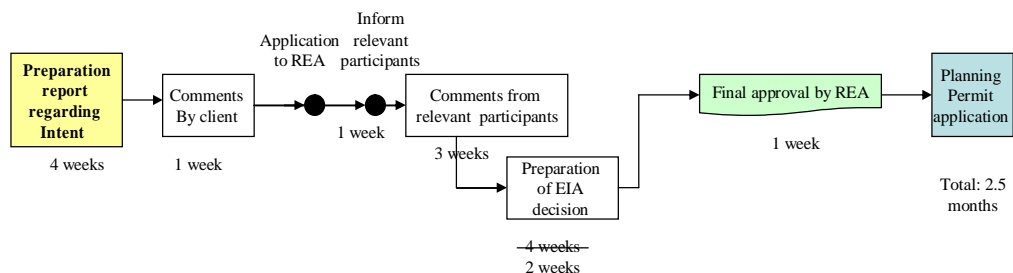
Regarding the detail requirements for criteria for evaluation of alternatives (1-3) it is necessary to check exact criteria for decision of evaluation and shortened procedure of EIA resulted from Law No. 24/2006 latest revision, part 8.

Scheme 4: Simplified scheme of EIA (proposed variant)-(for more details see Att. 2)



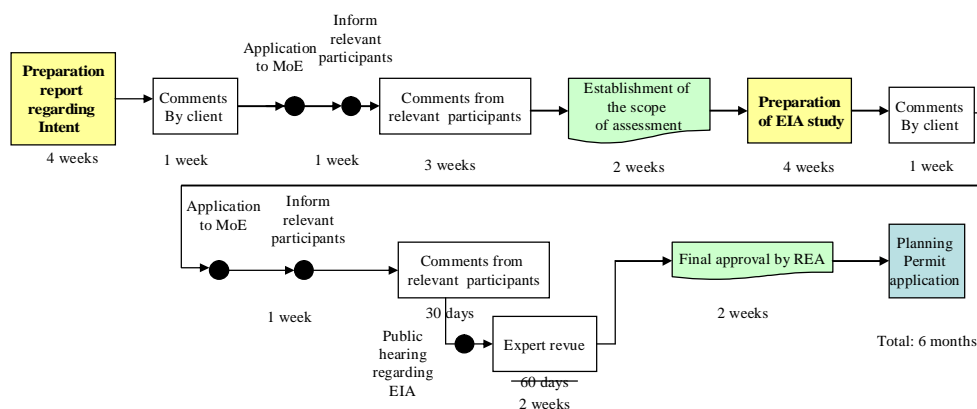
The “Small EIA” is mostly used by new plant construction. I have prepared the Scheme 5.a: Intent – Small EIA: most common used as well in case of Kia new projects and by this procedure it is possible to save minimum of 2 weeks because if you agree the Regional Environmental Authority (REA) and you are able to prepare the document according to their requirement, the preparation of EIA decision could be made in 2 weeks instead of 4 weeks, with one week overlapping of comments from relevant participants. This procedure was used by Kia second engine shop in the year of 2008 as well.

Scheme 5.a: Intent – Small EIA – (for more details see Att. 3.1)



The “Big EIA” is mostly used by new plant construction with the paint shop or waste water treatment plants. I have prepared the Scheme 5.b: Intent – Big EIA: by this procedure it is possible to save time by 6.5 weeks because if you agree with Ministry of Environment of the Slovak republic regarding independent expert who will execute expert revue in 2 weeks with one week overlapping of comments from relevant participants.

Scheme 5.b Intent – Big EIA – (for more details see Attach. 3.1)



4.3.1 Problems, solutions and recommendations

In the table 5, there is a sample of designed parameters of the EIA. The most important from these parameters is not underestimating the volume of production and a building area. I would propose from my experience to increase the capacity and building area that later it is easier to extend the production. Also, during Kia project of parking place extension we did not need to elaborate new EIA because in former EIA we calculated with extension of parking place in total volume of 120.000 m², which saved time and cost for new design.

In total, 69 conditions were recommended for the stage of building preparation and realization of the Kia investment in 2004. After examination of technical proposal, in view of possible impacts on the environment, taking into consideration the remarks and statements from involved authorities and organizations, there are recommended following measures for further stages of preparation, implementation and utilization of the project activity.

Extract of the most important measures are visible in the Table 6: Description of measures related to impact on surrounding environment and Table 7: Description of measures related to building and production technology, these conditions were stated after the negotiation with the authorities and were mentioned as conditions to the building permit. The similar conditions would be stated for other automotive plants in Slovakia. With implementation of these conditions before starting the EIA preparation, it is possible to save the time and cost due to the proper preparation. In case of a new project, we are implementing these conditions automatically.

Table 5: Designed variant of EIA for Kia Motors Slovakia and Hyundai Mobis

Capacity of production		
	KIA MOTORS	HYUNDAI MOBIS
I. phase (2006)	80,000 pieces of cars/year 360 pieces of cars/day	227 pieces of modules/day
II. phase (final state)	300,000 pieces of cars/year 1,400 pieces of cars/day	1,228 pieces of modules/day
Requirements for areas		
	KIA MOTORS	HYUNDAI MOBIS
Build-up area – objects	20 ha	14 ha
Build-up area – roads, hard surfaces	50 ha	16 ha
Green and not consolidated surfaces	96 ha	8.4 ha
Surfaces of areas in total	166 ha	55 ha

Table 6: Description of measures related to impact on surrounding environment

No.	Measure
1.	Before the planning decision is issued, it is necessary to harmonize the projected activity with the valid planning documentation for involved villages (completion, making over, working out of territorial planning documentation).
2.	Elaborate the study of social impacts from the projected activity with detailed analyses and implementation of their results into the land planes of involved villages, in which a construction of flats and of other social infrastructure comes into account.

3.	Architectonic solution of the plants is to be designed with the latest concept of industrial architecture in the way that it would harmonize appropriately with the environment and would not affect the involved territory in a distracting way.
4.	Work out a comprehensive study for transport in relation to the projected activity for the period of construction and operation of the projected activity, including transport of employees.
5.	Create the insulating green line for noise level minimizing and integration of the plants into environment.
6.	Work out separately park project – landscape architecture for park area, which will be a component project for building permission.
7.	Taking regard to the present lack of information about technology, the new dispersion study, also focused on the statement related to concentration of selected organic matters, is to be worked out within the building permission and based on the real data.
8.	Work out the emission analysis as a base for evaluation whether the emission limits are feasible, and optimize the height of chimneys on the base of this.

