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Municipal Infrastructure Support Programme

●●● Building together for the future

Program podrške razvoju infrastrukture lokalne samouprave

●●● Gradimo zajedno za budućnost



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RISK MANAGEMENT

Impacts upon Project

Time, Quality and Money





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WHAT IS RISK?

“An uncertain event or condition that, if it occurs, has a positive or negative effect on at least one project objective such as time, cost, scope or quality”

(PMBok® Guide - Project Management Institute, USA)

Positive



.....Less than Positive





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WHAT IS RISK?

Risks are not always negative. They can also have positive results.

A positive risk is often called an “Opportunity”

For example

You need to arrive at airport on-time, and you need to travel through the rush hour traffic. You leave home well in-time, but it is touch and go. However, there is a football match that evening, and it is likely that the traffic will be very thin – possibly because most people are staying indoors to watch the match



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WHAT IS RISK?

A good rule of thumb is to assume that
“everything matters.”

Richard Thaler (an American Economist)



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RISK BACKGROUND

- Risk is unavoidable and is present in almost every human situation;
- It is present in our daily lives, public and private sector organizations;
- Risk refers to uncertainty that surrounds future events and outcomes. It is the expression of the likelihood and impact of an event with the potential to influence the achievement of an organization's objectives;



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RISK BACKGROUND

- Certain information about project cost, execution and schedule may not be entirely known until the project is underway;
- Emerging risks that can be identified early in a project and that are likely to impact upon the project at some stage are often termed as “Known Unknowns”;
- These risks can be mitigated with a good risk management process;
- For those risks that cannot be identified early in a project, a good risk management process will also assist the project management team;



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RISK BACKGROUND

- Most projects involve a certain level of risk, but those involving construction and engineering very often have more serious implications, either technically, financially or both
- Some years ago, the UK Department of Trade and Industry, identified that for construction and engineering projects in the UK:
 - 40% were late in being completed;
 - 50% were over budget;
 - 30% failed to meet the expectation of the users



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RISK BACKGROUND

Risks are greater:

- The longer the project lasts;
- The longer the time period between preparation of the project and starting work;
- The less experience the organization , ot its team members have with similar projects;
- The newer the project's technology



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COMMON GENERAL PROJECT RISKS

a) Staff Risks:

- Key staff will not be available when needed;
- Key skill sets will not be available when needed;
- Staff will be lost during the project.

b) Equipment Risks:

- Required equipment will not be delivered on time;
- Equipment may fail;

c) Beneficiary's Risks:

- Resources will not be made available when required;
- Staff will not make decisions in a timely manner;
- Deliverables will not be reviewed according to schedule;
- Experienced staff will be replaced with less experienced staff;



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COMMON PROJECT RISKS

d) Scope of Work Risks:

- Requirements for additional works will arise;
- Changes in scope will be considered to be incl. in the Project;
- Scope changes will be introduced without the knowledge of project management.

e) Technology Risks:

- The technology will have limitations that may endanger the project;
- Technology components may not be easily integrated;
- The technology is new and not well understood;



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COMMON PROJECT RISKS

f) Delivery Risks:

- The system will fail to meet functional requirements;
- System capacity requirements are greater than available the capacity

g) Physical Risks:

- The offices will be damages or destroyed by fir, flood or other disaster;
- A computer virus will infect the development system;



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WHAT IS RISK MANAGEMENT?

A structured approach to identifying, assessing and controlling risks that emerge during the course of a project. Its purpose is to support better decision-making through understanding the risks inherent in a project and their likely impact;

(Dept. of Finance, Ireland, National Public Procurement Policy Unit)



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WHAT IS RISK MANAGEMENT?





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WHAT IS RISK MANAGEMENT?

- Not hope. Hope is not a strategy;
- No single point estimate of cost or schedule can be correct;
- Cost, Schedule, and Technical Performance are inseparable;
- Risk management requires adherence to a well defined process;
- Communication between all parties is the most important factor for success.



