MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS

BUSINESS PLANNING IN TOURISM

Guidelines for the training

for Bachelor's (first) degree students
of speciality 242 "Tourism"

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The methodical aspects of the organization of the training form of learning in the process of preparing specialists of the tourism industry are presented, namely: the structure and content of the training session, independent work of students within the framework of the training schedule, forms of control and criteria for evaluating the effectiveness of the training.

For Bachelor's (first) degree students of speciality 242 "Tourism".

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Introduction

The acquisition and testing of skills during the learning process is an integral part of successful employment of future graduates; the ability to act quickly and make informed decisions under uncertainty and an increased market risk is a requirement for qualified professionals in the field of tourism.

The essence of training as a way to enhance learning in higher education consists in helping students to create and develop complex skills needed for a particular practice. The concept of training is based on the fact that the most effective learning is ensured only if the participant has mastered practical implementation of certain actions.

The target audience of the training are fourth-year students of the bachelor degree. The training contains 40 hours of classes, of which 8 hours are devoted to practical sessions and 32 hours to laboratory work (usually 10 days, 4 hours a day).

The purpose of the training is to form professional competences which a bachelor of tourism should have.

The basic professional competences of the bachelor of tourism are:

the ability to create a high-quality, competitive and secure tourism product for the needs of the domestic market and foreign consumers, to choose and combine the elements of tourism services;

the ability to use information technology in the creation and implementation of tourism products;

the skills in selecting the best way of selling tourism services, studying consumer markets, planning marketing activities and coordinating information flows at small and medium tourism enterprises;

the ability to adapt, display creativity, generate ideas and take action in a new situation;

the ability to use information and communication technologies to search, process and analyse information from different sources;

the ability to work in a team and cooperate during the execution of tasks.

1. The goal, the task of the training and the competences to be formed

According to many experts, the competitiveness of a graduate student in the labour market depends not only on his/her knowledge of the subject area and the mastery of typical operations that form business processes of a certain kind of activity, but the initiative, capacity for self-learning, responsibility and ability to make decisions under uncertainty. Each training course should provide a semantic unit, after mastering of which an applicant gets an overview of the state and prospects of the industry functioning, the categorical apparatus used in the practice of management and in scientific research, a list of fixed features and technologies that make the process of development, production and sale of a product (tourism products and those of related industries), and practical tasks of different complexity – from typical pre-established clauses to case studies and analysis of a real situation which a professional faces during practical activities. The block of practical tasks forms a complete set of competences – separate ones for subjects and integrated ones which in turn define the knowledge and skills of future professionals in the tourism industry and require, in addition, the implementation of a multidisciplinary approach.

The competences that are formed during the training "Business Planning in Tourism" relate to the competences formed within the subjects "Economics of Recreation and Tourism", "Organisation of Tourist Trips", "Management and Marketing of Tourism", "Information and Communication Technologies in Tourism" and others which, in turn, relate to the competences of the speciality "Tourism".

The goal of the training is to develop the system of competences for students in the field of management of the processes of creation and implementation of tourism services at tourist enterprises and organisations, prioritisation of tasks and optimisation of resources.

The list of competences on the academic discipline in terms of the training theme and the description of bachelor's qualification characteristics according to the National Qualifications Framework are given in Table 1.1.

Table 1.1

The qualification characteristics that Bachelor's degree students should have after the training "Business Planning in Tourism"

Knowledge	Skills	Communication	Autonomy and responsibility
Basic knowledge of the theory of enterprise management	The ability to build an optimal organisational structure of a tourist company depending on specific activities	The ability to hire the staff, allocate tasks between the departments of a company and individual employees	Providing total control over the tasks within a project, resolving problem situations that may arise during the team work
Basic knowledge of the theory of process management	The ability to simulate standard business processes, identify different types of resources needed to perform project tasks	The ability to allocate resources and responsibilities between the participants in a project at each step (task), to draw up a schedule of control measures	Coordinating business processes within a tourist enterprise/organisation
Improving knowledge of the organisation of tourist trips and the development of elements of tourism services	The ability to select and substantiate the list of tourism services included into the final product, identify customer requirements for the quality of services	The ability to conduct the analysis of the external environment of the subject of tourism, determine the influence of interested parties (stakeholders) at different stages of the project	Interacting with various stakeholders in the tourism market, building a strategy of cooperation with the most influential actors of the external environment of tourism businesses/ organisations
Basic knowledge of business planning	The ability to develop a business plan using established templates, choose the most appropriate presentation tools depending on the type of a tourist product	The ability to represent the results of the company's own developments to potential customers, investors, direct executors	Evaluating the social and economic impact of the implementation of the company's own business proposals

In order to achieve the goal of the training and ensure the participants' acquiring the key competences it is necessary to fulfil the following tasks:

1) to select a tourist product to be developed, determine the features of its design and implementation in the market;

2) to determine the strategic goal of the project of creating a tourist product;

3) to select resources required for the project;

4) to identify the key processes that ensure the development and implementation of the tourism product;

5) to determine the optimal structure of a tourist enterprise / individual structural units that will participate in the creation of the chosen tourist product, to calculate the number of performers and the fund of the working time;

6) to schedule the work and allocate the resources;

7) to write a short business plan;

8) to describe the main tasks and phases of the project using specialised applications;

9) to perform the final report on the training.

2. The organisational and general structure of the training

At the beginning of the training, the participants should be familiarized with the rules of work in the classes and computing centres, the requirements to the tasks, the content of the final report and the evaluation system.

The programme of the training "Business Planning in Tourism" provides 40 hours divided into 10 days, 4 hours per day (1 800 minutes in total). Table 2.1 shows the programme of the training sessions.

The maximum number of points that a student can receive during the training equals 100. A student must gain at least 60 points for the final test. As a result of the final report defence, each student receives individual assessment, which consists of the following components:

20 % for the evaluation of the project developed by a small group of participants (individual projects are not evaluated);

15 % for the evaluation of the labour participation factor within a small group;

65 % is provided by the lecturer evaluating the part of the final report for which the student as a member of the small group is directly responsible, and individual tasks.

Table 2.1

The organisational structure of the training

Tasks	Type of activity	Duration, minutes
1	2	3
Lesson 1. Practical session ***The aim is to choose a tourist product for development and implementation by each group of participants***		
1. The task is to get familiarized with the rules of the training, the general requirements and structure of the final report, the evaluation system, competences that are obtained during the training session, the schedule	Presentation, visual aids	15
2. Defining the expectations of the participants in the training	Tests, discussion	15
3. Observing the variants of tasks, the choice of the tourist product (the type of tourism) to be implemented. Forming project teams	Presentation	15
4. The business game "Defining the requirements of potential consumers of tourist products": a cross survey of the participants in small groups about the requirements for the proposed range of tourist services, developing a template of a questionnaire	Working in small groups	20
5. A report of each participant on the result of the previous survey, identifying competitive advantages and disadvantages of the tourist products which the participants have selected for implementation	Presentation, discussion	15
6. Formulation of a brief summary of the business plan of creating a tourist product. Homework "An interview with a star"	Individual work	10
Lesson 2. Practical session ***The aim is to build an optimal organisational structure of a tourist enterprise/ organisation and make appointments to the key posts***		
7. Discussion on the theme: "Basic requirements to a specialist in tourism". A minilecture on the theme "Regulation of employment in tourism: the experience of Ukraine and the world"	Discussion, a minilecture	10
8. Discussion on the theme: "Advantages and disadvantages of typical management structures. Requirements to foreign representative offices of travel agencies"	Visual aids	10
9. Drawing the organisational structure of a tourist enterprise or its departments, most appropriate for the implementation of the developed product	Working in small groups	15
10. Determining the list of requirements for key positions in accordance with the developed management structure. Designing a template of an advertisement for vacant positions (the number is determined by the total number of students in the academic group)	Individual work	10

Table 2.1 (continuation)

1	2	3
11. Determining the type of specialists by the Belbin test	Tests	30
12. A business game "Forming a project team". Preliminary appointment to positions according to the Belbin test results	Working in small groups	10
13. Reviewing the typical resume forms and job sites. Homework: preparation of a resume according to the declared vacant positions	Presentation	5
Lesson 3. Practical session ***The aim is to determine the strategy of implementation of a tourist product***		
14. The final formation of the teams. Planning the expansion of the head office and creation of subsidiaries based on the resumes of all students in the academic group	Working in small groups	20
15. Introduction to the methods of formulating strategic goals and describing a product brand developed by the Gazelles consulting	A minilecture	5
16. Preparing a description of sales strategies, filling in the template forms	Working in small groups	20
17. Presentation of the work of small groups. Critical analysis of proposals	Discussion	20
18. Correcting the business strategy and brand characteristics of a tourist product based on customer requirements (the members of other teams), developing a brand name, a slogan and a logotype	Working in small groups	25
Lesson 4. Practical session ***The aim is to determine the types of resources needed to create and implement a tourist product***		
19. The principles of creating an ideal company. The test "Rockefeller Habits Checklist". Checking the consistency of the stated principles with the national business environment	Test, discussion	15
20. Introduction to the most common classifications of resources taken in project management. Defining priority goals and objectives of the project, requirements for the structure and content of a business plan (according to the method of R. Abrams, the EBRD and other recommendations worked out for small and medium enterprises)	A minilecture, visual aids	20
21. Mapping of stakeholders. Determination of the external and internal environment of a tourist company that affect its effectiveness	Working in small groups	15
22. Evaluating the external environment of a tourist enterprise, analysing target markets, their trends and prospects, describing a company, risk mapping, developing a marketing plan and a sales strategy	Working in small groups	40
Lesson 5. Laboratory work		
23. Introduction to the interface and basic modules of Gantter software	A lecture, presentation	90

Table 2.1 (continuation)

1	2	3
Lesson 6. Laboratory work		
24. Definition of main stages and goals of the project of development of a tourist product. Filling in the project properties, drawing the Gantt chart, creating the user calendar	Working in small groups	90
Lesson 7. Laboratory work		
25. Allocation of resources for the tasks (work with the module "Resources"). Identification of risks (work with the module "Risks"). Appointment of resources and risks, testing the workload of resources. Calculating the total cost of the project, the amount of required resources	Working in small groups	90
Lesson 8. Laboratory work		
26. Setting the control points of the project. Exporting control points to an external file, integration with online calendars. Placing external links and inviting other members to view the project. Reviewing projects of other teams	Working in small groups	45
27. Export of the completed project. Project description for the needs of stakeholders, potential users and investors	Working in small groups	45
Lessons 9 – 10. Laboratory work		
28. Filling in the template of a business plan, electronic forms, if necessary, adding links to external recourses inside the chapters	Working in small groups	180
Lesson 11. Laboratory work		
29. Introduction of the process approach to management, methodology, description of business processes	Presentation, lecture, working in small groups	90
Lesson 12. Laboratory work		
30. Introduction to the interface and basic modules of Ramus Educational software	Presentation, working in small groups	90
Lesson 13. Laboratory work		
31. Building a model of the business process "Creation and implementation of a tourist product" based on the standard IDEF0	Individual work	90
Lesson 14. Laboratory work		
32. Analysis of the selected data domain of business process modelling: defining objectives, inputs, outputs, control actions and mechanisms of a business process, the components of a process and subprocesses	Individual work	180
Lesson 15. Laboratory work		
33. Building models of business processes of a chosen data domain using Ramus Educational software. Drawing contextual diagrams	Individual work	90

Table 2.1 (the end)

1	2	3
Lesson 16. Laboratory work		
34. Building models of business processes of a chosen data domain using Ramus Educational software. Drawing diagrams of functional decomposition	Individual work	90
Lesson 17. Laboratory work		
35. Building models of business processes of a chosen data domain using Ramus Educational software. Drawing diagrams of functional decomposition	Individual work	90
Lesson 18. Laboratory work		
36. Making a presentation and preparing a report	Individual work	90
Lesson 19. Laboratory work		
37. Defining criteria of effectiveness for business plans of creation and implementation of a tourist product. Composing a questionnaire for external experts using Google Forms (or a similar tool)	Individual work	90
Lesson 20. Laboratory work		
38. Presentation of results (presentations of small groups on their business plans)	Presentation, discussion	45
39. Evaluation of the quality of business plans via questionnaires in Google Forms (each student evaluates at least 2 projects, the distribution is done through the draw, members of a small group cannot assess their own project)	Individual work	30
40. Summary and session completion	Feedback (questioning the participants)	15
Total		**1800**

3. The guidelines for doing the tasks

The task "An interview with a star". Imagine yourself in 5, 10, 15 or 20 years – the period which, in your opinion, will be sufficient to complete the desired career. Determine which achievements were the most important to you during this period, what experience you want to share with others. Imagine that you are giving an interview to a famous magazine, which publishes articles devoted to the life of celebrities – scientists, artists, politicians, businessmen and others. Write an article about yourself in the format in which you would really like to see it in this edition. What questions would you ask yourself? What pictures would be posted to the public? Would any secrets appear that you would protect from strangers?

Once the article is finished, consider to which extent you are ready now to translate your dreams into reality. What knowledge and skills do you already have and what do you need to learn? Try to make a plan of action to achieve the level of success that you have noted in the interview (an example is in Annex 1, but you can use any other method).

The task "Building a team" (based on the Belbin test). The distribution of roles and powers within a newly created team, whose members do not have enough information about the professional qualities and abilities of each other, is often made through psychological tests. The main purpose of testing is to identify the strengths and weaknesses of each employee, the contribution he/she can make to a joint project, activities where he/she can achieve the greatest success – both personal and corporate. Identifying psychological types can also prevent the occurrence of disputes and misunderstandings in the team if the manager realises which employees work better together, and which should not be united in groups because they unconsciously dislike each other. Different types of people are needed for various tasks, so depending on the life cycle of a project, the workload may be distributed unevenly among the team members (in reason of course), but it does not cause discomfort and internal conflicts because each employee is involved in the work which he/she knows the best.

After analysing the results of individual testing (Annex 2) each group allocates the roles for the project based on the recommendations in the test keys, and determines which roles have remained unoccupied and the responsibilities which should be distributed between all group members.

Based on his own research, the British scientist Raymond Meredith Belbin identified eight types of team roles performed by the person depending on individual characteristics and traits: Coordinator, Shaper, Plant, Monitor-Evaluator, Implementer, Resource Investigator, Completer-Finisher, Team Worker (some contemporary researchers identify one extra role, a Specialist).

The test "Team roles" by R. M. Belbin will determine the native roles of each person in a team, and the roles people would rather give up to perform. According to the theory of Belbin, the perfect manager is one who combines all the advantages of the above-mentioned types of roles and thus is deprived of their shortcomings, but such workers do not exist in real life because of contradictory personality characteristics. But what cannot be done by one person can be successfully executed by a team whose personal characteristics encompass the qualities necessary for the implementation of all 8 roles. This does not mean that the group should consist necessarily of eight different

people. Everyone can combine several roles, but usually no more than 2 – 3 main functions. The complete role structure provides a basis for effective team work in general. Table 3.1 shows the comparative characteristics of 8 psychological types.