Table 7: Description of measures related to building and production technology

No.	Measure
1.	Within further stages of project documentation, it is necessary to ensure elaboration of: a) emission-technology survey (comparing of technology, efficiency of separating process, fulfilment of emission limits, evaluation of emission flows, estimation of tapping pollution quantity). b) polluting-transfer survey (appraisal of chimney heights, smoke-uptake, calculation of pollution concentration).
2.	Within building permit, it is necessary to specify burning condition of the gas from drying-plant. (Temperature, oxygen content, delay time, specification of pollution that will be measured continually, etc.).
3.	In the process of project preparation it is necessary to complete the data about suppliers of technological equipment, their exact description and technological parameters, specify the details of chemical agents being used in the process of pre-preparation, paint and bonded matters being used in surface treatment, the data about the types of solvents for bonds and hot waxes, as well as about suppliers of these chemical agents, and supplier's guarantees related to keeping the emission limits.
4.	During surface treatment (painting) of cars the technology based on water-diluted paints is to be installed, or other methods acceptable in environmental view are to be used. To reduce using of the paints based on organic diluents to minimal level.
5.	Based on realization of technical and technologic solutions, reduce to minimum of all carcinogenic substances in emissions from the paint shop.

6.	Reduce using of formaldehyde and all other substances with formaldehyde content in order to minimize the risk of carcinogenic affection to inhabitants.
7.	Install only new and quality technology (BAT) in the plants, acceptable in view of environment; installing of an old technology from other countries, which was used and disassembled, is not allowed.
8.	During construction of the plants the watercourse will not be directly touched because the main building jobs will be performed 700 m away from the river. Within the plan of precautions it is necessary to work out the Accident plan for the period of construction work, according to the valid regulations.
9.	Work out and observe the plan of accident measures for water protection, in which there will be, elaborated the protection method of the rock surroundings and subsurface water during construction and operation of the projected activity.
10.	Rain water from parking places are to be drained via the oil and petroleum filters.
11.	Work out a detailed noise and pollution study, based on more precise specification of input data, to be enclosed to building permit.
12.	Elaborate the waste economy schedule for both plants and incorporate there in the biggest scale recycling of used materials and using the wastes with the aim to minimize the amount of the dumped wastes.

4.3.2 Evaluation

- EIA is the first step of permit procedure. An investor should have already designated the designer and engineering company which will design the manufacturing plant. This procedure is last when the investor can easily change the designer and engineering company after its finishing. If you are not satisfied, simply change these companies. Later it will be more difficult and more expensive to execute such decision;
- During the elaboration of the EIA investor should simultaneously work on the planning permit documentation and after receiving the valid EIA they should have the planning permit documentation prepared. In this case it is advantage if one designer is appointed to prepare all documentation;
- EIA design should be elaborated properly and the investor should consider also future extension, if possible. In this case it is most important to extend the design but not to fall under the Big EIA according to Scheme 4 (3rd Alt.). This can cause from 3 up to 5 months time delay because of EIA approval;

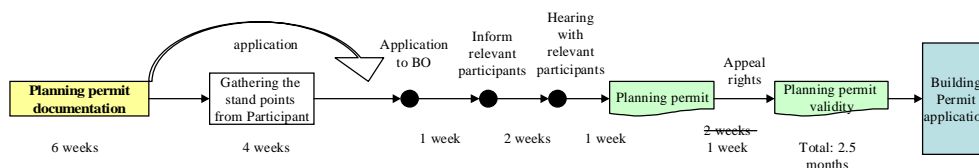
- EIA procedure is the only one procedure in which you do not need the detail data about the production plant. An experienced designer will be able to prepare EIA without investor support or just with minimum input data about production technology, for example on the basis of “fiction study”.

4.4 How to proceed effectively through planning permit procedure?

At the EIA stage, the investor shall execute the planning permit documentation. After receiving valid EIA, they shall submit planning permit documentation to relevant state authorities to receive their standpoints. From my experience it required minimum of 12 copies of planning permit documentation, but every time the total quantity of documentation depends on project extension and number of interested parties on both authority and investor side. According to my experience, 2 more copies of planning permit documentation for the building office is necessary due to archiving purposes. I would recommend ordering total number of 14 sets of the planning permit documentation, same quantity for building permit procedure. Some designers would like to change for an extra copy.

Saving total permission time, it is possible to apply for the planning permit before collection of all standpoints from relevant authorities. An investor shall collect all standpoints before public hearing and latest up to the planning permit issuing by authority. By the appeal rights procedure is possible as well to save 1 week if your engineering company collects the standpoints from all relevant participants that they step down from the appeal rights. As a result, investor can save around 1 month of engineering time and reduce the planning permit procedure to 2.5 months. Proposed procedure is described in the Scheme 6:

Scheme 6: Planning permit procedure – reduced – (for more detail see Att. 4.1)



Detailed process of planning (building) permit hearing and issuing of planning (building) permit

After the registration of planning (building) permit application (with copies of building permit project and statements from all participants of the building permit hearing) is a 30 – day period – limit for the building office to make his resolution about the application. During this period, the building office has to call a planning (building) permit hearing joined with local examination and visual inspection of the building location with all participants of the planning (building) permit hearing.

In the case of successful process of the planning (building) permit hearing is the planning (building) permit issued by the Building office. The planning (building) permit is applicable after 15 days from the date of issue. The 15 – day time limit is purposed for protests and opinions of participators of the building permit hearing.

The Building office will mention in building permit conditions suggested by participators and local examination. These conditions are compulsory for the investor in building permit process. The planning (building) permit is valid for two years or longer, if the building office agrees with longer validity proposed by investor. The planning (building) permit cannot lose its validity if the building is initiated in the time of the building permit validity.

Dismissing of building permit application

If it is be realized during the planning (building) permit hearing, that realization or operation of building could endanger public interest, or legitimate rights of planning (building) permit participants in wider amount than was expected in the planning permit, than the building permit application will be dismissed.

4.4.1 Problems, solutions and recommendations

Before execution of the planning permit design, an investor should prepare information stated in the table: Basic input information for the planning permit documentation and provide them to a general designer. According to this data, both an investor and a designer can save time and smoothly proceed through the planning permit procedure.

In the Table 8 you can find the input data which a designer require in the stage of planning permit documentation.

Table 8: Basic input data for the planning permit documentation from investor to the designer

1. Specification of production halls
1.1 footprint (length x width x height)
1.2 layouts (production area, storage area, utility area, etc.)
1.3 requirements and placement of rooms
1.4 requirements for material design
1.5 requirements for floor, floor surface, static requirements
1.6 requirements for cranes (if any)
1.7 requirements for heating, cooling, air condition and ventilation, requirements for special thermal, humidity or dustless production
1.8 requirements and description of intercepting traps for oil
1.9 requirements for wiring
1.10 requirements for water, production waste water, compressed air, all the type of gases and other utilities
1.11 requirements for telephone and computer network (connection points and type)
1.12 requirements for fire and burglar alarm installation
1.13 number of production workers on particular shifts, number of female workers, number of shifts
2. Specification of office and service buildings
2.1 building design (architecture requirements)
2.2 offices layout, meeting rooms
2.3 catering type (kitchen or only canteen)
2.4 requirements for air conditioning/heating
2.5 requirements for material design
2.6 requirements for wiring
2.7 requirements for telephone and computer network connection points and type
2.8 connection point and quantities for office building for all the type of utility (the same as for production halls)
2.9 requirements for fire- and burglar alarm installation
2.10 number of administrative employees
3. Machine equipment
3.1 description of production, equipment, layout
3.2 connection type and quantity requirements for electricity, voltage
3.3 weight and dynamical load of machine
3.4 possible emissions

3.5 type and quantity of all the kind of waste
3.6 water consumption per year
3.7 heat output of machines, exhausting requirements for machine
3.8 machine equipment noise level
4. Requirements for the plots
4.1 total area layout
4.2 requirement for car and truck parking
4.3 quantity and weight of trucks
4.4 total area layout of road and parking
4.5 requirements for fencing and garden arrangement
4.6 requirements for central heating and hot water boiler
4.7 requirements and placement of waste area and raw stock area

-Necessary attachments from Investor: Description of production technology, at least 2xA4 pages of text.

