

Training of farmers V4 in techniques  
for environmental protection and soil  
water management.

---

Project ID 22020162

- 
- Visegrad Fund
- 
-

# Way out



- In 2018, a group of universities solved a successful project funded by the Visegrad Fund.
- Outputs in written and electronic form were displayed on the project website for free download.

# Project goals



- The aim of this project is to disseminate information about the results of the above project to the widest possible target group.
- The project will be implemented through a web application, which will contain multimedia professional lectures and other relevant information in electronic form.
- These materials will be drafted in all V4 national languages.

# Target group

- Visegrad Fund

This project is specially designed for both small and medium-sized agricultural enterprises and large agricultural companies.



# Applicant

- Visegrad Fund



**Slovak University of  
Agriculture in Nitra,  
Slovak Republic**

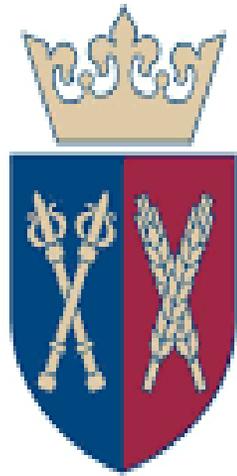
# Project partner No. 1



● Mendelova  
● univerzita  
● v Brně  
●

**Mendel University in  
Brno,  
Czech Republic**

# Project partner No. 2



**UNIwersytet Rolniczy**  
im. Hugona Kołłątaja w Krakowie

**Uniwersytet Rolniczy  
im Hugona Kollataja  
w Krakowie,  
Polish Republic**

# Project partner No. 3



**Hungarian University  
of Agriculture and  
Life Science,  
Republic of Hungary**

# Use of project management tools in improving water management in the soil.

---

Pavel Máchal

Brno, 10.06.2021



- 
- Visegrad Fund
- 
-

# Představení lektora



**Pavel Máchal**

**Institute of Lifelong Learning**

**Mendel University in Brno, Czech Republic**

- **Certified Senior Project Manager IPMA<sup>®</sup> Level B,**

- **Certified Program and Portfolio Management Consultant IPMA<sup>®</sup> PPMC**

# Lecture Structure

---

- Introduction
- The article
- Discussion and conclusion

# Introduction

---

- Today, a large part of one-off work in the form of projects is carried out in companies and other organizations.
- These projects are often a crucial part of a company's strategic management. Whether or not they are the basis of the strategy, they occur everywhere.
- The goal may be the rapid commercialization of a new product or service, the development of new software, the modification of a process or procedure, etc.

# Introduction

---

- In summary, a project is an organized effort to achieve a certain goal.
- This is no different when implementing projects related to improving water management in the soil.
- The aim of this lecture is to acquaint students with the basic concepts and methods used in project management.

# The article



- A project can be defined as an activity that is limited in cost and time, and whose goal is to achieve a set of defined benefits (the extent to which project objectives are met) according to appropriate standards and quality requirements.
- Projects are also characterized by other attributes such as originality, complexity, legal restrictions, interdisciplinary teamwork, work sharing as an activity and as a result.

# Project

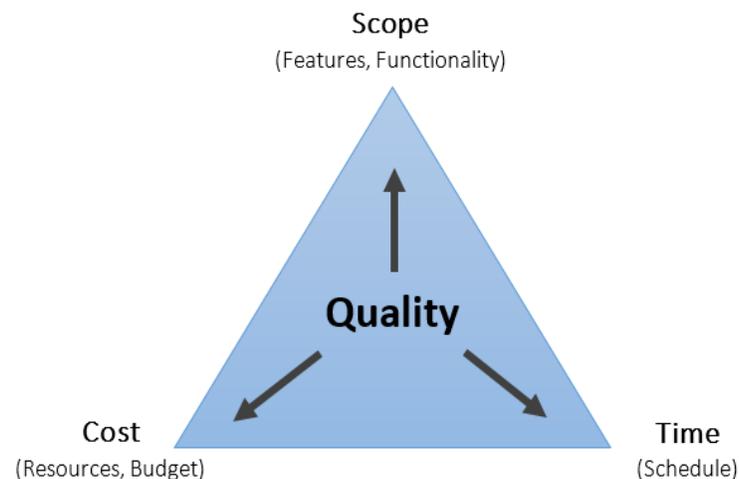


- There are four typical features of projects that, when found together, distinguish project management from other management activities. The projects have:
  - three-dimensional target,
  - are unique,
  - include resources and
  - are implemented in an increased risk environment.