Table 3.1

Comparative analysis of team roles by R. M. Belbin

Team role	Typical features	Positive qualities	Acceptable disadvantages
Implementer	Conservative, binding, predictable	Organisational skills, practical common sense, hard work, self-discipline	Lack of flexibility, resistance to new ideas
Coordinator	Calm, self-confident, self-controlling	The ability to understand and use any logical proposal without prejudice; purposefulness	Not higher than average intelligence and creativity
Shaper	Intense, competitive, dynamic	Energy and readiness to challenge inertia, ineffect-iveness, complacency and self-deception	Easily provoked, irritable, restless
Plant	Thinking seriously and unorthodoxly	Talent, imagination, intelligence, knowledge	Dreamy, forgetful, prone to ignore the practical details and formalities
Resource Investigator	Extroverted, cheerful, sociable enthusiast	The ability to communicate with people and learn new things; the ability to respond to challenges	Tends to lose interest immediately after the initial enthusiasm has passed
Monitor-Evaluator	Sane, calm, cautious	Prudence, thoughtfulness, fairness	No inclination or ability to motivate others
Team worker	Prone to communication, soft, receptive	The ability to adapt to people and situations; the ability to build the team spirit	Indecision in crisis situ-ations
Completer-Finisher	Diligent, organised, conscientious, cautious	The ability to monitor performance and bring the case to the end; pursuit of excellence	The tendency to pay excessive attention to detail, the reluctance to limit to the satisfactory instead of the best

Executing task 14. When it is possible to use the potential of all students of the academic group and the results of psychological testing are supplemented

with resumes, the small group should try to complete a staff of an enterprise with the most effective use of human capital. Before starting immediate work on the business plan of creating a tourism product, self-assessment of the formed small groups as project teams should be conducted using the following template (Fig. 3.1):

<table>
<tr><td>Advantages (strengths) of the team</td><td>Areas of activity where the team will achieve the greatest success</td><td>Disadvantages (weaknesses) of the team</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td colspan="3">Self-assessment of each team member</td></tr>
<tr><td colspan="2">How can I benefit the group:</td><td>What tasks would I avoid:</td></tr>
<tr><td colspan="2">1.
2.
...</td><td>1.
2.
...</td></tr>
</table>

Fig. 3.1. **A template of self-assessment of the team**

The task "The project strategy description". Each small group chooses a tourist product, the implementation of which will be the main theme of the business plan. It is advisable to limit, firstly, the geographic distribution (the extent of the potential consumer market) to a single town or district. Tourism types and the range of services should not be repeated within the academic group.

After selecting the tourism product, the team has to describe the strategy of the project in one or two sentences. Usually two strategies are formulated – a so-called "internal" strategy (real actions and beliefs that provide a profit and the existence of the company) and an "external" one (often used in marketing activities to appeal to consumers and investors or the general public).

The authors of the technique [3] distinguish 7 issues of building a successful strategy:

1. What words should occur to the target audience when they hear a company/project name?

2. What are the main consumers of the product? What are the three main promises a brand is giving to them? What indicators can confirm that the company keeps these promises?

3. Guarantees that the promise will be fulfilled.

4. Is it possible to write down in a single line the strategy that customers will probably dislike, but which is crucial for the revenue and leadership in the competition?

5. Is it possible to name 3 – 5 unique characteristics of the product?

6. An X-factor as a factor that provides a competitive advantage of 10 or even 100 times. Does it bring profit?

7. Do we set any global goal?

Along with the strategy, it is necessary to identify the key competence – in other words, what you can do better than others so that:

competitors may fail to copy it;

it can be used for many products and in many markets;

it enhances the impression of the end users of goods and services and enhances their value to customers.

Examples of forms to describe the strategies are given in Annex 3 [3].

The task "The analysis of stakeholders". No company can operate without interaction with the environment. Foreign companies, NGOs, governments and individuals can have a positive or negative impact on the company, and the interests of all parties which are somehow related to the project must be considered. The key issues are:

Who is involved in the project?

What are the goals/interests of each party?

Who supports the project and who prevents from its implementation?

Who has a strong impact on the project?

Also an entrepreneur should be aware that his/her activities influence the environment directly or indirectly causing various social, environmental and economic impacts with positive and negative traits. Therefore, a preliminary analysis of stakeholders should be done from two perspectives: what use a business activity can bring to the environment and how it can be damaged, and vice versa, how the external environment can stimulate or restrain the implementation of the proposed activities set in the business plan. The following scheme may be used for this purpose (Fig. 3.2). Each arrow shows the direction of the impact.

A detailed description of the external influence can be provided by using Table 3.2.

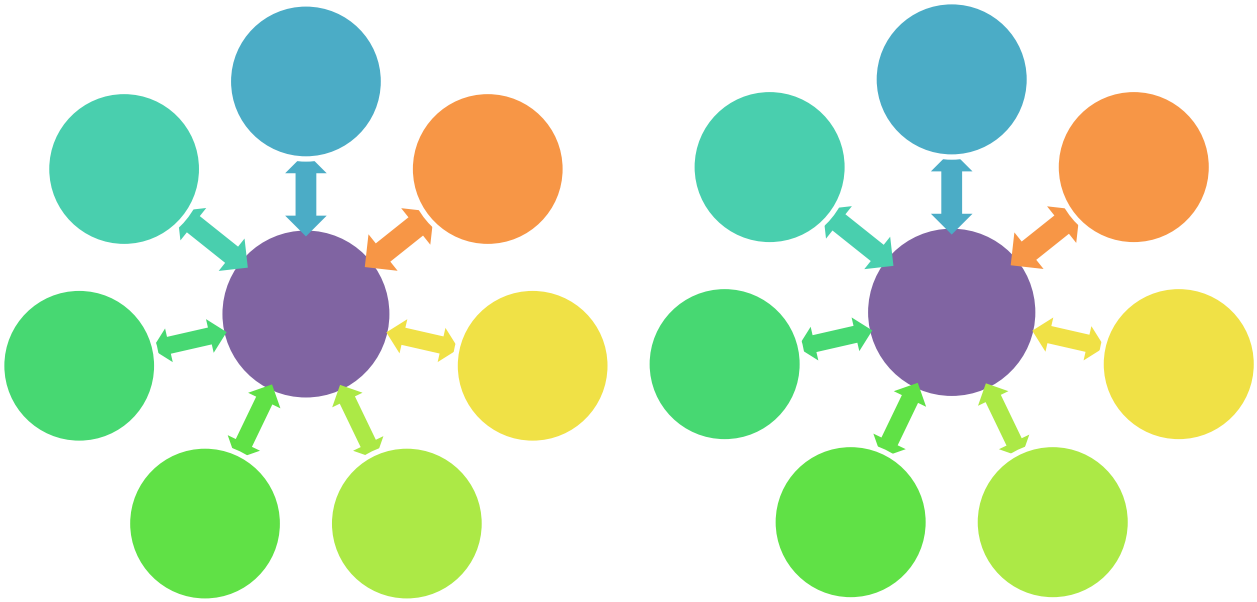

Fig. 3.2. **The analysis of the stakeholders' impact**

Table 3.2

The description of stakeholders

No.	Company / personal name	Expectations from the project	Expectations of the project participants as to this stakeholder	The negative impact on the project	The positive impact on the project	The importance of the stakeholder	Measures to be taken (methods of cooperation)	Relation to other external actors	At which stages of the project the impact is the most significant	What works/processes/ steps are influenced the most
1										
2										
...										

The task "Development of the business plan". Project teams choose one sample among several business plan templates suggested by the lecturer. They will work with the chosen template for two weeks. It is recommended that its units be immediately distributed between the participants within a small group, but joint discussions of all tasks and activities are encouraged.

In order to correctly identify the activities and their frequency during the creation and implementation of the tourism product, you need to understand

what kind of work (tasks) are performed at each stage of the project preparation. All actions (tasks) should be divided into one-time and permanent ones (among them there are so-called part-time activities that occur on average once a month, quarter or year, that is quite a long period of time, such as the development of a seasonal marketing plan, internal quality control, a survey of loyal customers, etc.) (Fig. 3.3).

The author [2] believes that the three blocks shown in Fig. 3.3 are better implemented as separate mini business plans, which ought to be reviewed and updated constantly. The extended list of tasks inside the blocks includes:

I. The issues to be resolved in order to organize and start a new project.

II. The problems to be resolved to fulfil obligations to customers (i.e. to provide services for which they pay timely and accurately).

III. What should be done and what problems are to be resolved to get customers and orders to recoup costs and make a profit (or to achieve the main goal of the project – of course, non-commercial projects have different priority tasks).

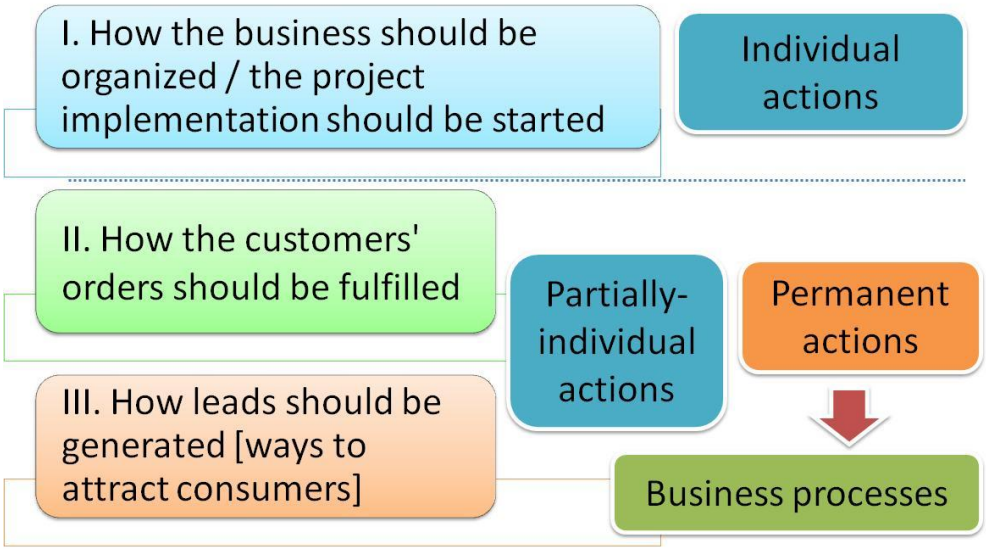

Fig. 3.3. **The definition of tasks before the business plan development**

The key points of a business plan are the following:

- The size of the initial investment.
- What is required, in addition to money, and how it should be provided.
- How long it will take to organize and run the project.
- Current costs of the project; monthly amount to cover the minimum necessary current expenses. Depending on what and in which way the running costs will increase with the business's growth rate or scale increasing.

- How and where the income is planned to be received. What products and services will be sold. Who may be the clients of the company? Where will these customers be and how should they be involved?
- When should selling be started? How many months it would take the company turnover to reach the breakeven point? To which extent will the initial costs increase during this period?
- If running the project and sales does not start as expected, at what point and under what conditions must the project be stopped (or even terminated)? How much will the total cost be at this moment? How can at least part of the investment be returned during the project liquidation? The size of the planned and maximally possible loss. Can a business owner / an investor afford these losses?
- The value of goods and services (in % share to variable costs) in the price list, including the purchase price/cost value. The volume of monthly sales required to reach the breakeven point.
- How long will the business execute the planned sales for the first time? What turnover will the company support then? What income will the owner receive?
- How soon will the business return the investment?
- What profit can the project bring after that? The planned annual income of the owners: in absolute figures and in % interest per annum on the cost of capital.

Planned costs for new projects are distributed into variable (the size of which depends on the volume of current operations) and permanent (those charged in any case, regardless of the turnover); single (e.g., investments at the stage of implementation of business ideas) and regular (those that should be paid several times during the period).

The main goal of the project must also be identified at the very beginning:

capitalisation – a company is created and developed for resale. The funds are spent to ensure the increase of the estimated cost of the business;

the maximum increase in the current cash flow – the purpose of financial management is increasing the gap between income and expenses as much as possible. As a result, operating profits of the company owners should boost.

The key financial leverage designed to increase profits includes:

1) price;
2) volume of sales;
3) costs;
4) operating costs;

5) receivables;
6) stocks / work in progress;
7) accounts payable.

The return (loss) of the project is determined as follows (Fig. 3.4):

Turnover – variable costs = marginal (gross) profit.

Marginal profit – fixed costs = net profit.

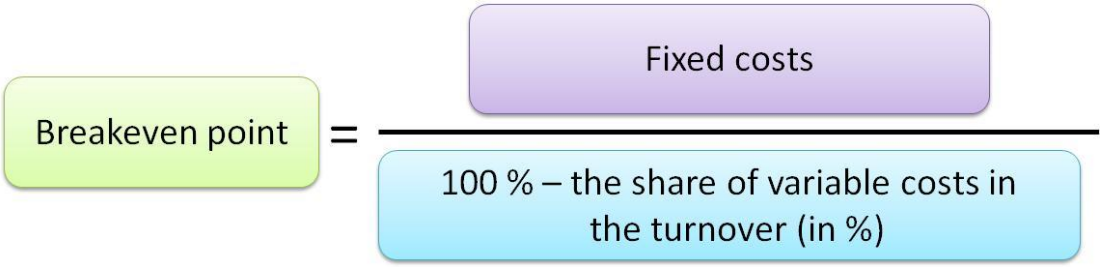

Fig. 3.4. **Calculation of the breakeven point**

Marginal profit equals fixed costs upon reaching the breakeven point of the project.

Techniques [1] (an example is given in Annex 4) may help to evaluate the readiness of the market to accept the proposed tourist products.

A summary of the business plan is formulated after determining the key indicators, describing tasks and allocating resources. Typically, the document size does not exceed 5 – 10 pages, some investors require that the key ideas of the project should be placed on one page.

The summary aims to show potential investors that:
the basic business concept makes sense;
the business itself has been thoroughly planned;
the management team is professional enough;
a clear-cut market exists;
the business incorporates significant competitive advantages;
financial forecasts are realistic;
investors or lenders will have an excellent chance to make money;
direct performers will continue to work on the project expansion.

A summary of the business plan is the only chance to arouse interest in the offer when lacking time for enhanced presentation, so it should be worked over very carefully. A sample of a brief summary is provided in Annex 5.

The task "Description of business processes". ***The key issues of the process approach to organisation management.*** The most full thesis of the process approach to management is contained in the international standards ISO 9000:2000 which specify requirements for a quality management system which can be seen as a guide to building an effective management system for any organisation.

Building business process models is a part of the process approach to organisation management. This approach provides the use of the system of related processes for resource and activity management at an organisation.

In accordance with the process approach, the category "process" means a stable and task-oriented set of related activities which transforms inputs into outputs valuable to the consumer by a certain technology. Usually the categories of a process and a business process are used interchangeably. The *model* is defined as a graphical, tabular, text, character description of a business process or their related set. *The business processes network of an organisation* is a set of interrelated business processes that include all functions performed at organisation departments.

The following methods are used in implementing the process approach to organisation management:

creating a network of business processes;

determining the owners of business processes;

modelling (description of) business processes;

regulation of business processes;

business process management based on the PDCA cycle;

audit of business processes.

The key issues in implementing the process approach to management are:

definition and description of existing business processes and the order of their interaction in the overall process network;

clear distribution of managers' responsibilities for each segment within the entire network of business processes;

definition of performance indicators and methods of their evaluation;

development and approval of regulations that formalize the system (e.g. regulations of processes implementation, job descriptions, department regulations);

resource and regulations management over detection of deviations or disparities in the product or changes in the environment (including changing customer requirements).

The main advantage of the process approach introduction in the organisation is the optimisation of the corporate management system, turning it into a transparent one that is able to respond flexibly to environmental changes.

The issues that are regulated in the process approach implementation in an organisation are:

the procedure for planning purposes and activities;

interaction between processes and departments of the organisation;

responsibilities and authorities of process holders and other employees.

Definitions that are used in the process approach to management. To manage the business process, it is needed to define the purpose, the process owner, resources, inputs that are transformed into outputs, and information flows.

The owner of the business process is the official who has the staff, infrastructure, software and hardware, information about the business process; who manages the business process flow and is responsible for the results and effectiveness of the business process.

Business process input is the resource required to execute the business process.

Business process output is the result (product, service) of the business process execution.

Resources are the information (documents, files), finance, materials, personnel, equipment, infrastructure, environment, software needed to perform a business process.

Indicators of the business process are quantitative and/or qualitative parameters that characterise the business process and its outcome.

The consumer is the entity receiving the result of a business process. Consumers may be:

a) internal – located in the organisation and using the results (outputs) of the previous business process;

b) external – located out of the organisation and using or consuming the result (the output of the business process).

Operation (work) is part of a business process.

The function is the area of activity of the element of the organisational structure, a group of similar operations performed on a regular basis.

Business process rules (business process description) is a document that describes the sequence of operations, responsibility, order of interaction between performers and decision-making on improving the business process.

Activities are undertaken by the organisation as a whole, a separate unit, a group of units or an individual performer. Therefore, the processes can be defined and described at different levels of specification, but it is recommended that processes should be defined starting from the top level, for the purposes of managing the organisation.

Processes should be grouped as follows:

1. Basic processes.
2. Supporting processes.
3. Managerial process.

Multiple methodologies are used to describe business processes. The most common methodology includes Business Process Modelling, Work Flow Modelling and Data Flow Modelling.