4.4.2 Evaluation

- During processing of the planning permit procedure, the investor should already works on the building permit documentation. After receiving valid planning permit, they should have prepared the building permit documentation. In this case the investor hve advantage if one nominated designer executes all documentation.
- Regarding the planning permit documentation the most important is to fix the layout and exact position on the land area. Later change could cause invalid planning permit and necessary to apply for new planning permit which might result into time delay and extra cost.

4.5 How to proceed effectively through the building permit procedure?

As I described by the planning permit procedure, in the time of receiving valid planning permit, it is necessary to have already prepared documentation for building permit. The building permit procedure is similar to the planning permit procedure, but with more detailed documentation requirements for getting building permits. Another difference is that in this stage investor does not receive only one building

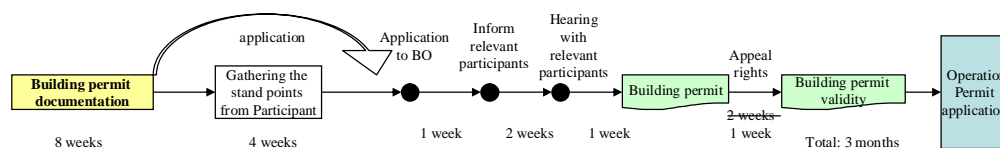
permit as in the case of planning permit, but Building office will issue also other kind of building permits described in the Table 9: Possible building permits.

Table 9: Possible building permits

Dividing of building permit	
Special building offices:	Investor needs for construction start or TOP (POP):
<ul style="list-style-type: none"> • Building office for the buildings • Building office for the water line, rain and sewage line, and all water construction • Building office for the public roads • IPPC building office • Building office for the railway 	<ul style="list-style-type: none"> • Temporary site facility • Parking places • Guard houses • Utility buildings • Shops

In order to save the time, it is possible to apply for the building permit before collection of all standpoints from relevant authorities like in case of the planning permit procedure. Up to public hearing announced by Building office, an investor has enough time to collect all standpoints, at latest up to the building permit issuing. By the appeal rights procedure it is possible to save 1 week as well if your engineering company collects standpoints from all relevant participants that they step down from the appeal rights. Investor can save cca. 1 month of engineering time and shorten the building permit procedure to 3 months in total. Proposed procedure is described in Scheme 7.

Scheme 7: Building permits procedure – reduced – (for more details see Att. 4.2)



4.5.1 Problem, solution and recommendations

Before starting with the planning permit design execution, the investor should prepare the information stated in the Table 10: Basic input information for the building permit documentation from investor to the designer. Knowing this data investor and designer can save the time and smoothly proceed through the building permit procedure.

Table 10: Basic input information for the building permit documentation from an investor

1. Specification of production halls
1.1 footprint (length x width x height) exact dimensions for each part and each floor of each building
1.2 layout (production space, storages, utility area, etc.) with all dimensions for each building
1.3 layout of production technology with all machines with description for each machine and connection points for all utilities for each machine
1.4 requirements and placement of each room
1.5 requirements for material design of all building constructions (surfaces, walls, floors, roofs, ceiling, windows, doors, pipes, etc.)
1.6 requirements for floor, floor surface (antistatic, oil-resistant, loading requirements, etc.) for each room and shop
1.7 static requirements (additional loading for roof, columns, etc.) for each construction
1.8 requirements for cranes (static, velocity, placement, etc.)
1.9 requirements for heating, cooling, air condition and ventilation for each room
1.10 requirements for special thermal, humidity or dustless production for each room
1.11 requirements and description of intercepting traps for oil, pits, utility channels, etc. for each shop
1.12 requirements for wiring for each shop (or if there are some special for each room)
1.13 requirements for water, production waste water, compressed air, all the type of gases and other utilities for each machine
1.14 requirements for telephone and computer network for each room, shop (or each machine if needed), connection point, type and quantities
1.15 requirements for fire- and burglar alarm installation for each room or shop
1.16 number of production workers on particular shifts, number of female workers, number of shifts for each shop, production room and office
2. Specification of office and service buildings
2.1 building design (architecture requirements) of all the outside building constructions (façade surfaces, walls, windows, doors, etc.)

2.2 offices layout, meeting rooms with all the dimensions for each room
2.3 catering type (kitchen or only canteen)
2.4 requirements for air conditioning/heating for each room
2.5 requirements for material design of all the building constructions (surfaces, walls, floors, roofs, ceiling, windows, doors, pipes, etc.)
2.6 requirements for wiring for each room
2.7 requirements for telephone and computer network for each room, (or each working place if needed) – connection point, type and quantities
2.8 connection point and quantities for office building for all the type of utility (the same as for production halls) for each room (if there are any special)
2.9 requirements for fire and burglar alarm installation for each room
2.10 number of administrative employees for each room
3. Machine equipment
3.1 description of production, equipment, layout – information for each line
3.2 connection type and quantity requirements for electricity, voltage for each machine
3.3 weight and dynamical load of each machine
3.4 possible emissions – table of type, quantity and chemical base for each line (shop)
3.5 type and quantity of all the kind of waste – table of type, quantity and chemical base for each line (shop)
3.6 water consumption per year for line (shop)
3.7 heat output of machines for line (shop), exhausting requirements for each machine
3.8 machine equipment noise for line (shop)
4. Requirements for the plots
4.1 total area layout
4.2 requirement for car and truck parking (also temporary truck parking)
4.3 quantity and weight of trucks (table with each used type of truck)
4.4 total area layout of road and parking
4.5 requirements for fencing and garden arrangement
4.6 requirements for central heating and hot water boiler rooms and equipment
4.7 requirements and placement of waste area with lay-out for each kind of waste and raw stock area

– Production technology (machine) layouts in AutoCAD for each single machine and production line and written description of production technology – at least 3xA4 pages of text for each machine or production line.

Building permit is valid for 2 years after its issuance by building office. It is sufficient only to inform the authority about starting of the construction work within this period and permit is valid up to the end of the construction project.

The valid building permit documentation can be recognized according to the stamp from the building office. The documentation without a stamp is not valid. The fire

authority and technical inspection for production technology project as positive standpoint can issue a similar stamp for the documentation.

