



# Politechnika Wroclawska

## SOFTWARE PROJECT IN MANAGEMENT

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# Contradiction and change management



# CONTRADICTION MANAGEMENT

- The implementation of the project is influenced by many factors that may threaten the success of the project.
- One of them is a conflict of interest, which can be defined as follows

*a dispute between two or more parties*



# TYPES OF CONFLICT OF INTEREST

- contradictions concerning the scope of the project / product type,
- financial contradictions,
- schedule contradictions,
- contradictions regarding measures,
- organizational contradictions,
- contradictions between partners,
- communication contradictions.



# CONTRADICTIONS CONCERNING THE SCOPE OF THE PROJECT / PRODUCT TYPE

- They occur when the final goal of the project (scope) or one of the key components that resulted from it (the product) is questioned by the shareholder, project member or partner.
- Implementation of a new computerized financial management system: financial management includes accounting functions, 'creditors' account, 'debtors' account and financial reporting, but does not include payroll or purchasing functions.
- Products:
  - financial management software,
  - computer equipment - one server and 10 workstations,
  - training.



# CONTRADICTIONS CONCERNING THE SCOPE OF THE PROJECT / PRODUCT TYPE

- Contradictions can apply to both scope and products.
- Example:
  - *Not included financial management computer system of budgeting issues in the description of the scope of the project, may cause doubts whether this element include, or not to the scope of the project.*
  - *The product list may not contain "modifying the spreadsheet" in order to use more advanced techniques in the field of accounting and reporting.*



# CONTRADICTIONS CONCERNING THE SCOPE OF THE PROJECT / PRODUCT TYPE

- Even properly defining the scope of the project and products does not protect against different interpretations.
- Products :
  - Scope: creditors account handling function. The finance department may interpret this wording as also referring to the electronic receipt of transfers via the Internet, while the software manufacturer / seller may interpret it as a function not included in the specification.
  - Products: the training can be interpreted as training all employees, while the manufacturer / seller can interpret the training as five days of training on all aspects of software management in financial management for a maximum of ten participants.



# FINANCIAL CONTRADICTIONS

- They appear when the costs of the project's component exceed the original draft budget and find no source of financing.
- In the event of unforeseen expenses in the project budget, the consent of the persons supervising the implementation of the project is required, and in many cases this requires the approval of the project financing unit.
- This leads to delays in project implementation, which may mean the need to change its scope and redefine products.





# FINANCIAL CONTRADICTIONS

- Example:
  - The costs of new parking spaces, which were planned to spend around \$ 2 million, will increase significantly if the number of parking spaces increases from 250 to 325 vehicles.
  - An increase of 75 seats may entail additional costs of 600,000 dollars, which exceeds the originally established reserve for unforeseen expenses about 20%.
  - In the face of such a dramatic increase in costs, decision makers may recommend discontinuing the project or dismissing those responsible for preparing the original budget.



# SCHEDULE CONTRADICTIONS

- Situations when the expected duration of a certain phase, activity or task is prolonged and threatens the timely completion of the project
  
- Example:
  - the introduction of a new computerized financial management system must take place after the end of a given financial year and before the beginning of the next.



# CONTRADICTIONS REGARDING MEASURES

- Personnel assigned to carry out a given phase, activity or task fail to comply with their obligations.
- Example:
  - an employee may be given the task of designing a multi-level car park, requiring experience in the field of spatial planning and construction, while he only has experience in the field of spatial planning.
  - Assigning specific tasks to people who do not have the appropriate qualifications not only delays the implementation of the project, but can also lead to low-quality products.



# ORGANIZATIONAL CONTRADICTIONS

- They often result from a double hierarchical subordination of people involved in the project.
- Example:
  - The project employee responsible for defining the requirements for the new financial management system identifies "project scope conflict". It consists of the lack of explicit determination of the need to support the "budgeting" function by the program. This employee reports this to his direct supervisor in the project, who ignores attention. In connection with the above, the employee informs the project manager, who acknowledges the validity of his remark. Therefore, the project manager organizes a meeting with the participation of all persons involved in its implementation in order to develop a procedure for solving problems arising from contradictions regarding the scope of the project.



## PARTNERSHIP CONTRADICTIONS

- An organization external to the organization does not provide the necessary support in the implementation of the project.
- Example
  - The company orders a project for the design of multi-family residential buildings. The terms of the order are set out in the contract, but during the implementation of doubts about specific issues.
  - Therefore, there is a need to clarify the contract, which requires time and results in delays in the implementation of the project and may lead to a change in the scope of the project and the amount of its implementation costs.