The IDEF0 standard. The US standard IDEF0 is the most widely used methodology of the business process description. The IDEF0 approach was developed on the basis of the SADT methodology of structural analysis and design. The design standard has not undergone significant changes since then. The IDEF0 methodology provides an analyst with opportunities to describe the business of an organisation at the upper level, with a focus on process management. The notation allows for representing the feedback of the process model: by information flows, by management, by movement of materials. Convenient mechanisms of the process model decomposition in IDEF0 simplify the analytics significantly.

The principles of business process modelling. A process block is designated as a rectangle on the diagram, the process name is placed in the centre of it. The name of the process is expressed by the verb (to select a tour, to pay the bill, to accommodate guests) or by a noun (gerund) formed from the verb which indicates some action (trip selection, paying bills, placing guests).

Inputs, outputs, influence and control mechanisms of the process are indicated on the diagram by arrows (Fig. 3.5).

Modelling should be started with the business process outputs, as they indicate the results of the business process and yield the most obvious parameters at the initial stage of simulation. For example, the result of the business process of the trip formation is this trip itself and the documents accompanying it (contracts with hotels, carriers etc.). The output arrow is placed to the right of the process block.

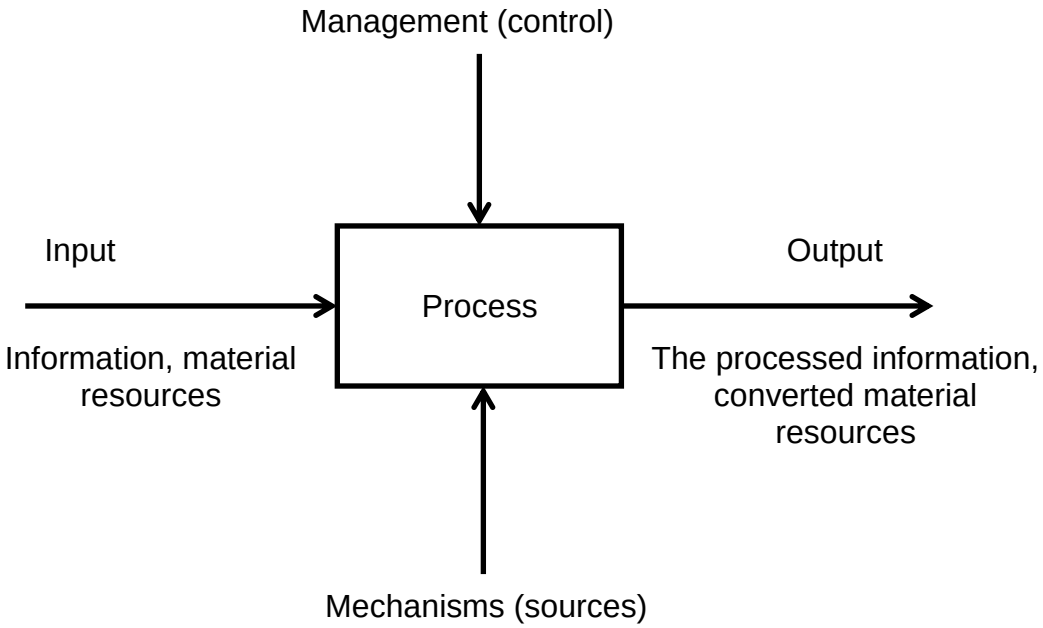

Fig. 3.5. **The business process diagram**

After determining the outputs of the business process, we suggest the inputs we need to get outputs – what information and material resources are to be transformed during the business process activity for the exit. The *entrance* can be oral information, sample information contained in the documents, documents and material resources. For example, in order to get a ready-made trip for the exit, we must have the options for accommodation, sites to visit, deals with carriers, information about the value of their services, and so on. The input arrows are placed to the left of the process block.

After determining the inputs and outputs of a business process, control actions are defined. This arrow on the diagram is called *business process management*. These are documents regulating the course of a business process. They may be regulations, national standards, the enterprise strategy, internal methodology of implementation of the business process. For example, a tourism organisation is always guided by the law "On Tourism". The control arrow is attached from above to the process on the model diagram.

The arrow attached to the process from the bottom is called *mechanisms* and shows who is executing the process. However, the mechanisms include not only human resources but also information systems and other support, which is performed using the process. For example, the mechanism is a travel agency manager, a hotel manager, the hotel information system 1C, service booking.com.

Typical tasks (stages) of the business plan development are:

1. To find information about a particular business process in the field of tourism.

Examples of business processes:

planning a tourism product;

the formation of a trip;

the process of signing an agreement with a tour operator;

the process of signing an agreement with a carrier;

the process of signing an agreement with a hotel;

the process of selling travel services by a travel agency;

the process of selling tourist services by a travel operator;

managing tourism marketing activities of a company;

after-sales customer servicing.

2. To analyse the information received from various sources and describe the purpose and the path of a business process.

3. To build business process diagrams: several context diagrams and diagrams of functional decomposition using the software *Ramus Educational*.

4. To include the IDF0 model description into the final presentation.

References

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2. Бакшт К. А. Как загубить собственный бизнес / К. А. Бакшт. – Санкт-Петербург : Питер, 2012. – 336 с.

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Annexes

Annex 1

One-Page Personal Plan
(according to Gazelles)

Name_____ Date_____

	1	2	3	4
	Relationships	Achievements	Rituals	Wealth
10 – 25 Years (Aspirations)				
1 year (Activities)				
90 days (Actions)	Start			
	Stop (things to refuse from)			

Annex 2

The Belbin Test

Distribute 10 points between the possible answers in each of the seven blocks of the questionnaire according to how you think they describe your behaviour the best. If you agree with some assertion one hundred per cent, you can give it all 10 points. One sentence can be assigned at least 2 points. Check that the sum of all points in each block (answers in the table rows) does not exceed 10.

Transfer your scores from each block of the questionnaire into the table. Ensure that the total sum of all points in the last row (the sum of all the cells) equals 70.

Team role	Coordinator	Shaper	Plant	Monitor-Evaluator	Implementer	Resource Investigator	Team Worker	Completer-Finisher	**Total points**
Block 1	13	15	12	17	16	10	11	14	**10**
Block 2	21	24	26	23	20	22	25	27	**10**
Block 3	30	32	33	36	37	35	34	31	**10**
Block 4	47	41	44	42	43	46	40	45	**10**
Block 5	55	53	57	50	51	54	52	56	**10**
Block 6	62	66	60	64	65	67	61	63	**10**
Block 7	76	70	75	71	74	73	77	72	**10**
Total									**70**

Questionnaire

Block 1. What I believe I can contribute to the team:

10. I think I can quickly see and take advantage of new opportunities.

11. I can work well with a very wide range of people.

12. Producing ideas is one of my natural assets.

13. My ability rests in being able to draw people out whenever I detect they have something of value to contribute to group objectives.

14. My capacity to follow through has much to do with my personal effectiveness.

15. I am ready to face temporary unpopularity if it leads to worthwhile results in the end.

16. I can usually sense what is realistic and likely to work.

17. I can offer a reasoned case for alternate courses of action without introducing bias or prejudice.

Block 2. If I have a possible shortcoming in teamwork, it could be that:

20. I am not at ease unless meetings are well structured and controlled and generally well conducted.

21. I am inclined to be too generous towards others who have a valid viewpoint that has not been given proper airing.

22. I have a tendency to talk too much once the group gets on to new ideas.

23. My objective outlook makes it difficult for me to join in readily and enthusiastically with colleagues.

24. I am sometimes seen as forceful and authoritarian if there is a need to get something done.

25. I find it difficult to lead from the front, perhaps because I am over-responsive to group atmosphere.

26. I am apt to get caught up in ideas that occur to me and so lose track of what is happening.

27. My colleagues tend to see me as worrying unnecessarily over detail and the possibility that things may go wrong.

Block 3. When involved in a project with other people:

30. I have an aptitude for influencing people without pressurizing them.

31. My general vigilance prevents careless mistakes and omissions being made.

32. I am ready to press for action to make sure that the meeting does not waste time or lose site of the main objective.

33. I can be counted on to contribute something original.

34. I am always ready to back a good suggestion in the common interest.

35. I am keen to look for the latest in new ideas and developments.

36. I believe my capacity for judgment can help to bring about the right decisions.

37. I can be relied upon to see that all essential work is organized.

Block 4. My characteristic approach to group work is that:

40. I have a quiet interest in getting to know colleagues better.

41. I am not reluctant to challenge the views of others or to hold a minority view myself.

42. I can usually find a line of argument to refute unsound propositions.

43. I think I have a talent for making things work once a plan has to be put into operation.

44. I have a tendency to avoid the obvious and to come out with the unexpected.

45. I bring a touch of perfectionism to any job I undertake.

46. I am ready to make use of contacts outside the group itself.

47. While I am interested in all views I have not hesitation in making up my mind once a decision has to be made.

Block 5. I gain satisfaction in a job because:

50. I enjoy analyzing situations and weighing up all of the possible choices.

51. I am interested in finding practical solutions to problems.

52. I like to feel I am fostering good working relationships.

53. I can have a strong influence on decisions.

54. I can meet people who may have something new to offer.

55. I can get people to agree on a necessary course of action.

56. I feel in my element where I can give a task my full attention.

57. I like to find a field that stretches my imagination.

Block 6. If I am suddenly given a difficult task with limited time and unfamiliar people:

60. I would feel like retiring to a corner to devise a way out of the impasse before developing a line.

61. I would be ready to work with the person who showed the most positive approach.

62. I would find some way of reducing the size of the task by establishing what different individuals might best contribute.

63. My natural sense of urgency would help to ensure that we did not fall behind schedule.

64. I believe I would keep cool and maintain my capacity to think straight.

65. I would retain a steadiness of purpose in spite of the pressures.

66. I would be prepared to take a positive lead if I felt the group was making no progress.

67. I would open up discussions with a view to stimulating new thoughts and getting something moving.

Block 7. With reference to the problems to which I am subject to working in groups:

70. I am apt to show my impatience with those who are obstructing progress.

71. Others may criticize me for being too analytical and insufficiently intuitive.

72. My desire to ensure that work is properly done can hold up proceedings.

73. I tend to get bored rather easily and rely on one or two stimulating members to spark me off.

74. I find it difficult to get started unless the goals are clear.

75. I am sometimes poor at explaining and clarifying complex points that occur to me.

76. I am conscious of demanding from others the things I cannot do myself.

77. I hesitate to get my points across when I run up against real opposition.

Key to the test

Coordinator. The type of a person who encourages and supports others. He/she tends to trust people and accept them for what they are, without the display of jealousy or suspicion. A Coordinator possesses a strong commitment to domination and group goals. The style of team management is to make contributions to team activities with pleasure and evaluate them in accordance with the team objectives. Mature, confident self-disciplined, peaceful, calm. Able to articulate goals, promote decisions and delegate powers. Organizes work of a team and uses resources according to group goals. Has a clear understanding of strengths and weaknesses of the team and makes maximum use of the potential of each team member. A Coordinator may not possess a brilliant intellect, but manages well people. An ideal Coordinator looks like a good manager – someone who knows how to use resources, is extremely responsive when dealing with people, but at the same time never loses his/her control over the situation and the ability to make independent decisions based on his/her own assessment of what should be done in practice. A Coordinator is a good leader for a balanced team facing a complex and multifaceted problem that requires effective distribution of roles within the team.

Shaper. A business type. Shapers always act as initiators of the action, and if the team is prone to inaction or complacency, the presence of a Shaper will bring it out of this state. This leader is dynamic, challenging, pressuring. Leadership style of a Shaper is to challenge, motivate, achieve. He/she is more individualistic than a Coordinator, the type of leader who encourages people to action, thus capturing them to follow him/her often leads the team either to failure or to success. His/her courage and energy helps to overcome the difficulties. Shapers oppose Team Workers in many ways. They hate losses, are prone to provocation, incitement and impatience. Characterised by high self-esteem, a tendency to frustration, sociability and suspicious attitude towards people. They are extroverts urged to action by the requirements of external environment. As leaders they are good for the already established team faces a complex external or internal obstacle. As managers, Shapers thrive on situations characterised by "political complexity" that hinders progress.

Plant. An introvertive type of generator of ideas. Resourceful, has a rich imagination – a person with ideas that can solve nonstandard problems. Usually Plants are alone, sitting in their corner and thinking about various options. Have a high intellectual level and very high creativity. These outstanding representatives of individual intellectuals are often perceived as very unsociable by team members. They are characterised by candour and honesty in communication. Style of a Plant is to bring innovative ideas to the work of the team and its goals. He/she is inclined to "head in the clouds" and ignores details or protocol. The more successfully Plants carry out their role in the team, the less similar is their behaviour to the familiar pattern of a manager. Plants do not prosper in the corporate world, and their managerial career shines rarely. Typically, they are very talented and skilful, leading to the fact that in most cases they are technicians, not holding high managerial positions. Plants are more common in newly established companies and start-ups, because they are more entrepreneurs than managers.

Monitor-Evaluator. Calculating, shrewd, strategic thinking. He sees all the alternatives, weighs the pros and cons – it is the type of an inspector. A Monitor-Evaluator is objective in analysing problems and evaluating ideas; is rarely flourishing with enthusiasm, which protects the team from making impulsive, reckless decisions. Representatives of this role do not clearly manifest themselves in the team for a long time until it becomes necessary to make important decisions. The members of the team, offering ideas (Shapers and Resource Investigators) are rarely the people who are able to evaluate the benefit of their ideas and their consequences. A Monitor-Evaluator possesses a high intellectual level, the level of critical thinking, especially the ability to suggest counter-evidences; is rather slow in his/her thinking and always prefers to consider everything carefully. This type may lack inspiration or ability to motivate others. The milieu can perceive Monitor-Evaluators as dry, slightly boring and sometimes too critical people. Many even wonder how members of this category become managers. However Monitor-Evaluators often hold high positions in strategic organisations.

Implementer. The main feature of an Implementer is discipline; other natural abilities or intelligence play almost always the secondary role. An Implementer's style in a team is the organisation of work. Implementers are reliable, conservative and efficient. They have internal stability and low anxiety. They work mostly on the team, not for their own interests. Able to realize ideas in practical actions. Implementers accept the goals set which became the part of their moral code, and stick to them during the work performance. They make plans and carry them out regularly. Very effective organisers and administrators. They may lack flexibility and do not like untested ideas. The career of such people is usually very successful at large, well-structured organisations. The success and recognition come to Implementers in the long run as a result of the fact that they do the work that must be done regularly, even if it does not meet their inner interests and bring pleasure.

Resource Investigator. An extroverted type of generator of ideas. Enthusiast, sociable. This is another team member focused on new ideas. However, the method of generating ideas and the nature of proposed measures differs from those of Shapers. Resource Investigators tend to "pick up" fragments of ideas of others and develop them rather than offer original ideas. They are particularly skilled in learning resources outside a team. The Resource Investigator's style of team building is to create a network and gather useful resources for a team. With the average intellectual level and creativity, they are friendly, curious and socially oriented. These qualities and the ability to employ the resources Resource Investigators integrate into a team easier than Shapers. When a team leader is skilful in management, a Resource Investigator and a Shaper can successfully coexist together without encroaching on the territory of each other and make their own contributions to new ideas.

Team Worker. Soft, sensitive, diplomatic. He/she knows how to listen, to prevent disputes among team members, is sensitive towards both individuals and situations. A Team Worker plays a relationships-oriented, supporting role in a team. If a team has people challenging to communicate, Team Workers are able to exert soft power at the situation and prevent potential conflicts, thereby helping the formal team leader in performing the task. A Team Worker can be indecisive at the moment of crisis. Representatives of this type are often found among the top-management. They become excellent mentors for young managers.