# Triple Constraint



- Projects have a three-dimensional goal, which means meeting the material implementation requirements at the same time, the timetable (they have a beginning and an end) and the budget costs. We call this the "Triple Constraint".



# Triple Constraint



- Successful project management requires that these three conditions be measurable (ie concrete and verifiable) and achievable.
- It is really extremely important that the people working on the project know how to meet the goals of the Triple Constraint.

# Resources

---

Projects are implemented using human and material resources.

The project manager has minimal control over many of the required resources.

For example, IT people control the autonomous tractor.

# Resources



- The project manager must organize human resources well in order to use the available material resources.
- They then have to deal with various difficulties and emotional problems that naturally result from the use of these resources and at the same time try to meet the requirements of the project sponsor while respecting the time schedule and budget.

# Project programs



- The project program consists of a set of interrelated activities, which together achieve a number of goals within one overall strategy.



# Project programs



- It usually consists of a project of corporate or institutional strategies.
- To achieve them, the organization establishes a group of interconnected projects to deliver the products and benefits needed to achieve the goals, and defines the organizational changes needed to better achieve this strategic change.

# Project portfolio



- A portfolio can be defined as a set of projects and programs that do not necessarily have to be merged and that have been merged to manage, coordinate and optimize the portfolio as a whole.
- The portfolio is usually managed by the portfolio manager, who informs the organization's management about all important matters at the portfolio level.

# Project portfolio



- Management of material dependencies between projects
- Data common to multiple projects
- Resources (workers) who are working on several projects at the same time and whose capacities must therefore be shared between them
- Mechanism for allocating resources to projects

# Project portfolio



- Creation, maintenance and development of company-wide standards, including sample products (project outputs)
- Deciding on the launch of specific projects
- Development environment and other infrastructure common to several projects

# Project Office



- The activities in the portfolio need to be provided with resources that do not belong to a single project, but rather perform a common management and support function for all projects.
- A so-called project office is being created, which oversees the course of all projects, coordinates them, supports them and ensures the necessary standards.

# Technical competencies

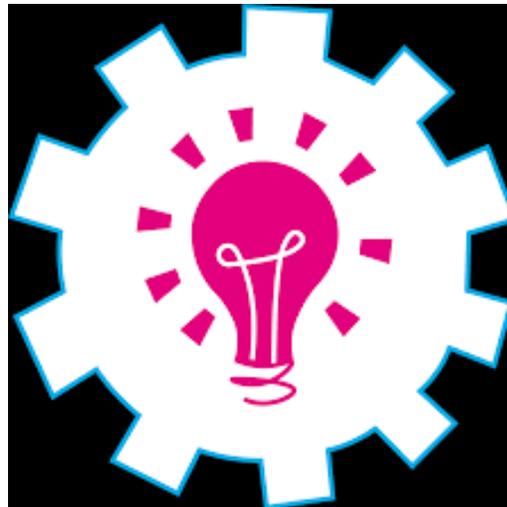
---

- The activities in the portfolio need to be provided with resources that do not belong to a single project, but rather perform a common management and support function for all projects.
- A so-called project office is being created, which oversees the course of all projects, coordinates them, supports them and ensures the necessary standards.

# Project benefits



- It is therefore necessary to be very aware of the purpose of project management, which lies in the benefits that project management represents for a company that implements and uses it in its practice.



# Project benefits



- Increasing certainty in achieving goals
- Cost reduction
- Shortening deadlines
- Effort saving
- Making loans available
- Possibility to participate in foreign contracts
- Access to finance from European Union programs

# Organizational structures of the project



- Project management is an aid in overcoming the problems that today bring the classic line hierarchical organizational structure, which still prevails both in our countries and abroad.