4.5.2 Evaluation

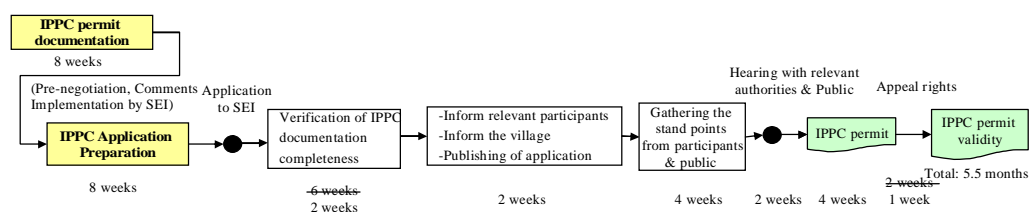
- The most important aspect by building permit documentation is time schedule, it is happening quite often that an investor does not have all relevant data to prepare this documentation. In this case I would recommend applying for building permit of sections with most complex information in order to start the construction, the investor can assume small future modifications and apply for building permit for whole project. Later they can apply for change of building permit which is in compliance with the building permit procedure;
- The construction can be executed with small modification of drawings approved by the Building office and before operation permit procedure the investor can apply for change of building permit before completion;
- The Building office is authorized to decide and judge about a small or big change, whilst big change could stop the construction. There are not fixed rules for this matter. The most important are negotiation skills of the designer who handle the behaviour of the investor. However the investor should understand that by the operation permit procedure are as well related authorities which give the statement to the building permit documentation and these authorities have the appeal rights to the operation permit procedure;
- Before starting of the construction, the investor has an obligation to inform Building office about the intention to start the construction.

4.7 How to proceed effectively through IPPC procedure?

If your production plant has significant influence on the environment, you should apply for special building permit called integrated permission from Slovak Environmental Inspection as specialized Building office. The main difference is that the building office will focus more on the environmental issues. Compared to the planning or building permit procedure, where the investor is responsible for

collection of standpoints, here the environmental inspection is obliged to collect them from interested parties. By this procedure it is possible to reduce time by verification of IPPC documentation completeness. This step can be reduced with the Slovak Environmental Inspection (SEI) agreement from 6 weeks to 2 weeks. By the appeal rights procedure it is possible to save 1 week as well if your engineering company collects standpoints from all relevant participants that they step down from the appeal rights. In Scheme 8, you can see simplified IPPC procedure. Otherwise the normal procedure is longer compared to standard building permit procedure up to 2 months. IPPC procedure takes min. 5.5 months in total.

Scheme 8: Simplified IPPC procedure – (for more details see Att. 5.1)



4.6.1 Problems, solutions and recommendations

IPPC procedure design has to react to the requirements from the Building office. Below, I have summarized 20 most frequent questions asking by Building office during commenting of the IPPC design documentation.

The evaluation process under the conditions of the IPPC most frequent questions:

Will be at the service provided Integrated Prevention and Pollution Control?

Is it sufficient designed to achieve a high overall level of environmental protection?

Was the integrated approach taken into account in assessing the operation, its effects on the environment, prevent the transfer of pollution from one medium to another?

Is the stated analysis of operation in comparison with the best available technology (BAT) in the operator's application complete and accurate?

What are the results from the analysis outcome?

Does the existing operation meet the criteria by the use of best available techniques (BAT)?

Are used and newly permitted operations proposing measures and technical equipment for air, water and land protection in the operation sufficient?

Are the measures to pollution prevention, especially by using the best available techniques sufficient (BAT)?

Are proposed measures in application for prevention of the waste generation sufficient, and if not possible, measures for waste recovery, or if not technically or economically possible, disposed in such way, that the reduction or prevention of its impact to the environment will be achieved?

Does the energy management in operation, stated in the application, the best solution in terms of achieving a high overall level of environmental protection?

Is use of raw and auxiliary materials in the operation, stated in the application, the best solution in terms of achieving the high overall level of environmental protection?

Are in the application referred measures sufficient for accident prevention and to limit the consequences in case of emergency and measures concerning the situation different from normal operation conditions?

Are proposed measures sufficient to minimize remote pollution and transboundary pollution impact?

Are proposed measures sufficient to reduce the high level of total pollution in the place of operation?

Are in the application stated technical equipment for operation monitoring and environment emission monitoring, means and methods of operation monitoring, sampling, measurement of emissions, sufficient and suitable?

Which data and information will be necessary to identify, collect, record, process, evaluate?

Are proposed requirements sufficient for temporary operation by the new operation or by the change of technology and measures in case of failure in operation?

Are measures sufficient in the application referred in the case of operation activities terminating, especially measures to eliminate the risk of possible pollution of the environment or human health hazards from the operation after ending of its activities, and to the placing the operation site to a satisfactory level?

Will it be necessary to determinate in the permit the time or operational limitations in existing operation, if not possible to reach the desired state of the environmental quality standards or using the best available techniques (BAT)?

Are conditions proposed in the application of the integrated permit sufficient? If not, what other conditions will be determined in the field of air (smell), waste management, water, noise, heat, vibration monitoring, operational procedures, maintenance, keeping operating records?

4.6.1 Evaluation

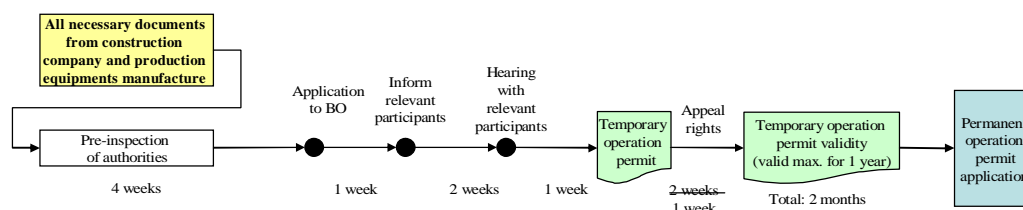
- If the production plant is be under IPPC procedure, receiving of the building permit can be delayed up to more than 2 months compared to standard building permit.
- Time problem can be avoided by application for standard building permit at Building office and before finishing of construction you should apply for IPPC permit. This depends on negotiation skills of your designer with authority. This is more risky and more expensive solution can save the time.

4.7 How to proceed effectively through operation permit procedures?

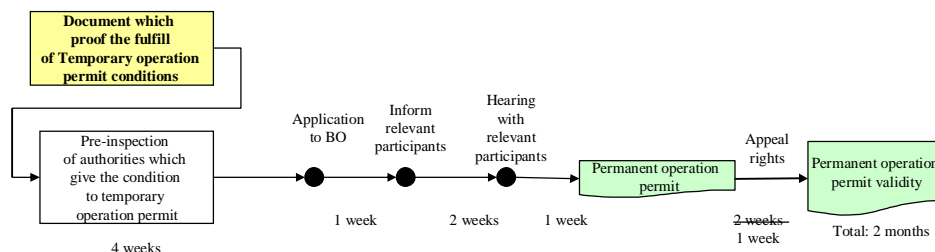
After finishing of construction it is possible to apply for:

- Temporary operation permit procedure, you can see in Scheme 9;
- Temporary operation permit can be used by some objects before finishing of construction of whole production plant;
- Temporary operation permit is for testing of production equipment and fulfilling of all requirements set by building permit, most of conditions resulted from environmental authority;
- Permanent operation permit procedure, you can see in Scheme 10.

Scheme 9: Process of TOP – (for more details see Att. 6.1)



Scheme 10: Process of POP-(for more detail see att. 6.2)



In the Table 11, you can see detailed list of steps required for receiving the TOP and POP by building office. This table is used also at new second engine shop construction in Kia Motors Slovakia in 2011.