Completer-Finisher. Diligent and conscientious, looking for errors and omissions. Controls the timing of orders. Typically, the success of a team is judged by the final results of its work. However, many people are almost pathologically unable to bring the started by them to end, and the ability to complete the undertaken is quite a rare feature. A Completer-Finisher is a person who possesses this gift to the full extent. They are distinguished by attention to detail and the ability to keep in mind the planned, ensuring that nothing will be forgotten and all the details of the plan will be brought to completion. They prefer a constant effort, coordination and action sequences rather than a "cavalry charge". They are focused on the obligations and are less interested in a spectacular and resounding success. Their indispensable features are the tendency to achieve excellence in everything they take and steadfastness in achieving planned goals. The weaknesses include low flexibility, sometimes resulting in spending too much effort on goals that become inaccessible under the circumstances that have changed.

Annex 3

Strategy: Strengths, Weaknesses, Trends (SWT) Worksheet (according to Gazelles)

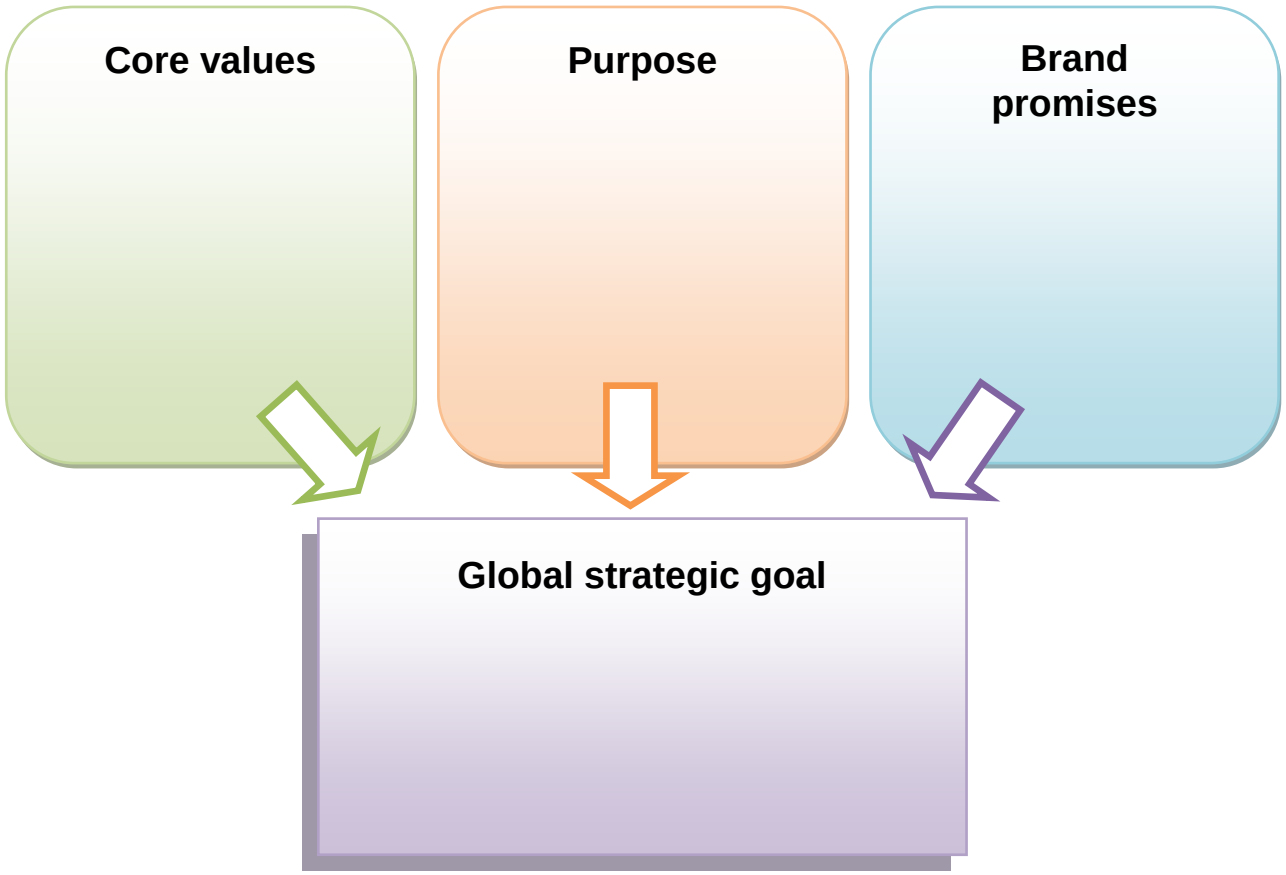
Trends	
What are the significant changes in technology, distribution, product innovation, markets, consumer, and social trends around the world that might impact your industry and organization?	
Strengths / core competencies	***Weaknesses***
What are the inherent strengths of the organization that have been the source of your success?	What are the inherent weaknesses of the organization that are not likely to change?

Strategy: 7 strata
(according to Gazelles)

Words you own (mindshare):			
Sandbox and brand promises:			
Who/Where? Core customers	What? Products and services	Brand promises	Key performance indicators
Brand promise guarantee (catalytic mechanism):			
One-phrase strategy (key to making money):			
Differentiating activities (3 – 5 hows):			
X-Factor (10x – 100x underlying advantage):			

Preferred amounts of profit	Strategic goal for 10 – 25 years

Strategy: Vision Summary
(according to Gazelles)



Strategic priorities		
3 – 5 years	1 year	1 quarter

Key performance indicators:

1. _____
2. _____
3. _____

Annex 4

A template "Questions for market research"
(by Rhonda Abrams)

Based on the features of products, list the questions, the answers to which you need to get via each category.

Industry / sector:

Products / services:

Target market:

Competition:

Marketing strategy and sales:

Operations / technology:

Long-term prospects:

Annex 5

A brief summary. The form for preparing a business plan (by Rhonda Abrams)

Company Description. Enter the company name, business type, location and legal status.

Mission. Formulate a brief declaration of the company intent.

The stage of development. Indicate whether your company is a new enterprise or has already been established. If so, when it was established, how far you have progressed in creating a product or service, whether you sell services or render shipment.

Goods and services. What goods or services your firm sells or plans to implement. For a company that provides various services their types may be specified in general, but a company with a narrow assortment must specify each of them.

Target market. List the markets you intend to cover and explain why you chose them; add analysis or market research.

Marketing and sales strategies. Describe briefly how you intend to reach the target market, explain the plans about advertising, participation in fairs and other methods that you will use for sales.

Competitors and allocation of market shares. Specify the nature of your competitors and distribution of market shares between them.

Competitive advantages and distinctive features. Show the factors of competitiveness, list the most important peculiarities of the company.

Management Team. Describe briefly the track record and business ability of every member of the management team.

Activity. Highlight the key features such as location, major intermediaries or suppliers, cost reduction methods, production technology, etc.

Finances. Note the expected revenue and profit for one to three years.

Long-term goals. Describe the expected position of the company (sales, number of employees, number of branches, market share) after 5 years.

The need for financing and exit strategy. Enter the amount of funds required, the number of investors, the services which you plan to apply, uses of funds and how investors or lenders will return their funds.

Annex 6

"Rockefeller Habits Checklist" – the evaluation of the organisation management effectiveness (according to Gazelles)

Put a "+" sign for those options of work situations that are true (each block may have a different number of affirmative answers or may not have any).

1. The executive team is healthy and aligned.

▪ Team members understand each other's differences, priorities, and styles.

▪ The team meets frequently (weekly is best) for strategic thinking.

▪ The team participates in ongoing executive education (monthly recommended).

▪ The team is able to engage in constructive debates and all members feel comfortable participating.

2. Everyone is aligned with the #1 thing that needs to be accomplished this quarter to move the company forward.

▪ The Critical number is identified to move the company ahead this quarter.

▪ 3 – 5 Priorities (Rocks) that support the Critical number are identified and ranked for the quarter .

▪ A Quarterly Theme and Celebration/Reward are announced to all employees that bring the Critical number to life.

▪ The Quarterly Theme/Critical number posted throughout the company and employees are aware of the progress each week.

3. Communication rhythm is established and information moves through organization accurately and quickly.

▪ All employees are in a daily huddle that lasts less than 15 minutes.

▪ All teams have a weekly meeting.

▪ The executive and middle managers meet for a day of learning, resolving big issues, and DnA transfer each month.

▪ Quarterly and annually, the executive and middle managers meet offsite to work on the 4 Decisions.

4. Every facet of the organization has a person assigned with accountability for ensuring goals are met.

▪ The Function Accountability Chart (FACe) is completed (right people, doing the right things, right).

▪ Financial statements have a person assigned to each line item.

▪ Each of the 4 – 9 processes on the Process Accountability Chart (PACe) has someone that is accountable for them.

▪ Each 3 – 5 year Key Thrust/Capability has a corresponding expert on the Advisory Board if internal expertise doesn't exist.

5. Ongoing employee input is collected to identify obstacles and opportunities.

▪ All executives (and middle managers) have a Start/Stop/Keep conversation with at least one employee weekly.

▪ The insights from employee conversations are shared at the weekly executive team meeting.

▪ Employee input about obstacles and opportunities is being collected weekly.

▪ A mid-management team is responsible for the process of closing the loop on all obstacles and opportunities.

6. Reporting and analysis of customer feedback data is as frequent and accurate as financial data.

▪ All executives (and middle managers) have a 4Q conversation with at least one end user weekly.

▪ The insights from customer conversations are shared at the weekly executive team meeting.

▪ All employees are involved in collecting customer data.

▪ A mid-management team is responsible for the process of closing the loop on all customer feedback.

7. Core Values and Purpose are "alive" in the organization.

▪ Core Values are discovered, Purpose is articulated, and both are known by all employees.

▪ All executives and middle managers refer back to the Core Values and Purpose when giving praise or reprimands.

▪ HR processes and activities align with the Core Values and Purpose (hiring, orientation, appraisal, recognition, etc.).

▪ Actions are identified and implemented each quarter to strengthen the Core Values and Purpose in the organization.

8. Employees can articulate the following key components of the company's strategy accurately.

▪ Progress is tracked and visible for the main strategic goal.

▪ Core Customer(s) – Their profile in 25 words or less.

▪ 3 Brand Promises – And the corresponding Brand Promise KPis reported on weekly.

▪ Elevator Pitch – A compelling response to the question "What does your company do?"

9. All employees can answer quantitatively whether they had a good day or week.

▪ 1 or 2 Key Performance indicators (KPis) are reported on weekly for each role/person.

▪ Each employee has 1 Critical number that aligns with the company's Critical number for the quarter (clear line of sight).

▪ Each individual/team has 3 – 5 Quarterly Priorities/Rocks that align with those of the company.

▪ All executives and middle managers have a coach (or peer coach) holding them accountable to behaviour changes.

10. The company's plans and performance are visible to everyone.

▪ A "situation room" is established for weekly meetings (physical or virtual).

▪ Core Values, Purpose and Priorities are posted throughout the company.

▪ Scoreboards are up everywhere displaying current progress on KPis and Critical numbers.

▪ There is a system in place for tracking and managing the cascading Priorities and KPis.

Project description using the online application Gantter

Choose the link "gantter editions" on the main page of the software http://gantter.com (Fig. A.7.1).

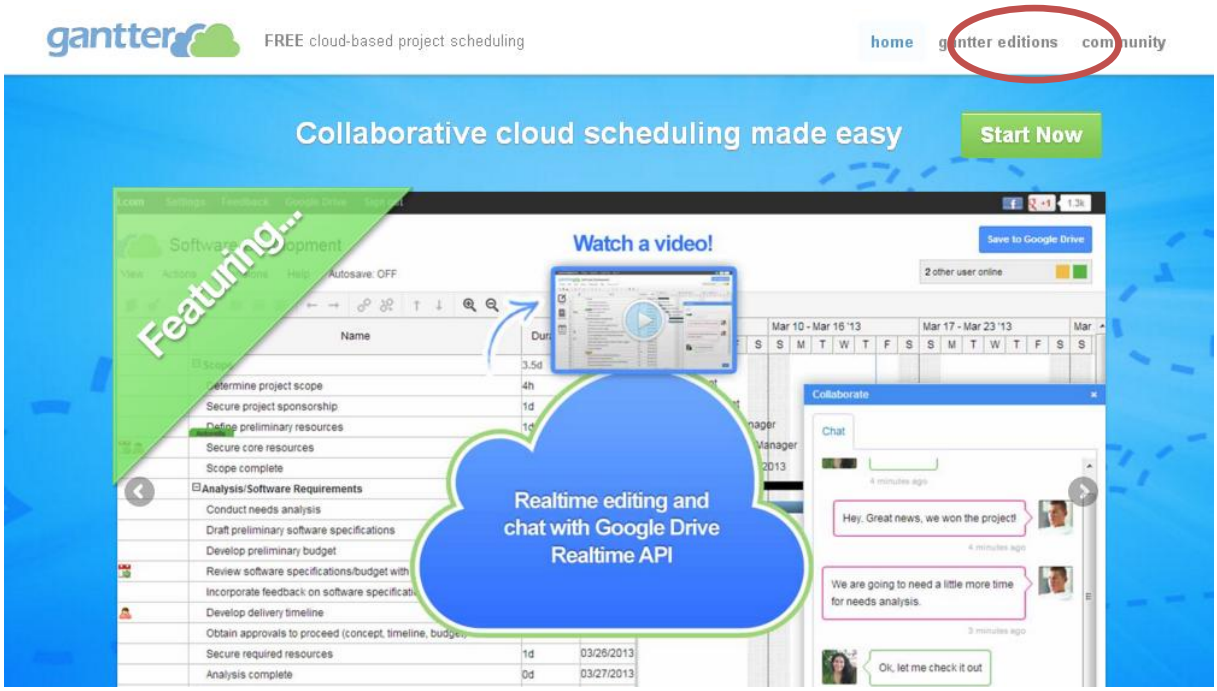


Fig. A.7.1. **The Gantter home page**

Choose "Gantter for Google Drive" among the available types of the application (currently there are four basic versions) clicking on the "Start Now" button (Fig. A.7.2).

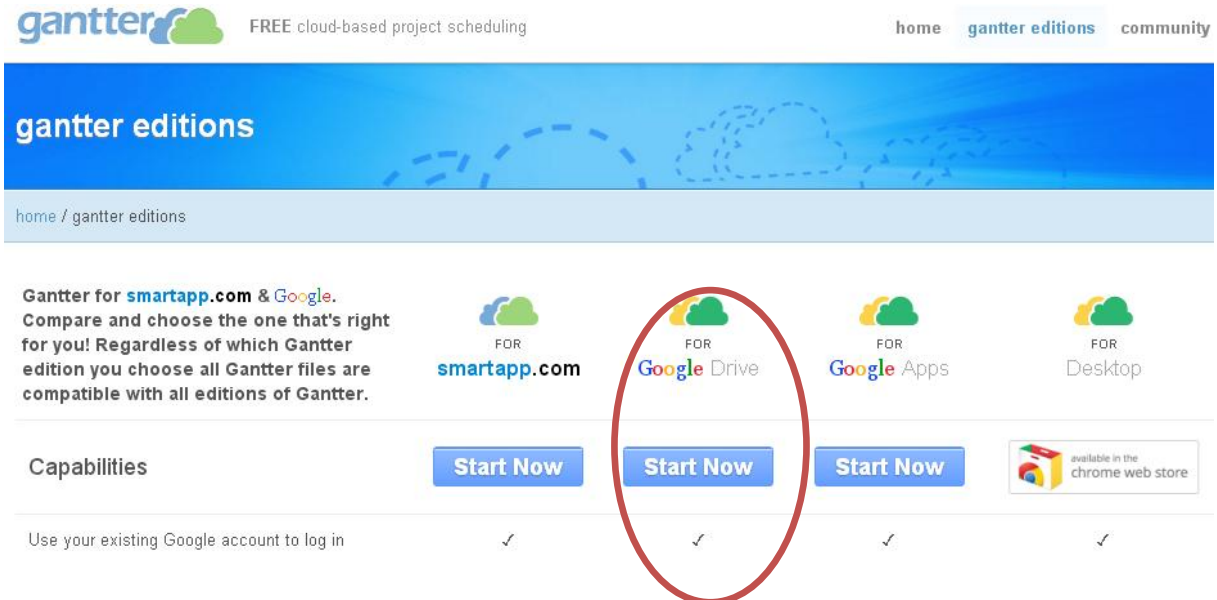


Fig. A.7.2. **The Gantter editions page**

If the entry in a Google account is not previously done, the system will prompt to choose it (Fig. A.7.3).