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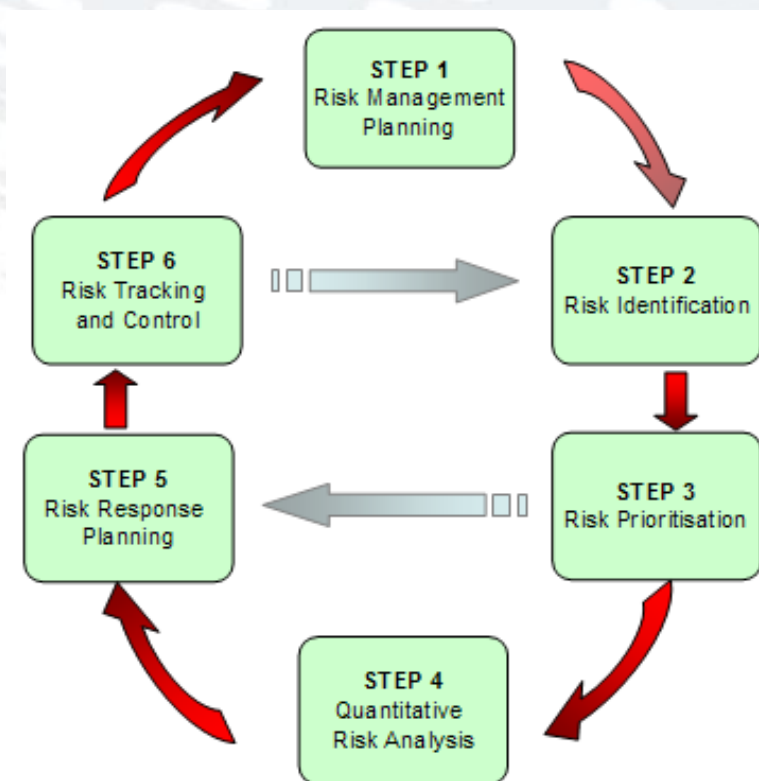
WHAT IS RISK MANAGEMENT?

- Risk management should be considered as a full-time activity to be implemented and monitored throughout the life-time of the project implementation;
- Someone should ideally be the “owner” of the risk and the process of the entire risk management
- Risk management is not an activity that is performed only once and then forgotten about. Risks do not just disappear, they are always there, even if they are mitigated, avoided or resolved.



WHAT IS RISK MANAGEMENT?

- ❑ Include as part of the Project;
- ❑ Identify Risks early in the Project;
- ❑ Analyse & Prioritise;
- ❑ Clarify Ownership;
- ❑ Plan and Implement Responses;
- ❑ Track Risks;
- ❑ Communicate;
- ❑ Document – Risk Register;





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WHAT IS RISK MANAGEMENT?

- ❖ For the implementation of many projects, most of the initial risks will be associated with the Beneficiary and those who prepare the project feasibility study and/or Tender Documents;
- ❖ During implementation of the resulting contracts, the risks become more related to the activities of the Contractor, Supplier or Service Provider and the possibility that he may be unable to deliver that for which he was contracted to do, or not deliver the results to the right quality level.
- ❖ The Control tools are usually the Contract Documents, incl. Specifications, Conditions of Contract etc.



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WHAT IS RISK MANAGEMENT?

- ❖ **Examples of risks that are likely to occur on many IPA projects would include the following:**
 - Accepted contract amount is too low to satisfy the expected contractual requirements;
 - lack of capacity of the contracting parties;
 - key staff are not made available to the contract;
 - inexperienced or unsuitable personnel are deployed on the contract;
 - the focus of business activity is shifted to other contracts;
 - deteriorating financial situation after contract award;



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WHAT IS RISK MANAGEMENT?

- ❖ Other risks which may be outside of the Contractor's, Supplier's or Service Provider's control could include:
 - Contracting Authority (CA) being unable to meet its contractual obligations;
 - CA's failure to arrange planning, building or other necessary permits, if it is required to do so under a Works contract;
 - Substantial price increases in labour, plant or materials;
 - Poor contract management by the CA;



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WHAT IS RISK MANAGEMENT?