Table 11: Detailed list of steps required for getting operation permit

Task No.	Task description
1.0 Completion of documentation	1.1 Schematic shop layouts
	1.2 Process flow/equipment list
	1.3 Tables: conveyors, machines, materials, workers
	1.4 Initial protocols: Basic groups of stipulated technical equipments according to Regulation No. 508/2009 Coll.: Lifting, Gaseous, Pressure and Electric equipment
	1.5 CE certificates
	1.6 Declarations of conformity
	1.7 Measurements results
	1.8 Waste disposal documents
	1.9 Internal safety documents
	1.10 Geometric plan
	1.11 Handover protocols with OEM-contractors
	1.12 Final documentation extract for authorities
	1.13 Project of production technology
	1.14 Evaluation of technology regarding fire fighting safety
	1.15 Evaluation of machinery and production technology by authorized body
	1.16 Specification of technology sources which course air pollution
	1.17 Emergency plan for water protection

2.0 Pre-inspections with authorities	2.1 Departments of environment protection Office:
	2.1.1 Department of protection Nature and Landscape
	2.1.2 Department of Air protection
	2.1.3 Department of water protection
	2.1.4 Department of waste management
	2.2 Slovak Environmental inspection
	2.3 Regional Office – Department of Crises management
	2.4 Regional Fire Office
	2.5 Labour inspectorate
	2.6 Regional Hygiene Office
	2.7 Police – department for traffic control
	2.8 Technical inspection
	2.9 Water and sewage company
	2.10 Electrical company
	2.11 Gas company
	2.12 Steam company
	2.13 Department for maintenance river and lakes
	2.14 Slovak telecom
	2.15 Villages
	2.16 Regional land office
	2.17 Building office
3.0 Permission in the time of construction	3.1 Permission with hazardous waste handling
	3.2 Permission with construction of pollution sources
	3.3 Establishing of underground water monitoring system
	3.4 Environment protection office: Department of Air protection - Permission for temporary operation of pollution sources
4.0 TOP Issue	4.1 Regional Fire office: positive standpoint for TOP
	4.2 Labour inspectorate: positive standpoint for TOP
	4.3 Regional Hygiene office: positive standpoint for TOP
	4.4 Building office: permission for temporary operation
5.0 Checking phase during TOP	5.1 Measurement of working condition with authorise body: Noise, vibration, dust, ergonomic, chemical factors in working environment
	5.2 Measurement of air pollution with authorise body
6.0 Pre-inspections	6.1 Regional Fire office
	6.2 Regional Hygiene office
	6.3 Labour inspectorate
	6.4 Departments of environment protection office:
	6.4.1 Department of nature and landscape protection
	6.4.2 Department of air protection
	6.4.3 Department of water protection
	6.4.4 Department of waste management
	6.5 Villages
	6.6 Building office
7.0 Application POP and final inspection	7.1 Environment protection office: Department of air protection - Permission for permanent operation of pollution sources
	7.2 Villages
8.0 Issuing POP	8.1 Building office

In the TOP and POP procedure, a investor should receive the documentation from subcontractor. In Kia Motors Slovakia, it is divided into documentation from construction company (project documentation for building permit, change building permit, as-built documentation) and production equipment manufactures (technology project, fire assessment of imported technology).

Documentation handover by the Construction Company

Usually the main construction is executed by general contractor who appoint many other subcontractors for various sections of building. Coordination and documentation management is one of the most important aspects during the construction. The list of necessary documents from the construction company is described below:

- certificates and attestations of the used materials test;
- records about the control of activities and parts of the work covered during the work implementation;
- records about the manufacturing equipment tests, about inspection tests and operation tests;
- inspection reports;
- geodetic surveying of the utility networks;
- as-build documentation with authorization stamp included all changes in the time of construction;
- construction company's declaration on word of honour about fulfilment of all obligations towards the work subcontractors related to their deliveries, about financial settlement of their claims on the day of the work handover in accordance with the subcontractors' contracts made between the construction company and the subcontractors;
- building log: the original document and/or audio records of the inspection days;
- construction company shall keep the copies of such documents for 5 years according to the investor requirements;
- records about the initial training and provision for training of the investor operators of technical and manufacturing equipment;
- list of equipment specifying the guarantee periods and the list of guarantee conditions, guarantee certificates;
- list of equipment including the production numbers related to the backed electric circuits, emergency power supplies, diesel generation set, telephone exchange, data network, etc;

- list of delivered keys, magnetic cards, etc. used for the premises, including their production numbers;
- list of location of all main meters and sub meters, showing the consumption indicator reading, production number, branch and/or the measured part of the building;
- list of all subcontractors who participated in the construction, specifying the subject matter of delivery, and the contractor's declaration on word of honour he has tied the subcontractors to keep confidential all the client's technical, technological, and operational conditions.

Documentation handover by the production technology suppliers

The most problematic part of the operation permit documentation are documents from the production technology suppliers mainly if they are foreigners.

The technology is usually not manufactured and delivered from Slovakia and the technology project approved by building permit procedure is not the same as as-build technology project. If the technology assembled in the production plant does not correspond to the building permit documentation, it is necessary:

- Update the technology project from building permit stage and approve it by authorized body (technical inspection, TÜV Slovakia, etc.);
- Update the fire project for building and technology – approve it by fire authority;
- Apply for building permit change before the completion of the construction and receive new building permit see Attachment 5.2.

Documentation from technology supplier must include following items:

- label on the machine, serial number;
- CE-mark on the machine;
- document about checking of the working tool;
- declaration of conformity;
- electric scheme of machine's electricity and distributor's connection;
- revision report of machine's electric and distributor's electric connection;
- declaration of conformity for the distributor;
- schemes and test results of technology medium distribution piping (gas, steam, coolant water, compressed air);

- operation manual and maintenance manual;
- risk assessment and risk analysis report;
- first official test report of the electric equipment for the line and electric connection to the line;
- short circuit resistance report in place of line distribution board connection to the electric network;
- revision reports of pressure vessels class B and lifting equipment;

In the Table 12, you can find specific list of data necessary for technology project. This data should be done at least 3 months before application for operation permit.