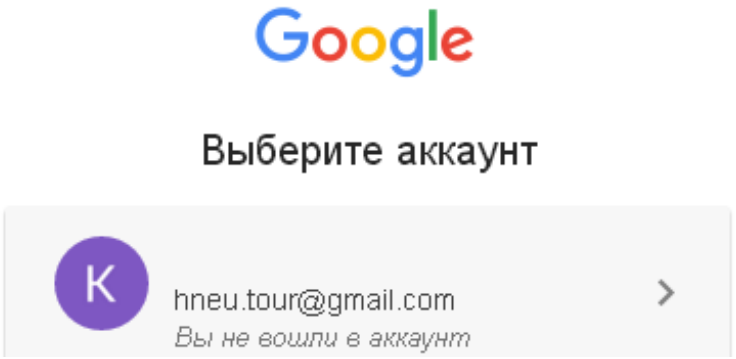


Fig. A.7.3. **The Google account entry page**

A blank project template is uploaded after entering the account (Fig. A.7.4).

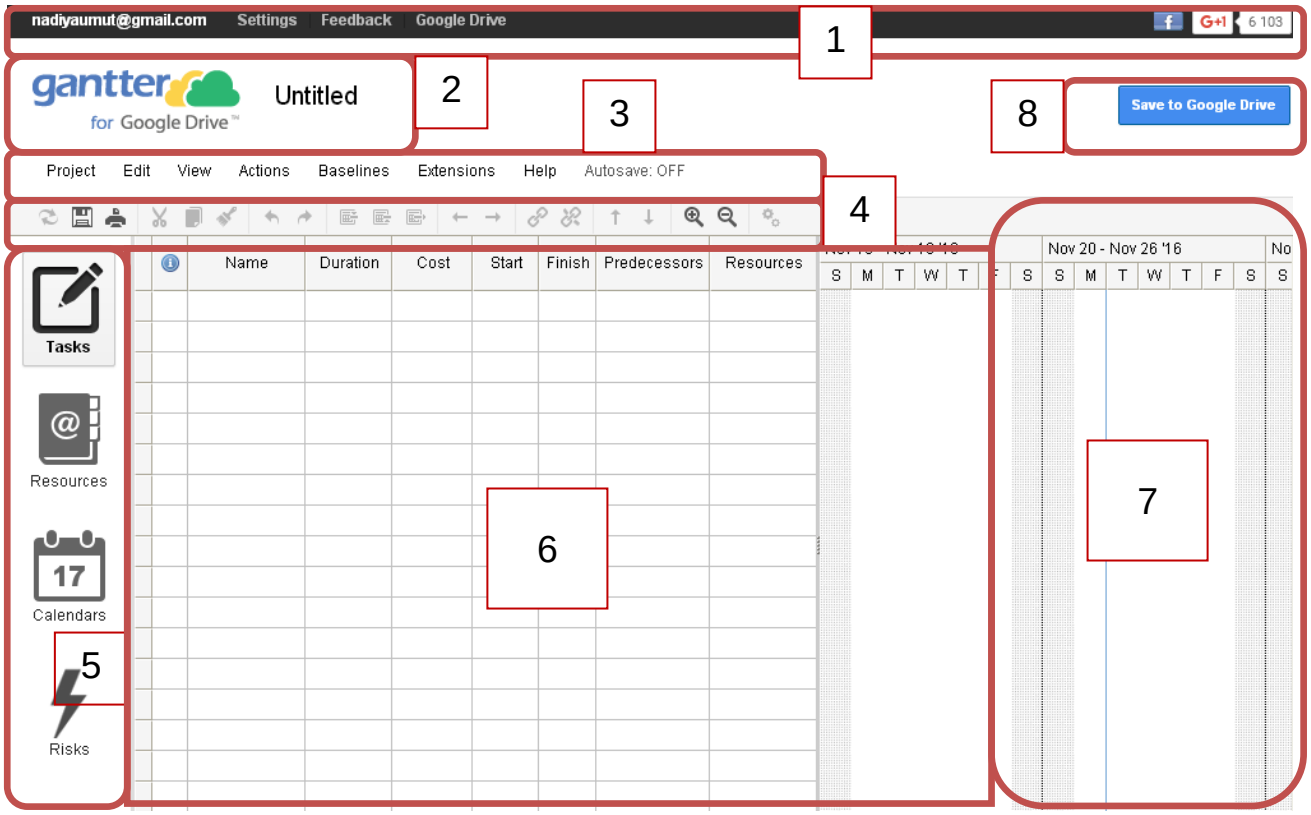


Fig. A.7.4. **A new project template**

An operating window of the application has the following areas:

1. *Menu of settings and references* – you can choose the language, check the account under which the user is working on a project, send suggestions

or comments to developers of the software, open the file storage or social networks' page. Note that switching between accounts is not implemented in this application.

2. *Project description field* – the type of application and the project name are presented.

3. *Main menu* – while the project template is empty, not all commands are active. Processes and modules are managed by the main menu commands.

4. *Toolbar* – duplicates the most common commands from the main menu.

5. *The block of modules* – presents the following modules that are part of the project description: Tasks, Resources, Calendars and Risks. Data input can be realised directly via the module interface (recommended), or filling the card of a process.

6. *The field of processes* – contains a list of project stages (processes and subprocesses) in the table rows and their description (visible characteristics can be selected manually) in the table columns.

7. *The field of Gantt chart* – shows the schedule of tasks and resources allocated by the user. The default calendar is displayed in days.

8. *Command button* – allows the user to save the project in a file storage.

At any time of working on the project, the language of the interface can be selected via the option "Settings. General" in the references menu. Click the "Save" button after selecting the desired language (Fig. A.7.5).

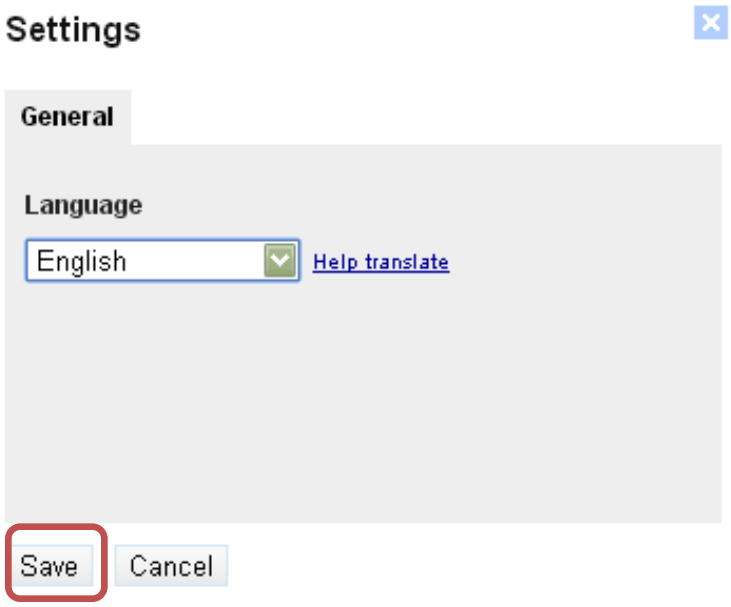


Fig. A.7.5. **Selecting the language of the interface**

The project card can be opened by clicking the left mouse button on the project name or pressing F8, or by selecting the "Properties" command among "Project" options in the main menu. The Project Properties window will open, through which the basic settings can be controlled and preliminary data can be inserted. If the modules' tabs were previously filled, the project card outlines all resources and processes used in the project (Fig. A.7.6).

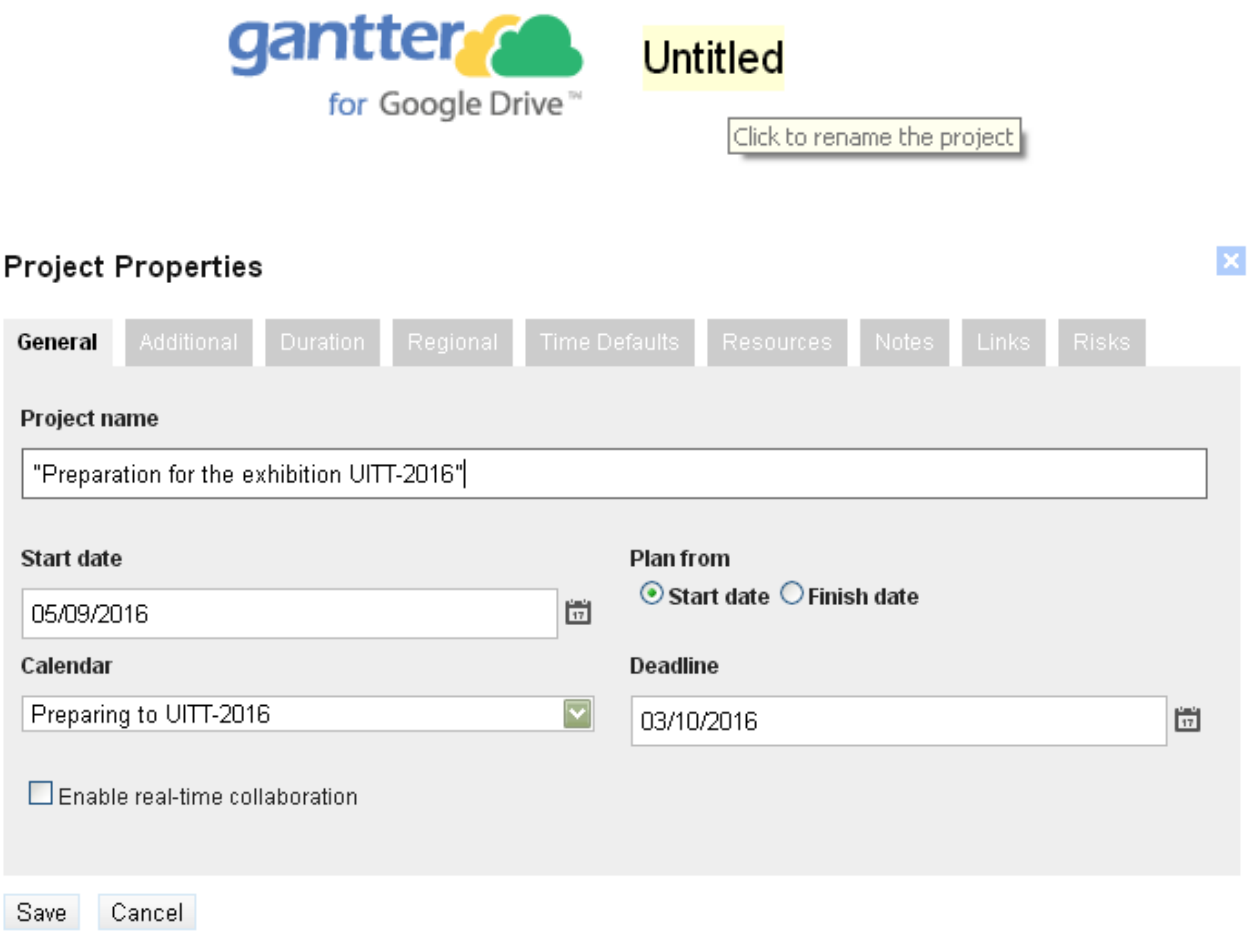


Fig. A.7.6. **The project properties window (the project card)**

The project properties window has several tabs, you can fill them in at the beginning of the work (excluding the tab "Resources" and "Risks") or after filling other fields. You can freely switch between all tabs of the card; when all data are submitted, the "Save" button must be pressed, otherwise the input data will disappear after closing this window.

Depending on the date from which the project is planned – the start or the finish one, select the corresponding date in the left middle field ("Start Date" and "Finish Date"). It can be registered manually or selected from a built-in calendar by clicking on the icon . This day will be starting in the construction field of the Gantt chart. You can immediately set the deadline for completion of the project and select the relevant calendar. The typical template offers 3 types of calendars: Standard, 24-hour and Night shifts. A user can customise them or create a new one using if necessary various calendars for different stages of work. All calendars available for the current project can be seen in the drop-down list (Fig. A.7.7).

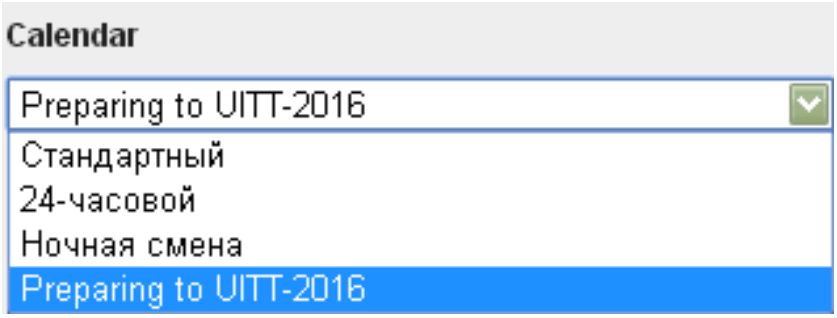


Fig. A.7.7. **Selecting a calendar in the project properties window**

In the "Additional" tab you can specify the industry, in which a business project is implemented (adding new options is not provided, only pre-specified names from the list are available), and the work location (geographic objects can be printed or selected from those that are available through Google maps, but opening a map from the application window is not provided yet). Inserted data can be changed later, as well as various locations can be specified for different tasks (processes) (Fig. A.7.8).

The "Duration" tab refers to the average working hours, the number of hours in a day, days in a week and in a month. However, these fields are not integrated with the others and are not used in the calculations. It seems that this tab was envisaged as a purely informative one for schedule preplanning and allocation of resources (Fig. A.7.9).

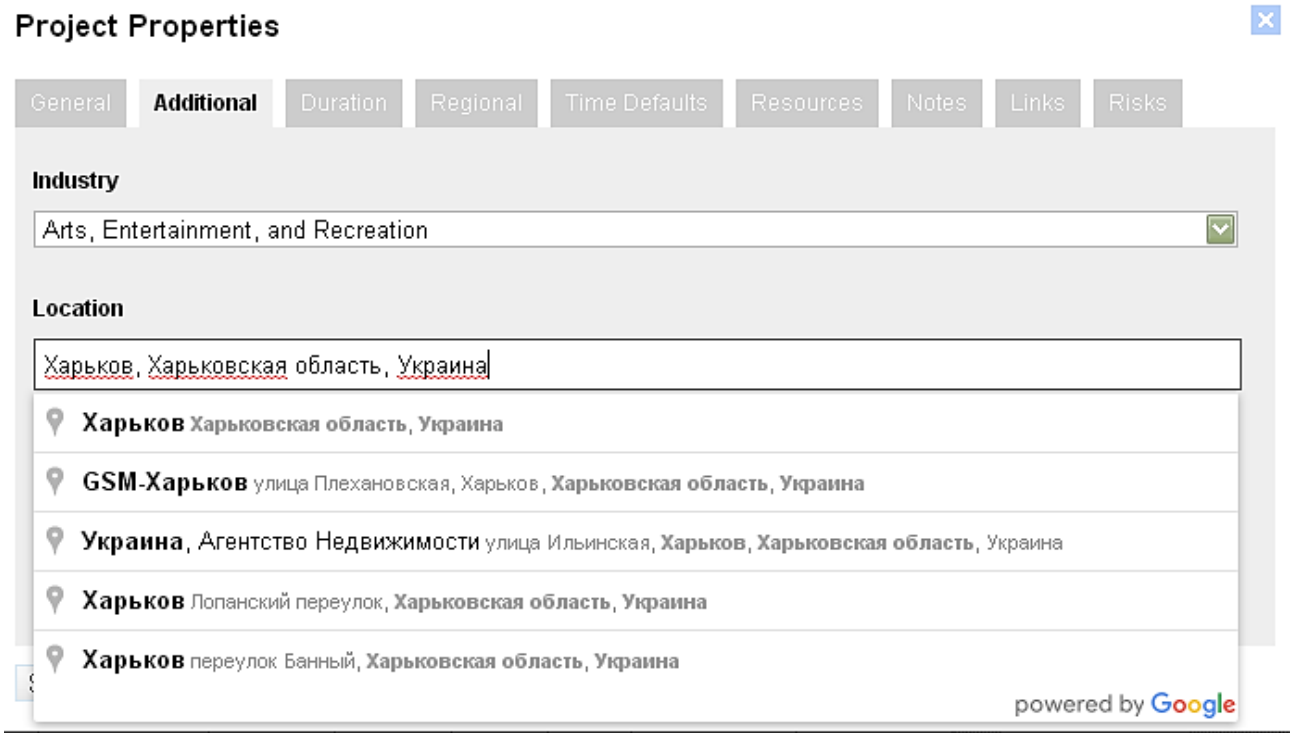


Fig. A.7.8. **The "Additional" tab**

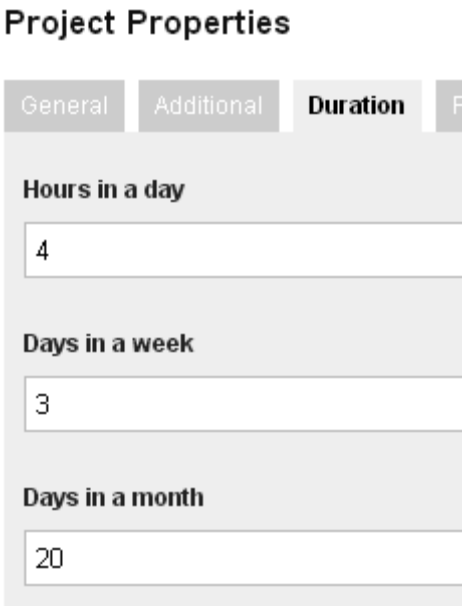


Fig. A.7.9. **The "Duration" tab of the project properties window**

The "Regional" tab is used to set the first day of the week (according to the international experience). There are three options: Monday, Saturday and Sunday), the date format (day-month-year or month-day-year), the time

format (24 or 12-hour), the name of the currency and the position of its name, i.e. a format to prescribe the value of work in the relevant fields of the processes. Currency name can be entered manually by the user, and several kinds of format are generated automatically after filling the name field (Fig. A.7.10).