- ❖ fundamental changes to the requirements of the Beneficiary/CA, resulting from, for example;
 - changes in legislation;
 - identification of errors in technical specification, the result of which may have serious scheduling or financial implications for both contracting parties;
- unforeseeable circumstances arising, of any nature;
- *Force majeure*



DELAY RISKS - TENDERING

- Type of tendering procedures used;
(*Open/Restricted/Negotiated Procedures, Framework Contracts*)
- Type of Works Contract
(**FIDIC** - *Employer or Contractor Design Responsibility*)
or
(**PRAG** - *Contracting Authority Design or Contractor Design*)
- Contracted Time for Completion is too short;
- Contractual disputes b/w Contracting Parties;



RISKS RELATED TO PROCUREMENT STRATEGY FOR WORK CONTRACTS

a) Responsibility for design:

Contracting Authority	Contractor
<i>FIDIC Red Book</i>	<i>FIDIC Yellow Book</i>
<i>PRAG Design & Build Contract</i>	<i>PRAG Unit Price Contract</i>

- b) Serbian legislation presents a number of complications with regards to Design Build Contracts, where the responsibility for design rests with the Contractor.
- b) This is especially the case for FIDIC Yellow Book and PRAG D&B Contracts.



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RISKS RELATED TO WORKS CONTRACTS

- a) Should be clearly identified in the Contract Terms and Conditions;
- b) Should not be unreasonably biased towards the Client. If so, this would likely be taken into account by the Contractor at tender stage and he would include such risk in his price. Result, increased tender amount and contract price.
- c) Contractor fundamentally carries the commercial risk related to providing the Works in accordance with the Contract Requirements, for the Contract Sum and within the stated Time for Completion.



EXAMPLES OF PROBLEMS ENCOUNTERED

EXAMPLE NO.1

- a) Final Design of the Works, and relevant Construction Permit, was not available by the Beneficiary or Contracting Authority (CA), at the time the tender was launched;
- b) Tender was launched and tender prices were received from tenderers based upon a Bill of Quantities that was not totally reflective of the actual works required;
- c) Contract was signed by CA with winning tenderer;
- d) During finalisation of the Final Design, numerous issues were identified that were different than those upon which the tender was launched and the contract was signed;



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EXAMPLES OF PROBLEMS ENCOUNTERED

EXAMPLE NO.1

- (e) Delay by the Beneficiary of around 10 months in providing all completed and approved Final Designs and related Construction Permits to the Contractor;
- (f) Due to this delay, the Contractor submitted a claim for additional costs in excess of € 1,000,000 due to the problems;
- (g) Who pays for Contractor's claims if they are assessed to be correct?



EXAMPLES OF PROBLEMS ENCOUNTERED

EXAMPLE NO.2

- a) Tender Documents were prepared, based upon a Feasibility Study (FS) which had been prepared, based upon advice and info. from the Beneficiary on various connection and P.E. rates for a WWTP;
- b) Reality of the FS assumptions at construction stage was different;
- c) Reduced connection rates might compromise the operations of the WWTP and limit testing of the executed Works by the Contractor, due to reduced inflow wastewater;
- d) Lack of available funding by the Beneficiary, who had planned to fund the assumed FS connections FS, reason for reduced connection rate;



EXAMPLES OF PROBLEMS ENCOUNTERED

EXAMPLE NO.3

a) Technical Specifications were:

- not clear or consistent within themselves between all sections of the Technical Specs. on issues related to relevant standards and building regulations ;
- Inconsistencies between Serbian legislation and the TS create problems with most Contractors and lead to claims (*additional time and costs*)

b) Claim from Contractor for delays of more than 1 year and in excess of € 1 million for associated costs;



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EXAMPLES OF PROBLEMS ENCOUNTERED

EXAMPLE NO.3

c) Beneficiary must have a role in reviewing and approving Technical Specifications to check possible discrepancies that may be included by authors who are less experienced with relevant Serbian legislation.

Beneficiary MUST have a role in reviewing and approving Technical Specifications.



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QUESTIONS AND ASSISTANCE

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Thank you for your attention!