Table 12: Specification of input data required for technology project elaboration

<p>1.0 Related technical documentation for all technology equipment in which must be mentioned:</p> <p>1.1 main technical figures</p> <p>1.2 energy requirements</p> <p>1.3 influence of the equipment to living and working environment</p> <p>1.4 noise level of the equipment</p> <p>1.5 vibration</p> <p>1.6 generation and characteristic of the emission</p> <p>2.0 Characteristic and amount of the technological filling for each equipment, including their safety documents (safety data sheets):</p> <p>2.1 gear box oils</p> <p>2.2 lubricants</p> <p>2.3 cooling emulsions</p> <p>2.4 welding and inert gases</p> <p>3.0 Drawing documentation for all technology equipment (layout, characteristic cross sections) in electronic *.dwg, *.dxf format</p> <p>4.0 Conformity Certificate issued by the manufacturer of the each equipment</p> <p>5.0 Detail technical documentation of each equipment/machinery including schema and characteristic of the electrical installation, pneumatic lines, hydraulic lines, distribution lines for technical gases. All documentation must be in Slovak language.</p> <p>6.0 Chemical and gas storages/storage areas</p> <p>6.1 amount and annual stored volume, annual consumption of chemicals, handling method, locations of each storage</p> <p>6.2 safety data sheet to each chemical</p> <p>6.3 gases, description of gas tanks, tank volume, kind of gases, handling method, storage areas</p>

Technology certification – general description

The laws and regulations of the Slovak Republic strictly control the safety conditions. There is a difference between sale of the machine on the market and introduction of the machine to the production. Selling the machine requires standard documentation and certification by manufacturer. Introduction of the machine to the production must be performed by the Slovak Authority – Technical Inspection of Slovak Republic (TI) or TÜV Slovakia (since January 2007) This process is called an inspection and as an output the final certificate is issued. The most important is that the final inspection process must be performed after installation. The subjects for inspection cover safety of mechanical area and electric area. Of course, it is impossible to check everything by TI. That is why there are revisions. The revision is a particular re-check process for exactly dedicated systems – electric systems, pressure vessels, lifters and gas systems that should be done by notified body. The output of revision is the revision report. The revision report usually contains the list of problems and these problems should be removed ASAP, otherwise it is not valid. This report is used by Slovak authority as a baseline document. Without revisions it is impossible to get a final certificate. There are many technicians for revisions on the market. The revision can be done also by Technical Inspection or TÜV Slovakia. All certificates will be used to get operation permit from regional Building office. Usually, the certified body or Slovak authority will find some problem which is in collision with the EU or Slovak regulations. Therefore, the supplier should be fully responsible for all revision processes. On the other side, the OEM technology supplier can choose certified body (technician for revisions) and also manage the Slovak Authority (TI or TÜV) by himself.

4.7.1 Problems, solutions and recommendations

The most occurring problems by construction company:

- as-build documentation is not according the executed works because change at site and not implementation to the drawings;
- incorrect numbering of the documentation.

The most occurring problem of production technology supplier:

- wrong CE: serial number of the machine has to match with the serial number on the certificate;
- missing schemes: schemes must contain data for machine and also for distribution box (DB) and scheme for DB must be stored directly in the DB;
- missing labels on DB, DB must have a label with all identification data and power characteristics;
- missing Slovak translation of documents, buttons and labels;
- all documents, buttons and labels must be in Slovak language;
- wrong colour of grounding cable (must an can be yellow-green);
- missing identification labels on both ends of cables and all labels must be visible;
- difference between the scheme and actual status of connection;
- missing plastic covers on inlets and outlets of transformers;
- missing identification data for transformers;
- wrong installation - sharp edges are touching cables, etc;
- missing short circuits resistance certificate.

4.7.2 Evaluation

- Communication with the state administration authorities ensures organization of the permission procedures within new building construction, reconstruction, modification of buildings is essential.
- Timely information to authority about planned new production technology installation, change or modification with impact on environment.
- Ensuring specified initial revisions, tests, special inspections of technology equipment including delivery of technology project elaborated by authorized designer.
- Cooperation with the technology supplier to review the new project's environmental impact and authority permission and to document this result.

In the Table 13, there are described significant penalty risks by the construction of production plant

Table 13: Most common risks and penalties during permission process

Process	Action	Legislative impact
Planning permit (PP) and Building permit (BP)	Building without PP or BP	Money penalty
Building inspection	Breach of the time limits and conditions of PP and BP	Money penalty
Measurements – (IPPC)	Breach of the rules Too high values of dangerous substances	Money penalty Risk of operation permit loss
Obligatory environmental reports	Reports missing	Money penalty

4.8 How to fulfil operation conditions and requirements set by authorities after getting permanent operation permit?

After receiving permanent operations permit investor has to start with regular monitoring of operation processes and investor report the results to various authorities.

Monitored and performed processes:

- collection, transit and disposal of waste;
- used amount of chemicals, materials and energies;
- operation of all environment facilities;
- water treatment plant and waste water treatment operation;
- external area maintenance;
- building and production technology maintenance.

In order to meet legal requirements, the investor who became the operator of finished building construction should measure below processes.

Analyze data and regular report to authorities:

- waste water treatment plant:
 - input of raw water into water treatment plant;
 - output of cleanable water from water treatment plant;

- input of drinking water;
- quality of chemicals into cleaning processes;
- quantity of produced sludge;
- parameters of quality at input/output from cleaning process;
- quantity of drain cleanable water per production;
- water treatment plant:
 - quantity of chemicals into process of water modification;
 - parameters of quality at input/output;
 - quantity measurement of water at input/output from modification processes;
- water consumption: quantity of water delivered in production;
- monitoring of underground water quality (primary and secondary monitoring);
- noise monitoring (noise study) and impact on surrounding environment;
- emission monitoring of pollutant exhausting into air, incl. greenhouses gases;

4.8.1 Problems, solutions and recommendations

In the Table 14, you can see the regular reporting by the production plant in Slovakia. The reporting matrix is used by Kia Motors Slovakia towards the authorities.

Table 14: Regular reporting related to production technology

Part	No.	Report name, concept	Reporting	Receiver
IPPC	1	Completely data about operation and pollution	Yearly	SHMU, SIZP
	2	Completely report regarding the IPPC conditions fulfillment, energies monitoring	Yearly	SIZP
Air pollution	3	Emission report – data about operation and emission calculation	Yearly Payment quarterly	SIZP, ObUZP
	4	Report regarding organic solvent using	Yearly	SIZP, ObUZP
	5	Yearly balance of solvent	Yearly	SIZP, ObUZP
	6	Data for National registry of polluters	Yearly	SHMU
	7	Data about operation of equipments with florid green house gases	Yearly	ObUZP
	8	Data about import of florid green house gases	Yearly	ObUZP

Air pollution	9	Data about production, import and export of equipments with florid green house gases	Yearly	ObUZP
	10	Report regarding amount of emission quotas	Yearly	ObUZP
Water	11*	Underground water monitoring results	Yearly	SIZP, SEVAK
	12	Waste water monitoring results	Yearly, Payment yearly	SIZP, SHMU
	13*	Rain water monitoring results	Yearly	SIZP, SEVAK
	14	Water consumption results	Yearly, Payment yearly	SIZP, SHMU
	15	Data for National registry of polluters	Yearly	SHMU
	16	Report regarding using of hazardous chemicals	Yearly	ObUZP
Waste	17	Waste amount and handling result	Yearly	SIZP, ObUZP
	18	Transport of hazardous wastes for previous month	Monthly	ObUZP
	19	Data for National registry of polluters	Yearly	SHMU
Packages	20	Packaging quarterly – import and export	Quarterly	ObUZP,RF
	21	Report regarding recycling limits fulfillment	Yearly	MZP
Batteries	22	Quarterly report – import and export	Quarterly	ObUZP,RF MZP
	23	Yearly amount of used batteries	Yearly	MZP
Products (under recycling Fund)	24	Amount of products, export, introducing to the Slovak market	Quarterly Payment quarterly	ObUZP,RF
ADR transport of hazardous chemicals	25	Yearly report about hazardous chemicals transport	Yearly	internal-for authority inspection
Information for public	26	Quarterly environment information for public	Quarterly	Company web site

Note: * Special requirement from Building permit – water company comment

Authorities explanation: SHMU – Slovak hydrometeorology institute, SIZP – Slovak Environmental Inspectorate, ObUZP – District Environment Authority , SEVAK- Water Company, RF – Recycling Fund, MZP – the Ministry of Environment Slovak Republic

4.8.2 Evaluation

- When investor receives operation permit and launch the production facilities, they are facing with regular works with local authorities. Reporting is an important part of factory processes, also announced or not planned inspections from relevant state authorities shall be expected, i.e. Labour office, Hygiene, Fire authority, Environmental authority, and others.