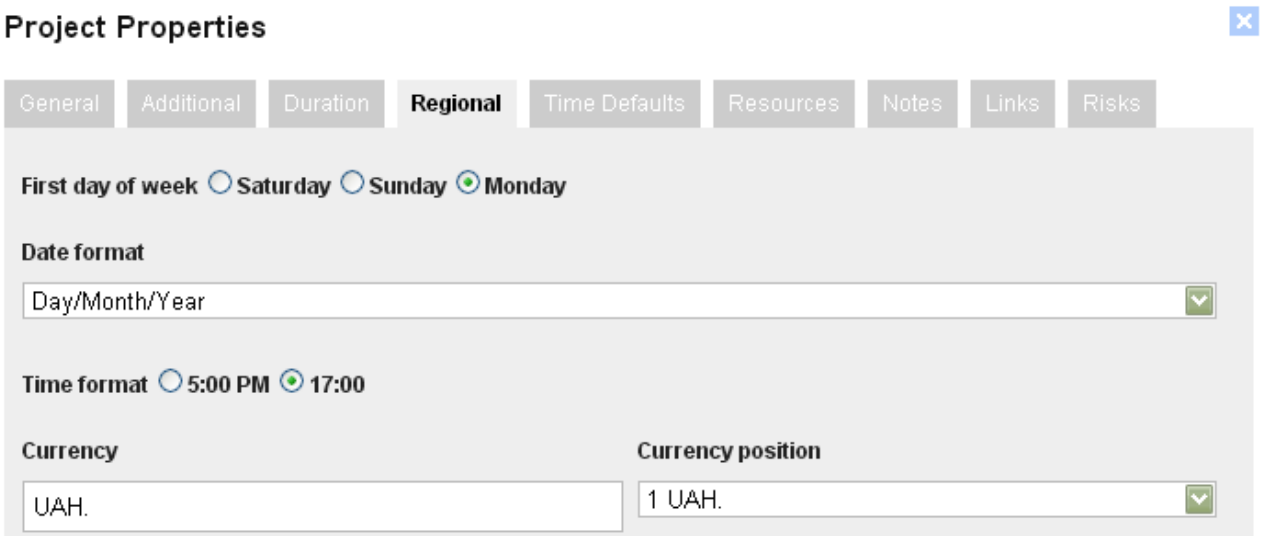


Fig. A.7.10. **The "Regional" tab**

Setting the time of the beginning and end of the day is provided via the "Time Defaults" tab, these hours are transferred into the standard calendar. However, as in the case with the "Duration" tab data, they do not change after adjustment of calendars and so display the desired but not the actual schedule (Fig. A.7.11).

Fig. A.7.11. **The "Time Defaults" tab (for the working time within a day)**

The "Resources" tab is empty for a new project; if resources are previously inserted, it displays all the resources involved in the project. By default, the

first column does not select any resource and its quantity is not available for editing in the last column. If you tick the box next to the resource, it means that the resource will be used not only in this or that task, but it is necessary to coordinate the project, and its cost will be added to the total cost of the project once again within the indicated units. The types of resources and their cost are not displayed in this window. In order to get a more detailed description, the module "Resources" should be opened (Fig. A.7.12).

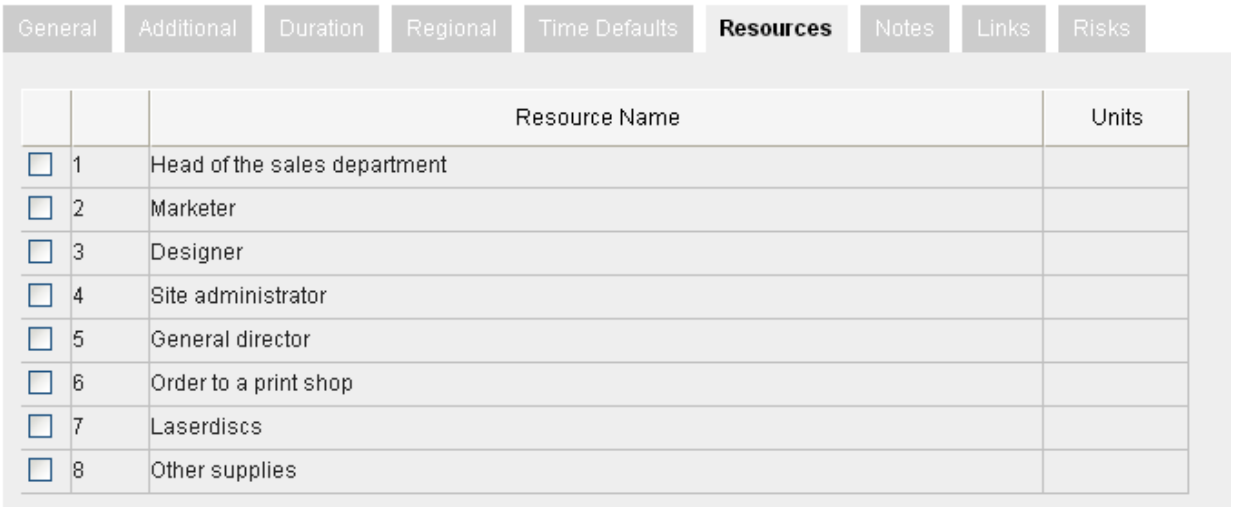


Fig. A.7.12. **The "Resources" tab**

The "Notes" tab contains a single text box in which you can print a general description of the project – for example, its goal, recommendations for the customer and so on. The inserted information is not displayed anywhere on the chart (Fig. A.7.13).

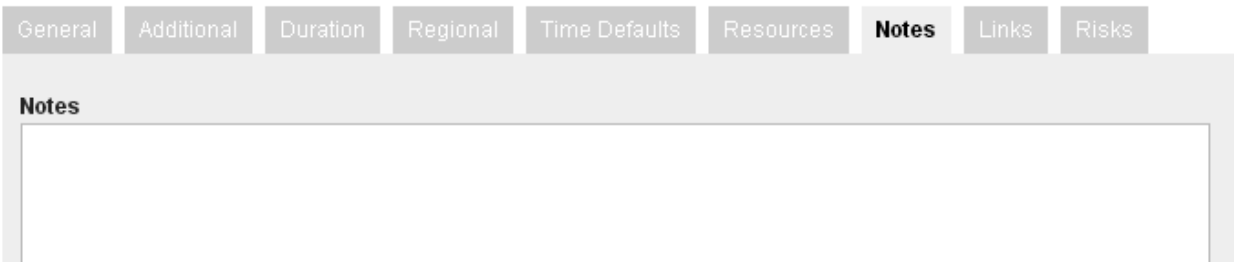


Fig. A.7.13. **The "Notes" (to a project) tab**

Links to external resources can be attached to the project file (using the "Links" tab). There are 2 types of links: a web page and an external file (Fig. A.7.14).

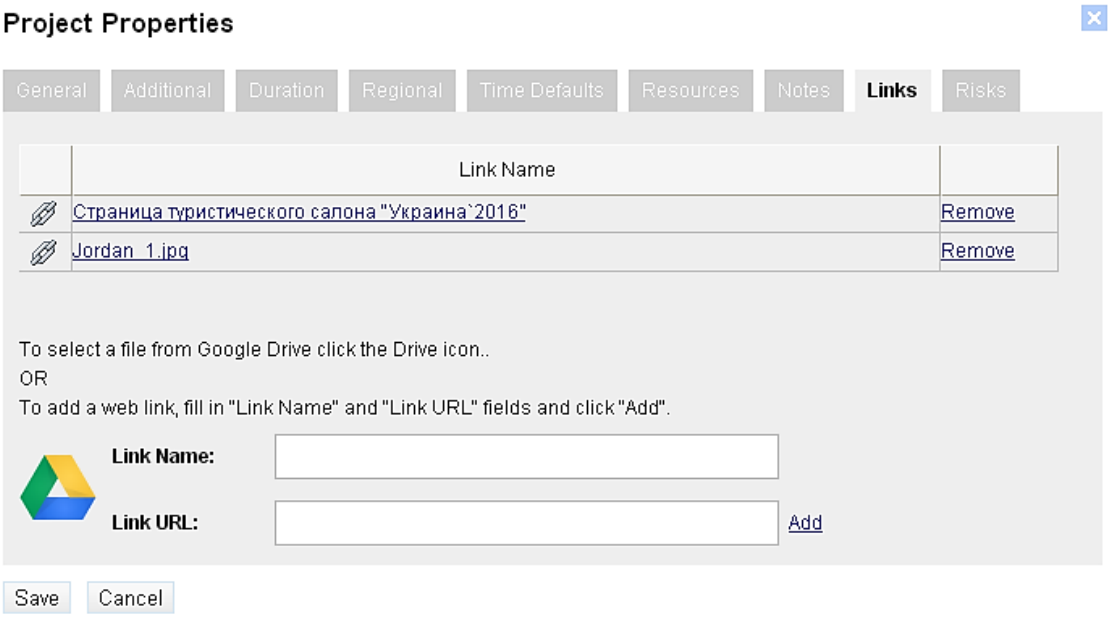


Fig. A.7.14. **The "Links" tab**

For making a link to a Web page, enter the name (this name will identify a link in the table), the resource address and click "Add". Links appear as a new row in the table. To add a link to an external file click the icon of a file storage and choose resources. If you have just started working with Gantter for the first time, the system will offer a choice of 3 file storages that can be used by the end of the trial period, then it will be necessary to appoint one of them as the main one, the others can be connected for an additional charge (Fig. A.7.15).

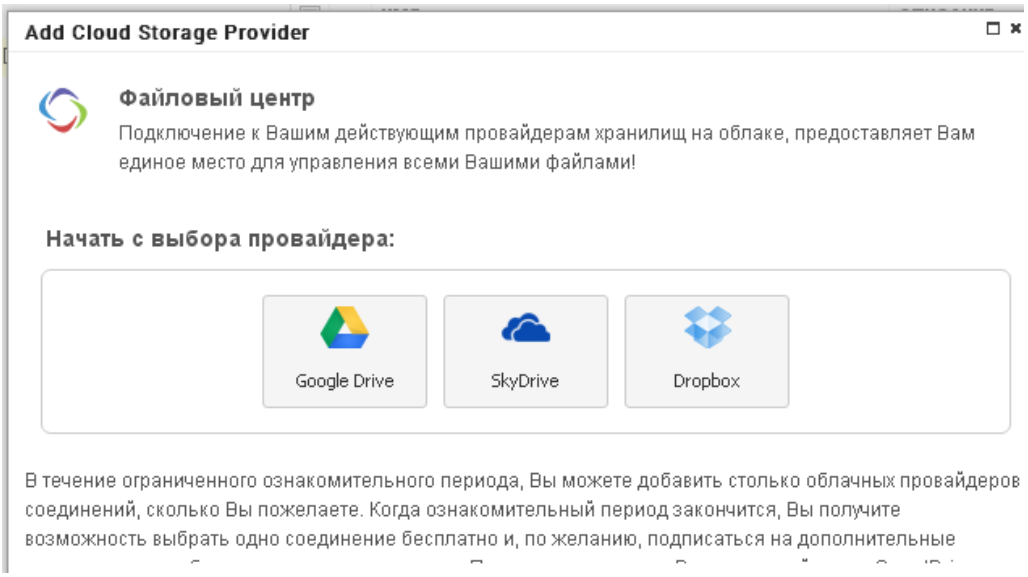


Fig. A.7.15. **The file storage selection window**

All the files available for the current user account can be seen through the resources selection window, or can be filtered by a file type. The link to a selected file is added to the reference table by double-clicking the left mouse button. To delete the odd reference, click on the item "delete" next to its name in the far right column of the table (Fig. A.7.16).

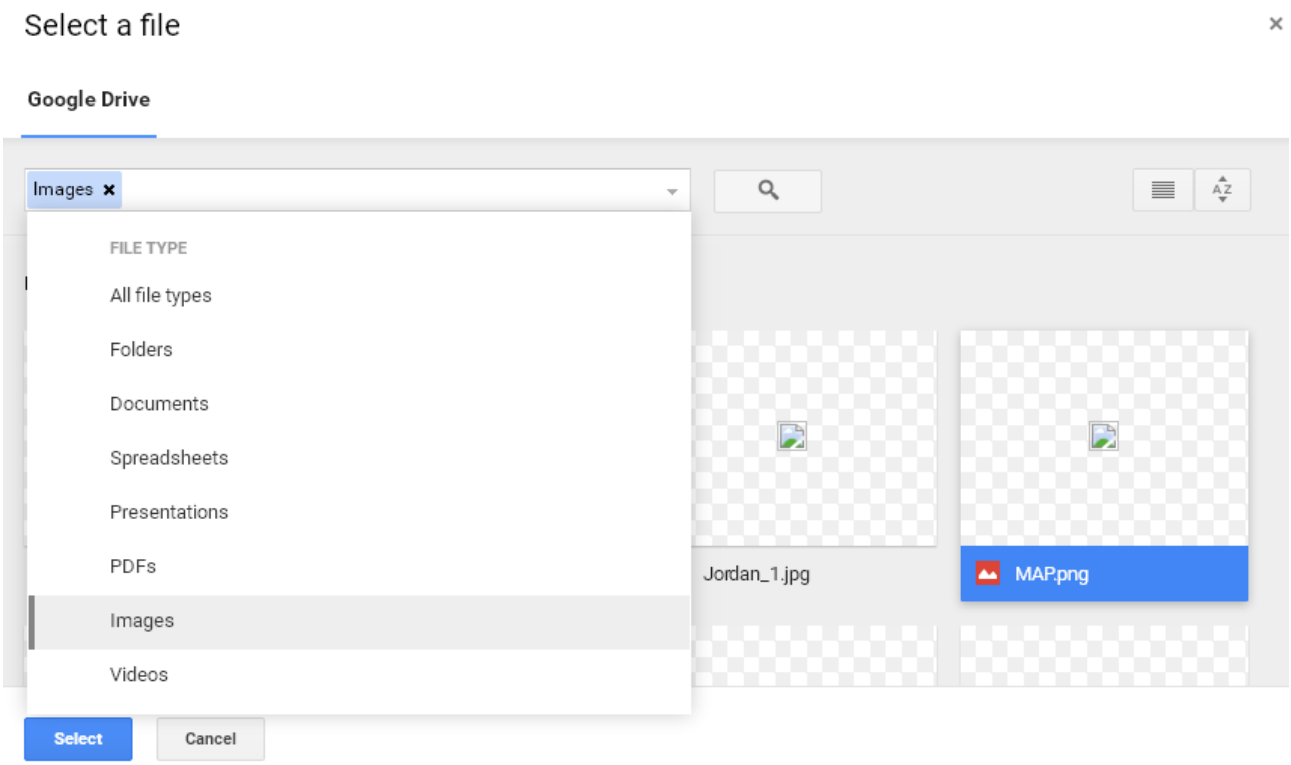


Fig. A.7.16. **The external files selection window**

The "Risks" tab displays all risks that were previously included into the "Risks" module. As well as in the "Resources" tab, you can assign risks to the project itself, or to leave a mark in the first column idle. Probable risks can be allocated in the "Risks" module in advance. If you have just started working on the project, the "Risks" tab in the project card will be empty. Checking the option "Show assigned risks only" 

will hide those risks in the table which are not allocated for the project in general and correlated with specific tasks (processes) (Fig. A.7.17).