# COMMUNICATION CONTRADICTIONS

- It occurs when the dialogue between project participants has collapsed or when important data about the project that should be communicated to other project participants has not been effectively communicated.
- Example
  - A communication contradiction may occur if the organizational unit involved in the project is not notified of a change in its implementation schedule.
  - Not knowing this delay, the finance department can not prepare an emergency plan involving, eg. the use of old software or old systems over the next two months.



# PRIORITIZING CONTRADICTIONS

- There are two factors to consider in the process of prioritizing contradictions: urgency and validity.
- Urgency refers to the time perspective in which the contradiction must be resolved.
- Validity is the degree of impact on the proper implementation of the project.



# PRIORITIZING CONTRADICTIONS

- In order to determine the validity of a given contradiction, it is necessary to analyze the degree of its possible impact on the project in terms of:
  - project plan,
  - costs
  - time frame,
  - functionalities,
  - project team,
  - public collection.





# CONTRADICTION ASSESSMENT PROCESS

Description	High	Average	Low
Project plan	The project plan should be changed thoroughly	The project plan should be modified	Minor changes to the project plan are necessary
Costs	The costs of the project will exceed its budget by 20%	The costs of the project will exceed its budget by 10-20%	The costs of the project will exceed its budget by 10%
Functionality	Key products will not be prepared	Some products will not be prepared in the previously specified way	Less important products will not be finished, but they can be prepared at a later date
Project team	It will be necessary to employ more qualified employees.	It will be necessary to employ several additional qualified employees	It will be necessary to employ two or three additional qualified employees
Social reception	Negative articles in the national press	Criticism in the local press	Several people will criticize the project



# CONTRADICTION SOLVING

1. Understanding the contradiction and its impact on the project.
2. Assigning individuals to responsibility for resolving contradictions.
3. Specifying the deadline to resolve the contradiction.
4. Monitoring and reporting on progress in resolving contradictions.
5. Escalation of contradictions.
6. Negotiating the solution of contradictions.



# TRACKING CONTRADICTIONS

- Objective: to ensure that each contradiction is subject to serious analysis and is resolved in due time.
- Every contradiction has its own life cycle. First it is identified, verified and recognized as a significant contradiction, then it is presented in the forum of the conflict resolution team and finally resolved.
- Monitoring of contradictions can be achieved by using very simple tools supporting office work, e.g. a text file or spreadsheet, or new software applications.



# TRACKING CONTRADICTIONS

Record of project contradictions: \_\_\_\_\_ (Project name)

Author: \_\_\_\_\_ (Project manager)

Last update: \_\_\_\_\_ (Date)

No.	Identification date	Description	Priority	Status	Responsible person	Actions taken	Term
		Type: Description: The most important consequences:					
		Type: Description: The most important consequences:					
		Type: Description: The most important consequences:					



# CHANGE MANAGEMENT

- Change management consists of two basic elements:
  - Version control
  - Tracking errors and changes
- IT projects are becoming more and more complex, last longer, require effective and well coordinated cooperation of a team of specialists.
- One of the most basic ways to improve communication in a team is to use versioning tools for source code of programs, documentation and any other files created during the production of the product (e.g. graphics, user manual, etc.).



# CHANGE MANAGEMENT

- Version control allows you to track changes made by individual team members, allows, if necessary, to restore previous versions of the software, allows you to block access to selected resources so that two or more people do not modify the same file at the same time, which can have undesirable consequences



# CHANGE MANAGEMENT

- Another way to improve team work is to use a tool to track errors and changes in the project.
- It is obvious that software during its life cycle, from the early stage, through the system building stage, to the implementation of subsequent versions to the customer will change.
- The key thing is the application lifecycle management, which guarantees that the reported error or new requirement will not be "lost".



# CHANGE MANAGEMENT

- The introduction of change management procedures in the project results in increased team productivity. Everyone knows what to do, what's more, you can evenly distribute the work load, because you know who has how many tasks assigned. In addition, the use of appropriate tools makes the creation of all reports and summaries very easy - they can be generated at the touch of a button.
- On the other hand, the customer is also satisfied because there is a clear mode for reporting bugs or requests to supplement the product with new functionality. It is known who at a given stage of the work deals with a specific notification, who should inform the client that the work has been completed and a new, improved version of the product is available.