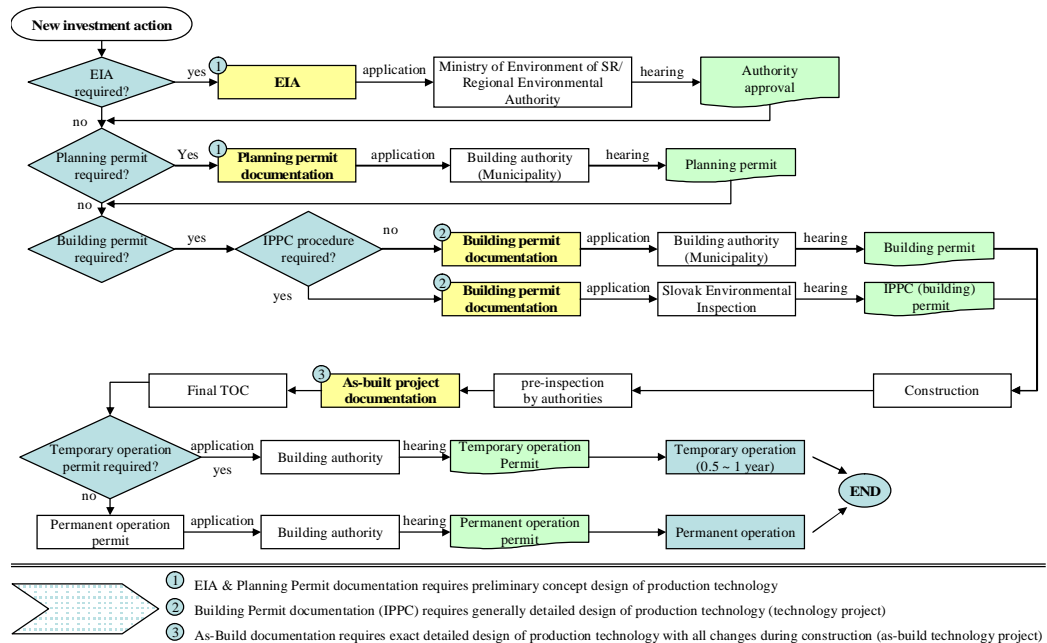
Below I would like to point out some of the most important activities related to authority work during temporary or permanent operation of buildings:

- if operator likes to use new chemical, they should confirm it with the Environmental office and update the IPPC permit if the plant is permitted under IPPC Act;
- permission from the Building office by new construction, building reconstruction, change and modification of production technology equipment;
- permission from the Building and Environmental office is usually needed in case of installation of new technology or its extension when containing new air pollution source, extension of storage for hazardous waste or chemicals, hazardous and flammable substances.

5. PRESENTATION OF THE RESULT OF THE MASTER'S THESES

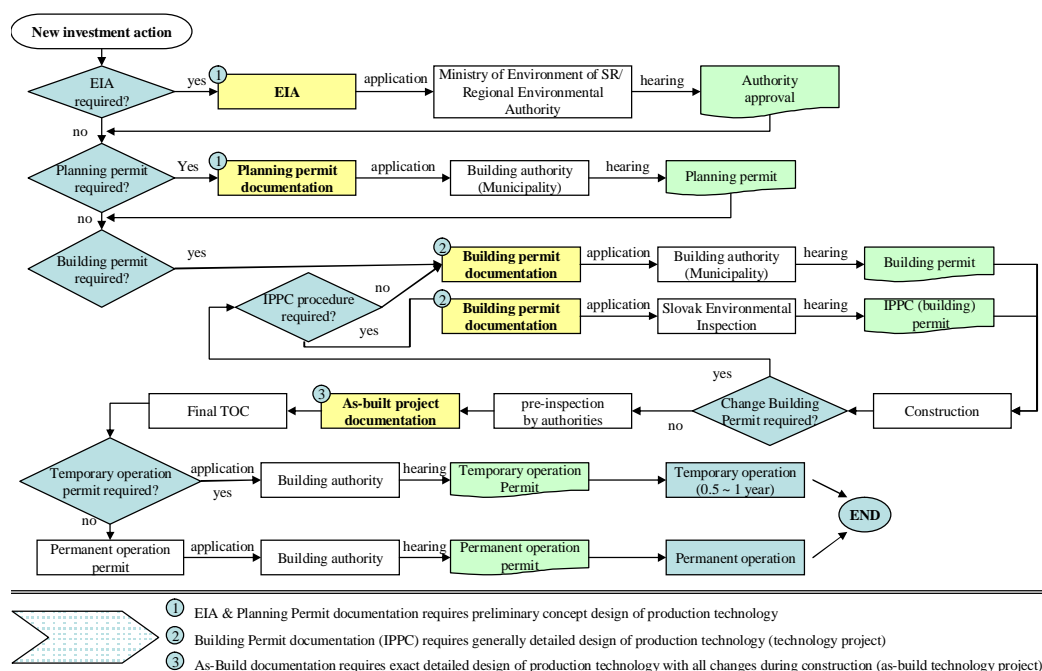
For the construction starting in Slovakia, it is necessary to fulfil many requirements from state authorities. In my Master Thesis, I was focusing on description of these procedures, simplified in Scheme 11.

Scheme 11: Standard permission procedure in Slovakia – (for more details see Att. 7)



Afterwards, I took the processes required by law and added one more step at the stage of construction. It is a step of change building permit before completion of construction works. I used the change building permit procedure to receive normal building permit first and after it to receive special building permit IPPC. By using of this procedure, it is possible to save min. 2 months during preparation stage, because the IPPC procedure is min. 2 months longer. You can see this new proposed procedure in the Scheme 12.