Fig. A.7.17. **The "Risks" (of the project) tab**

To return quickly to editing the general properties after closing the project card, click the left mouse button on its name.

It does not matter from which module to start filling the project description. You can enter the name of the process directly in the tasks table (the "Tasks" module must be active), switch to any module – resources, risks or calendar, and then return to the menu of tasks and assign resources. During the work, you can edit the entries either in the fields of processes and Gantt chart or through a detailed description in the modules.

It is better to start working on the project with the "Calendar" module, then calculate the schedule of work and the load of resources. You can select one of the system calendars or create your own one. To add a user calendar, enter its name in the empty cell of the table. Editing is possible by double-clicking on the sequence number of the calendar by the left mouse button. The default calendar provides a 5-day working week and an 8-hour working day, the 24-hour calendar is a blank template, the night shifts calendar includes 6 working days a week and 3 working shifts at night time. You can modify any calendar, including a name change. The completed calendar can be copied to the clipboard and duplicated as the table row (Fig. A.7.18).

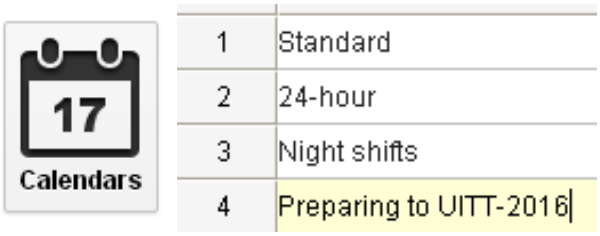


Fig. A.7.18. **Adding a new calendar**

The calendar is modified via the Properties window (Fig. A.7.19).

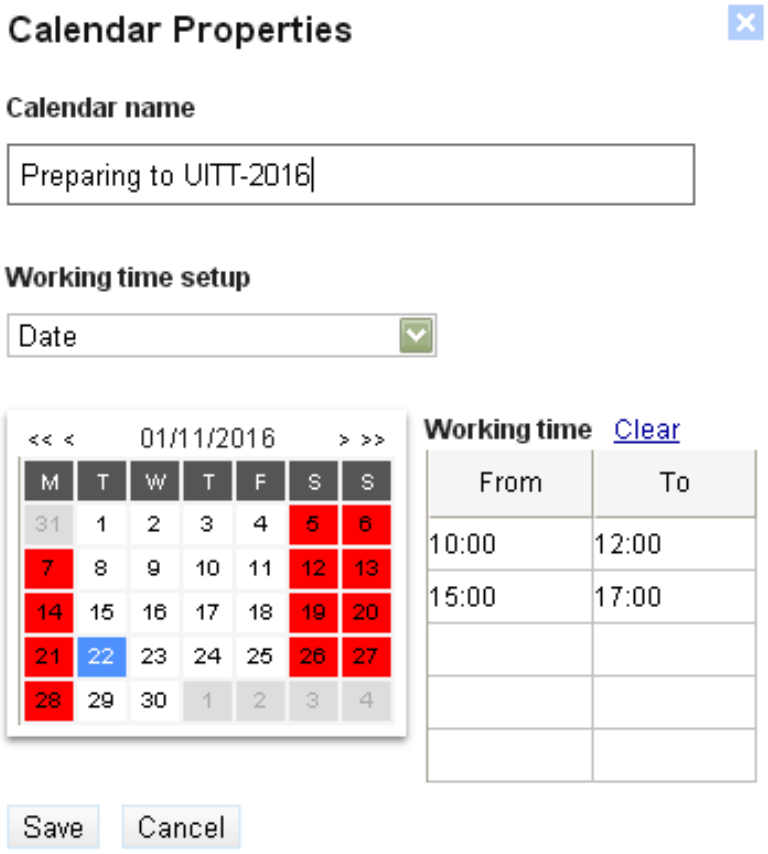


Fig. A.7.19. **The calendar properties window**

The name can be changed manually in the "Calendar name" field by entering or copying from the clipboard. The "Working time setup" option allows the user to choose a specific date for which working hours or particular days of the week will be set. In the latter case, the settings will be appointed to all working days of all available prior or previous periods. For example, you want to reduce working hours on all Fridays. An additional day off during the week can be assigned by removing records from the "Working time" table. This table provides up to 5 shifts a day, their beginning and end are entered into the cells manually. Inputs are not validated, so you should carefully follow the order of breaks and shifts for overlaps and the ascending order, starting at midnight. Hours and minutes are separated with the ":" sign without spaces. The duration of working periods (up to minutes) is used in calculating the cost of resources, to which the calendar is attached.

The "Risks" module is intended to describe the risks of the project. Each process can be assigned to several risks at once, but you can also assign none of the risks. It should be noted that the names of some fields are available only in English (Fig. A.7.20).

		Risk	Response	Cause	Probability	Severity	Priority
1	⚠	Disagreement with organizers			Occasional	Significant	Action

Fig. A.7.20. **The module of the project risks**

The table contains the following risk attributes (columns):

the sequence number – assigned automatically;

the information board – the empty one means that the risk is not identified with the task; the exclamation mark icon shows that the risk is assigned to a specific entry in the table of tasks (processes);

risk – entered manually or copied out of the clipboard (just as two previous attributes);

response – measures designed to eliminate or reduce threats provoked by the influence of risk factors; it can be left blank;

cause – the likely effects of the risk factor are indicated; filling this field is also not mandatory;

the probability of risk (probability) – the risk may not occur, or the probability is very low (improbable); the risk is possible in the long run (remote); it happens occasionally (occasional); the risk is more possible than impossible (probable); it happens often (frequent);

the level of influence on the implementation of tasks (severity) – the influence of this risk can be neglected (negligible); the risk has low impact (low); the risk is of moderate impact (moderate); the risk affects significantly the work progress (significant); the risk can lead to incorrigible consequences (catastrophic);

an action in the event of risk (priority) – there is nothing to commit (no action); the progress of the task should be monitored carefully (monitor); it is advisable to take certain measures in order to minimize the impact of the risk factor (action); demands an urgent action (urgent action); the task must be stopped if the risk factor occurs (stop).

The last three fields are compulsory, features are selected from the drop down list, each one has five levels (Fig. A.7.21).

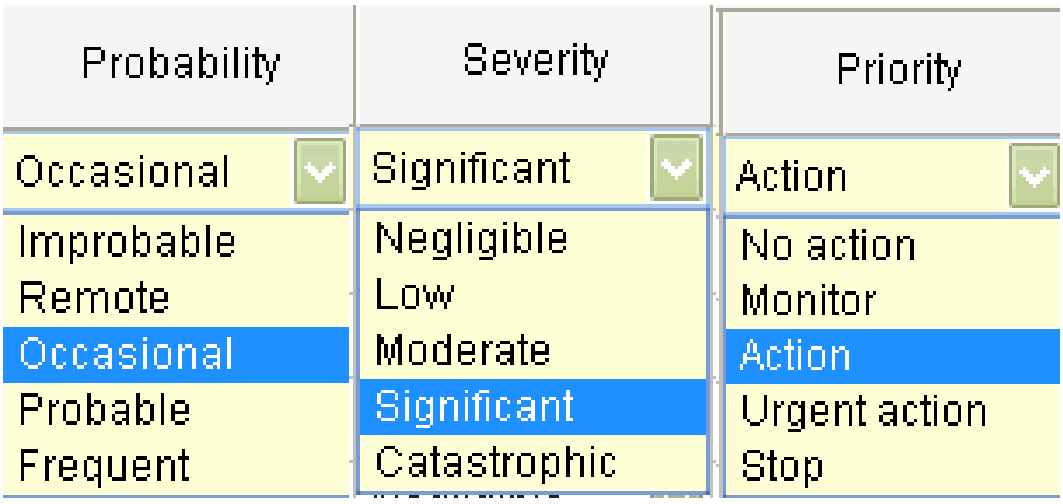


Fig. A.7.21. **The risk properties description menu**

A double click of the left mouse button on the sequence number of the resource opens the "Risk Properties" window. Additional general characteristics of factors can be added in the "General" tab, such as the "Risk Category", who of the performers can cause it or using which resource may provoke its happening (the "Risk Owner" option); the type of risk – a probability of it exists ("Relevant"), to whom it may be directed ("Addressed"), the risk has already occurred in the past or has happened during the project implementation ("Has happened").

If the risk consequences were not entered when filling the pivot table, you can add them later in the appropriate field (Fig. A.7.22).

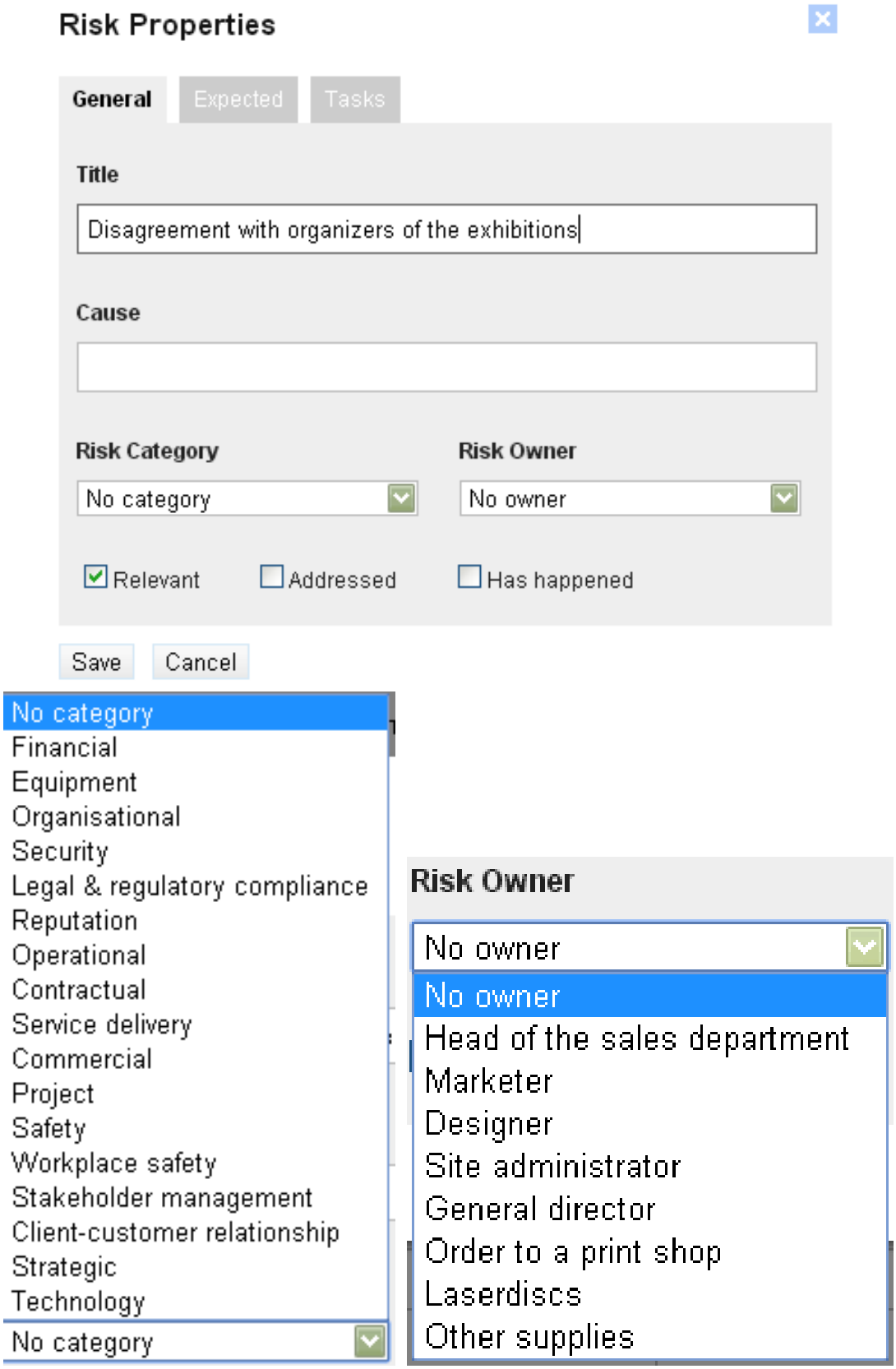


Fig. A.7.22. **The "General properties" (of a risk) tab**

The "Expected" tab allows the user to expand the description of activities and make further suggestions. For example, to determine what is affected by the risk factor ("Affects") – the schedule and time of the task execution ("Schedule"), costs ("Cost") or the project quality ("Quality"). If the process must be continued despite the degree of the risk influence, the "Priority" field can be deactivated by including the option "Detect using "Probability" and "Severity". If the list of measures to prevent the risk or needed in case if it occurs was not identified when filling the risks pivot table, you can do it in the box (Fig. A.7.23).

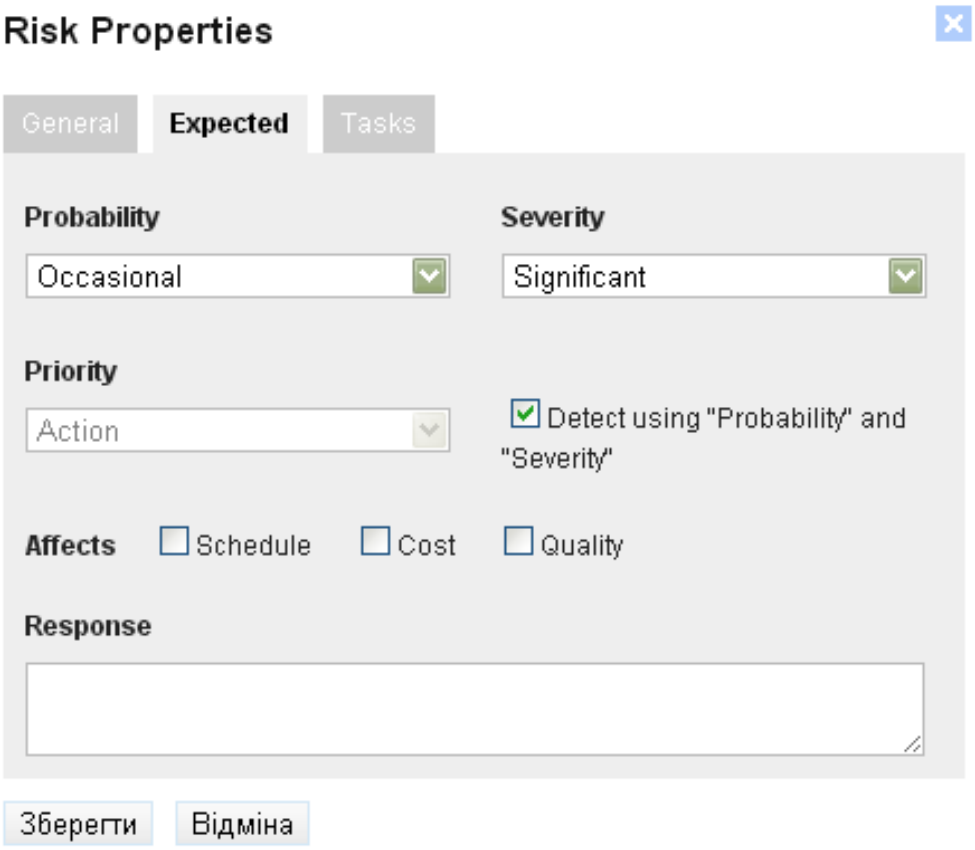


Fig. A.7.23. **The expected actions (in the event of a risk) tab**

In the "Tasks" tab, the list of available project processes can be observed, and the risk which is edited can be assigned to one or more processes. If the project does not have any task yet, this tab will be empty. The icon with a lightning in the properties field appoints that no risk has been specified to the process (Fig. A.7.24).