# Organizational structures of the project

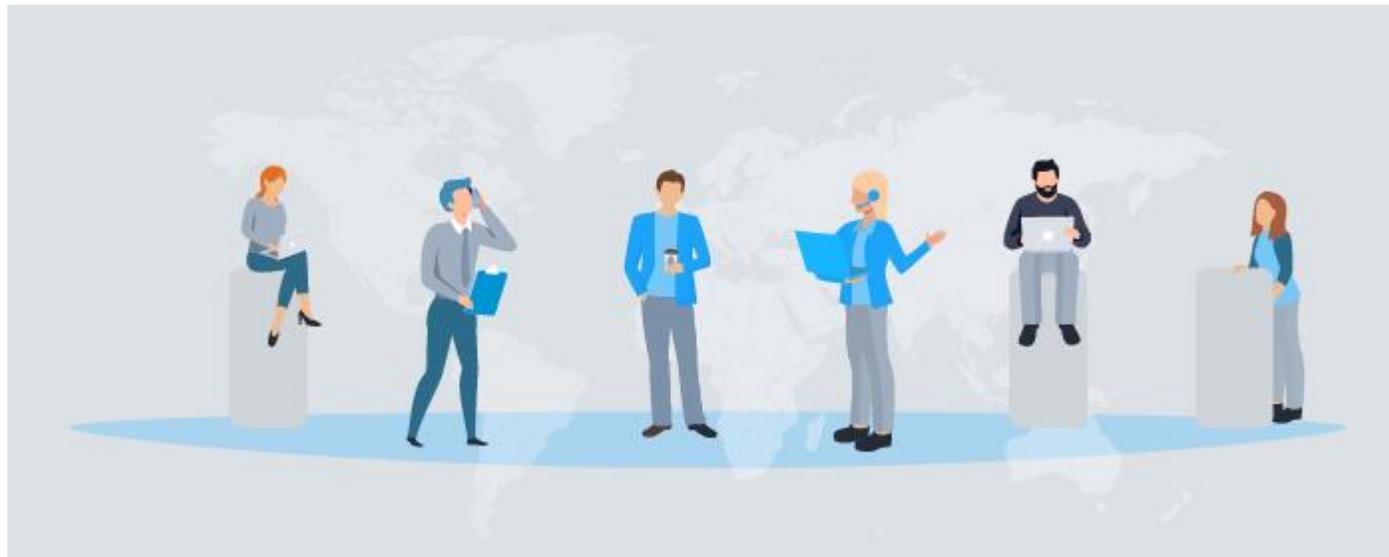


It is about overcoming such problems as:

- long communication chainstime
- loss in complex communication
- distortion in internal communication
- the occurrence of a ping-pong effect, where when solving problems, the departments constantly pass on an unresolved problem to each other.

# Stakeholders

- The term „Interested parties" is an officially defined ISO term (ISO 14000 series).
- The term "Interested parties" is synonymous with the term "stakeholders".



# Stakeholders



- The terms "client" and "customer" are also commonly used to identify stakeholder subgroups, which are people or groups who are interested in the performance or success of a project, or who are affected or limited by the project.
- The task of the project manager is to identify all stakeholders, identify their interests and determine the order of importance of both in relation to the project.

# Project requirements, strategies and goals



- Project requirements are always based on customer needs.
- These are formulated by their needs. A project plan is created, from which a business case, project and project strategy will develop.
- If we build the project on foggy requirements, it will lead to permanent changes in the better case, to the suspension of the project in the worse case.

# Project requirements, strategies and goals



- The strategy is a summary of all the decisive intentions within the project.
- From the very beginning, it must reflect all internal and external aspects that affect the feasibility of the project.

# Project requirements, strategies and goals



- The objectives of the project should be defined in such a way that their fulfillment clearly ensures the intention of the project, and they should be formally (and if necessary) and materially improved during the project as needed.
- They usually form a hierarchy of objectives, which should, however, be completely transparent to all project participants.

# Risks and opportunities



- Risks and opportunities within the project are defined as uncertain cases or possible situations with a negative impact on the overall success of the project, partial results of the project or events provided by it, which may cause unpredictable damage.

# Risks and opportunities



- In general, the risks and opportunities associated with acyclic (non-recurring) events and their management are always greater than for cyclical (recurring) events.
- The risk of damage associated with late product launch or commissioning of an infrastructure element with excessive budgetary costs, in low quality and class, is more complex.