Scheme 12: Proposed permission procedure in Slovakia – (for more details see Att. 8)

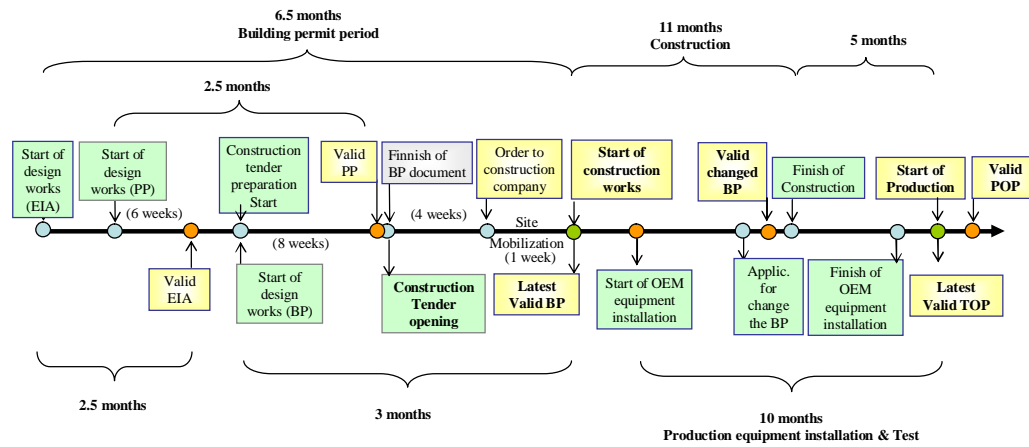


This time saving can be used only by the production plant which is handling under IPPC procedure. This plant has significant influence on the environment, for example operation of the paint shop or waste water treatment plant. However, this change of procedure must be approved by the IPPC building office before starting of design.

This procedure is more expensive approximately by 10% in design cost, because it is necessary to receive 2 building permits. However in the construction phase, it is usually necessary to apply for change building permit procedure before completion because of construction or production technology changes.

Regarding the production plant by which it is not necessary IPPC permit but standard building permit, as well by this procedure it is possible to have significant time reduction. This is possible by overlapping design works as described in Scheme 13 you can see the time schedule of the project with the approximate size of 30, 000 m² in Slovakia.

Scheme 13: Flow chart of time schedule from starting the design up to operation permit – (for more details see Att. 9)



By this overlapping of the design works, it is possible to save 2.5 months. By the EIA procedure, it is possible to save 2 weeks as well by overlapping of procedures because before the public hearing regarding intends report, the comments from relevant participant to expert revue could be implemented.

By the PP and BP procedure, it is possible to reduce twice a month because of possibility to apply for the PP (BP) in the same time before collection of the standpoints from relevant authorities. Up to the public hearing the investor can have all necessary standpoints, latest up to the issuing of PP (BP) by authority.

Without above overlapping of design works and procedures it would not be possible to reduce design time according to the law from 11.5 months to 6.5 months.

These procedures were approved by the construction of Kia Motors Slovakia plant and Kia is using them as well by construction of new Engine shop II.

Furthermore I prepared the time schedule in Microsoft project related to the permit matter from starting the design up to the POP which can by easily modify to another project and production plant construction see Attachment 10. With this file you can monitor the permit process to meet your required deadlines.

5.1 Theoretical contribution

- In order to prevent illegal constructions in Slovakia, according to my opinion there should be an open wide discussion among public and the government sector. Current state of building law is very outdated (Building Act is dated to year 1976 with additions) and cannot meet requirements of both foreign and domestic investors. On the one hand, government has high intention to invite a new foreign investor with the view to future economic development, but on the other hand the country offers old and bureaucratic legislation (see Chapter 4.2).
- Therefore, a private sector – for example automotive industry in Slovakia – shall comment new building law and related legislation and find appropriate and effective solution focused on shortening of the permission procedures in case of new green-field construction.
- In my work, I have proposed simple and well-tested procedures each for obtaining permits and also I have outlined the possibility of shortening the permission procedures, which can be used to develop new legislation.
- According to my opinion, the new building act should clarify the permitting procedures for foreign investors, in particular shortening the time periods required to issue permits by authorities, not only to tighten penalties for its violation – it should be balanced for both sides.

5.2 Practical contribution

According to my 8-year experience with many various investment projects I will summarize practical contributions of my Master Thesis below:

- Identification and explanation of possible problems during permission procedures with Slovak authorities with clear solutions for investor which should be taken in the early stage of investment planning (see Chapters 4.1, 4.2).
- Description and development of understandable schemes elaborated according to the laws, which are not clearly expressed for foreign investor (see att. 2, 3.1, 3.2, 5.1, 7).

- Stating new alternative solutions according to permission processes from pre – construction stage up to operation permit stage (see Chapters 4.6, 4.7).
- Finding solutions for the shortening of permission schedules and also cost saving methods by management tools during organization of the construction projects (see Chapter 5).
- Elaboration of MS Project general permission schedule from pre-design period up to operation permit with alternatives which is an easy tool for foreign investor with lack of knowledge of the Slovak law, also possible to modify according to various type of construction projects (see Att. 10)
- Preparation of the summary of requested data related to each permission procedure to be completed by the investor and providing general designer for proper design execution.
- During a plant operation, the company has to report many data to the state authorities which I summarized into one clear matrix (see Table 14).

5.3 Critical discussion

Throughout Slovakia, we can see prime examples of illegal constructions that were built without a building permit, or other clearance. This state of affairs was mostly due to the fact that the law in this area was too weak, imposing just fines and on rare occasions ordering the removal of the construction.

In my Master Thesis I was focusing on reducing the time by receiving the building permits. According to the Slovak legislation it is difficult to reduce the time without stepping to the risk of illegal construction. Because of that more than 50% of started constructions ran without a valid building permit. This is caused by the legislation which is not every time clear and also by the authorities who are not following the law based dateline to issue the decision. However, in the law there is stated maximum days to reply. Mostly in Slovakia the authorities are delaying with the decision by lack of manpower and ability. The investor does not have another chance only to agree with authorities and have limited rights to object. For the future it

would be necessary update the building law according to the latest requirements and find the solution to reduce the illegally started constructions.

This year, the government wants to change this situation by amending the Building Act and respective penal codes so as to class illegal construction activities as a crime, with possible jail sentences. Afterwards, of course the authorities could open the doors for bigger corruption.

5.4 Outlook

In the future, it could be interesting to compare the procedures from another countries of EU as well the procedures in the countries of USA, China or South American countries. However, in Slovakia the procedures are still changing, in example the IPPC procedure is in use less than 10 years and the environmental matter are becoming more important. On the other hand, the construction of the small buildings which have not serious influence to the environment should be considered to construct more easily and without so much bureaucracy. Law and norms in the EU as well in Slovakia are changing and this has influence on permission procedures.

The acceleration, improvement and clarification of the permitting process would certainly contribute possibility of an electronic information system for submitting application for permits under the Building Act, but also other permits, for example EIA, water construction permit, air pollution source permit, etc.

This plan would require long-term planning but including poll involvement of the private and public sectors so that the resulting effect will be benefit not a complication for foreign investors.

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- Scheme 4: Simplified scheme of EIA (proposed variant)
- Scheme 5.1: Intent – Small EIA:
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- Scheme 13: Flow chart of time schedule from starting the design up to operation permit

ATTACHMENTS

- Attachment 1 : Scheme 2: Generalized EIA procedure in Slovakia
- Attachment 2 : Scheme 4: Simplified scheme of EIA (proposed variant)
- Attachment 3.1: Scheme 5.a Intent – Small EIA:
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- Attachment 9 : Scheme 13: Flow chart of time schedule from starting the design up to operation permit
- Attachment 10 : Microsoft project time schedule from starting the design up to operation permit