# Types of risks

---



- Business risks.
- Technical - technological risks.
- Force major risks.
- Risks of human failure.
- Security risks.
- Financial risks.

# Risk management



- Hazard identification – i.e. determining which hazards could affect the project,
- elaboration of hazard scenarios – i.e. determination of what adverse events may occur and subsequently documenting their characteristics.



# Risk management



- hazard assessment - assessment of hazards and their links in order to determine their impact and the likelihood of their occurrence,
- creation of anti-risk measures - creating a response to defined risks,
- risk monitoring - responding to changes in risks during the project.

# Quality



- The term quality is defined as a set of characteristics of an entity that affect its ability to satisfy defined and anticipated needs.
- Quality is a ubiquitous feature of any object, phenomenon, process and activity.
- The quality of products and services not only affects consumer satisfaction, but also has more serious consequences for the prosperity of businesses and the overall standard of living in society.

# Quality

• Visegrad Fund

- Quality management is generally defined as a set of systematic activities necessary to obtain sufficient assurance that necessary and desirable products or services will perform a function with specified or generally recognized quality parameters.



# Project organization



- The project organization is flat, in comparison with the line-staff organization less hierarchical, with a lower organizational level.
- Mostly two-stage, only for large projects, disaggregated into subprojects, three-stage.
- It is open, it is not a complex of precisely defined tasks and corresponding groups.

# Scope and outputs of the project



Completion of work on the project in principle means achieving its goals.

It systematically combines two processes:

- ensuring tangible and intangible project outputs and their acceptance by the client,
- documenting and transferring all knowledge from the course of the project life cycle.

# Scope and outputs of the project



- The scope of the project defines the boundaries of the project.
- If the boundaries of the project, program or portfolio are not properly identified, and if additions or unfinished work are not properly documented, the situation around the project tends to spiral out of control.
- From the point of view of stakeholders, the scope of the project includes all outputs and deliveries of the project.

# Scope and outputs of the project



- Defining the scope of the project is helped by the project structuring technique - WBS (Work Break Structure).
- The project solution gradually develops within the scope of the project from the initial concept of the project to the final deliveries, and this development is captured in documents that define the project outputs in greater and greater detail as the knowledge gradually deepens during the project.

# Handover of material outputs of the project



- The handover of the tangible outputs of the project usually takes place according to a certain procedure, agreed by the customer and the supplier in the work contract or proposed by the project manager.

The goal is:

- handover of product documentation, test reports, inspection reports,

# Handover of material outputs of the project



- 
- final assessment of the financial situation (final calculation),
  - final report and project documentation,
  - list of open questions and finishing works,
  - list of claims, requirements, items.

# Conclusion



- The implementation of the project takes place either in the sense of its conscious use, systematization and improvement of existing practices, or it is a new implementation associated with a reorganization towards a project-oriented organization.

# Conclusion



- In a particular company or institution, it is appropriate to understand this intention as a project of an organizational nature, which will be implemented in standard steps.
- It should include, among other things, the implementation of a selected pilot project, on which the introduction of project management should be fine-tuned.

# Conclusion



- 
- If we want project management to be truly efficient and effective, it must fit well into the business environment in which it is conducted.
  - Project management must be linked to the overall strategy of the organization.

# Conclusion



- This management is actually designed to enable the implementation of the organization's strategy.
- Project management must be in accordance with the standards and guidelines in force in the social field.

# Conclusion



- These standards include organizational, legal, financial and economic aspects, human resources, sales and marketing aspects, as well as information and communication technologies (ICT).

# Conclusion and contact for discussion



## **A word from the author of the lecture at the end**

- This e-learning lecture aimed to acquaint experts in agriculture who specialize in problems associated with water management in the soil with an introduction to the issues of project management.
- Due to limited resources, whether financial or human, lack of time, there is a tendency in this area to use the form of management, which allows us to project management.
- His knowledge therefore becomes essential for managers in all areas of their professional activities.

## Contact for discussion:

- Pavel Máchal
- Zemědělská 5, 613 00 Brno, Czech Republic
- [machal.pavel@gmail.com](mailto:machal.pavel@gmail.com)