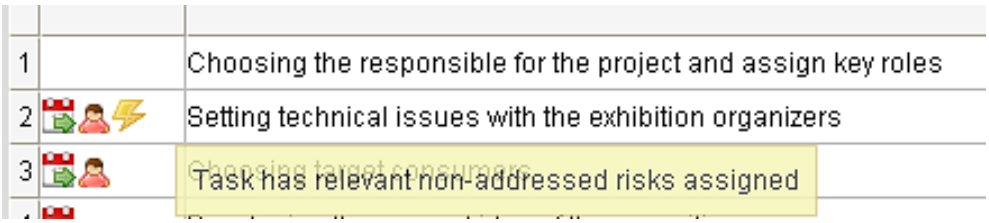


Fig. A.7.24. **Tracking the assigned risks**

The "Risks" module has a supporting, informative function and does not affect the implementation of the tasks, even if the command of termination is chosen for a process in the case of a particular risk (Fig. A.7.25).

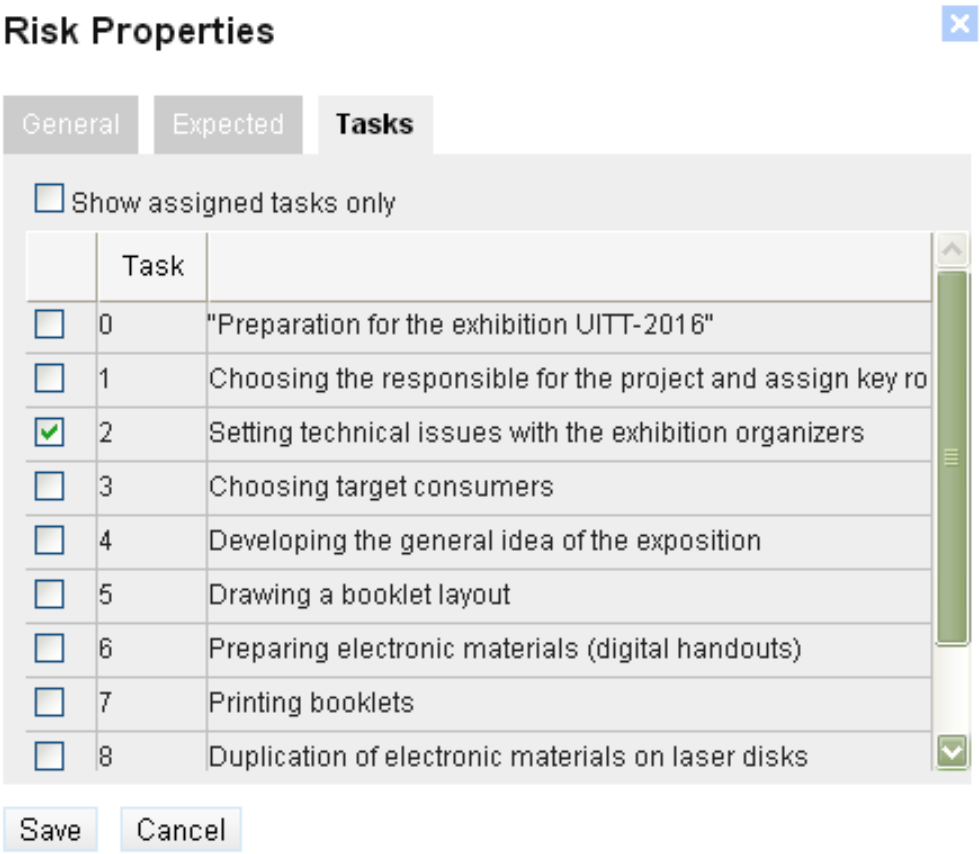


Fig. A.7.25. **The "Tasks" (processes) tab in the project risks card**

The "Resources" module contains the description of resources used in the project. They can also be entered in advance and then connected to tasks (works). The icon with an exclamation mark in the field of resource properties means that the resource is overloaded, for example, a full-time employee is involved in more than one task (Fig. A.7.26).

Resources

	Resource Name	Email	Type	Cost	Base Calendar
1	Head of the sales department	sales.dep@tour.com	Work	62.5 UAH./h	Preparing to UITT-2016
2	Marketer	mm.dep@tour.com	Work	50 UAH./h	Preparing to UITT-2016
3	Designer	art@gmail.com	Material	400 UAH.	Preparing to UITT-2016
4	Site administrator	admin@tour.com	Work	55 UAH./h	Preparing to UITT-2016
5	General director	head@tour.com	Work	0 UAH./h	Preparing to UITT-2016
6	Order to a print shop	print@org.ua	Material	5000 UAH.	Preparing to UITT-2016
7	Laserdiscs		Material	500 UAH.	Preparing to UITT-2016
8	Other supplies		Material	600 UAH.	Preparing to UITT-2016

Fig. A.7.26. **The "Resources" module of the project**

The resources table contains the following attributes (columns):

the resource properties field – the sequence number is printed and, if the resource is overloaded, a message is displayed (Fig. A.7.27);

Fig. A.7.27. **The notice of the resource overload (in the form of a bubble help)**

resource name – a resource can be added by entering its name in the field;

email – entered if exists, for example, for project implementers;

type – one of the two types is elected, the material or work resource;

cost – the cost/price of the resource is set (if the same resource has different costs at different times or for different tasks, it is necessary to double it by creating a new record in the table), the dimension depends on the type of resource. The separator of decimal places is a point, not a comma, i.e. fractional numbers are written like 62.5 UAH/hour;

base calendar – the calendar which will be used in calculations of the total resource costs is defined. For example, an employee may be hourly paid, and the room rental is charged regardless of whether it is used in a certain period or not.

The application provides two types of the resource use:

material – the cost does not depend on the total working time the resource is used, and is based on the number of units of the resource involved in a particular task, and the intensity of its use. The format value is a conventional unit (UAH);

work – the cost is calculated per hour of use (unless another minimum period is set) and according to the intensity of maintenance. When the first resource is assigned to a task, the total number of all working days in the calendar is taken (the calendar assigned to the resource is prior if it differs from the calendar assigned to the task). The format value is a conventional unit per period (UAH/hour).

Note that the performers, as well as tangible and intangible resources can be defined in work or material units.

If some specialist engaged in the project is outsourced (or is a part-time employee) and is paid only once (within a piece-rate system), or the staff employee is given a bonus or paid over his/her tariff rate, choose the material type of costs. For example, the designer is not a staff member of a travel agency and gets the pay after the work is done. Instead, a marketer works at the company, and his salary is calculated according to the tariff. Then the cost of work on the project is determined by multiplying the hourly salary rate by the total number of hours when this employee is directly involved into the implementation of the project objectives. It is clear that he can work simultaneously on other tasks of the project during the same day, so double fees are charged (in fact, the rate depends on the load and the exact number of hours) and the message of the resource overload appears. This is a mistake, and in case it appears resources must be reallocated. Managers of working groups often include in the project costs only third-party resources, because employees are paid anyway, so it makes no difference what project they are involved in during the specific period. The idea of calculating domestic spending intends, firstly, to assess the optimum value of outsourcing (for example, if the entire project is ordered to external executers), secondly, to get the value of deficient income if the qualified staff is diverted from current activities (Fig. A.7.28).

	Resource Name	Email	Type	Cost	Base Calendar
⚠ 1	Head of the sales department	sales.dep@tour.com	Work	62.5 UAH./h	Preparing to UITT-2016
⚠ 2	Marketer	mm.dep@tour.com	Work	50 UAH./h	Preparing to UITT-2016
3	Designer	art@gmail.com	Material	400 UAH.	Preparing to UITT-2016

Fig. A.7.28. **Viewing the value of a resource in use**

Not only paid resources are inserted into the table. The free ones which are not included in the total cost of the project ought to be chosen when it is reasonable to emphasize the need for their inclusion (e.g. a director may coordinate the team involved in the project).

When binding resources to tasks, their use intensity can be specified (in % from 0 to 100). For example, if technical issues are arranged by an employee of the marketing department and the head of sales with the exhibition organisers, we can consider the labour participation rate and load of each worker. If it is less than 100 %, then the value of pay per hour will be reduced by an appropriate factor in the calculation of the total cost.

By double-clicking the left mouse button on the sequence number of a resource in the summary table, the resource properties window will open. The type of resource and its cost/price of use can be changed on the "General" tab (Fig. A.7.29).

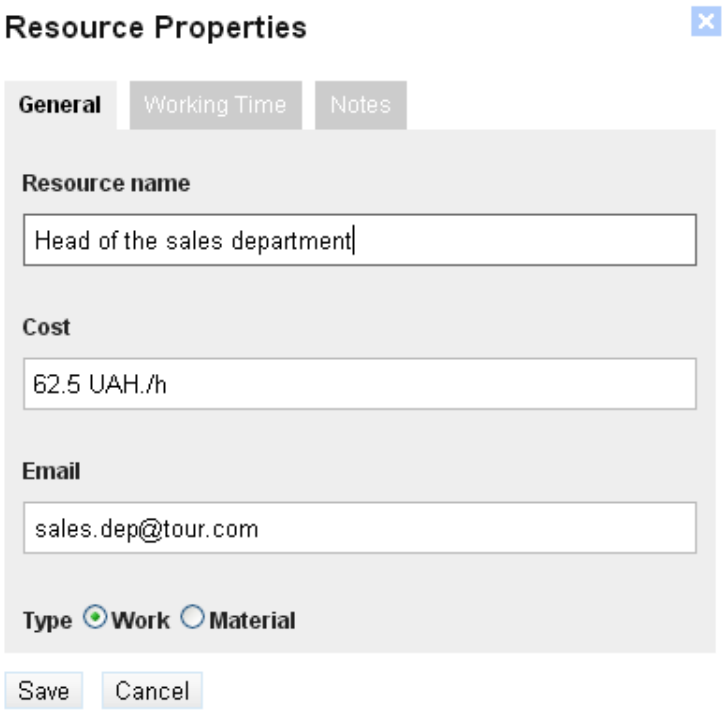


Fig. A.7.29. **The general properties tab**

The "Notes" tab is for entering more information about resources, such as the principles of the cost calculation (Fig. A.7.30).

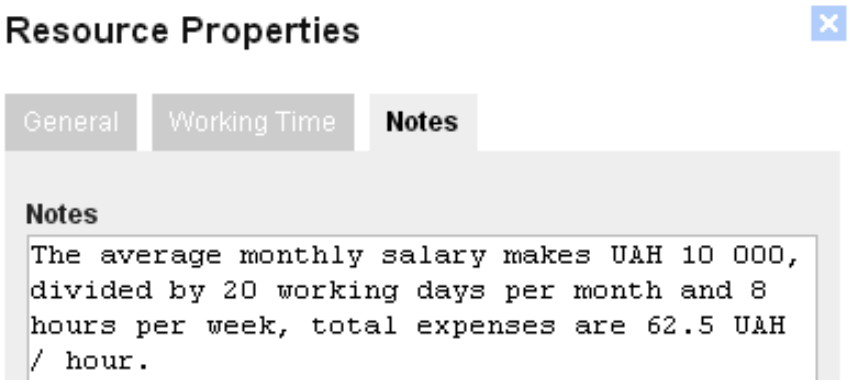


Fig. A.7.30. **The tab of notes to a resource**

On the "Working Time" tab, the calendar can be changed, or working hours and days can be assigned separately only for this resource without changing settings in the current calendar for other resources that use it (by activating the "Override" mark) (Fig. A.7.31).

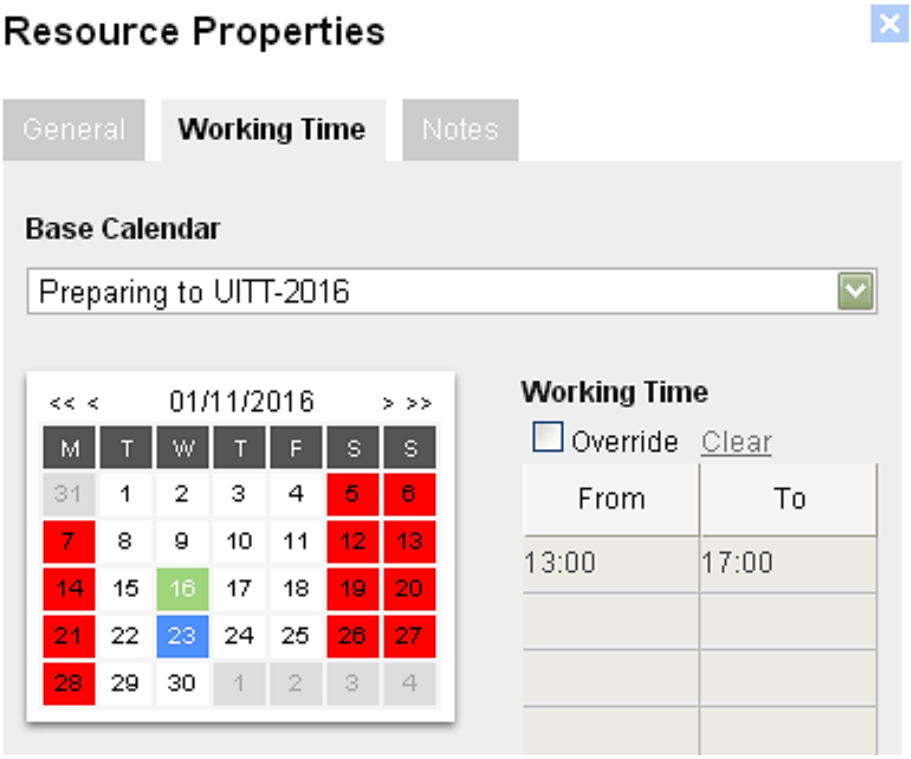


Fig. A.7.31. **The tab of the resource working time**

The application provides direct amendments to the properties of resources and tasks in pivot table fields, but practice shows that it is better to use module cards (the window of properties), otherwise there are frequent errors in the calculation of total project costs and construction of schedules.

Finally, the "Tasks" module integrates all the entries and provides a general description of the project work. To make viewing the tasks easy, the summary table is placed next to the Gantt chart (the work schedule), so the beginning, end and duration of a process can be immediately seen opposite to its name. Changing the width of the table columns and the schedule field is made by hovering the mouse pointer over the borders and dragging boundaries left or right. Zooming the graph in the current version of the software is provided by  elements on the toolbar. All available pivot table fields can be displayed via the menu item "View", only marked ones appear (Fig. A.7.32):

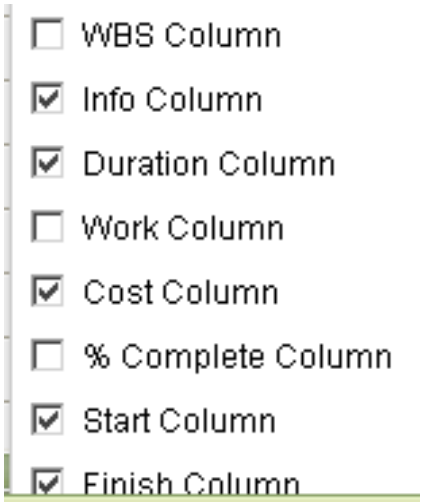


Fig. A.7.32. **The "View" menu of the pivot table**

WBS – the order of tasks (works);

info – the column with the icon  , contains data on each task, assigned risks and resources;

duration – calculates total work duration within a task, by default in days (fractional values are determined on the basis of the number of hours per day);

work – the cost of the task execution, by default in hours;

cost – the total cost of each task (work) in terms of the value set in the project properties);

% complete – the part of the project completion is set manually while monitoring the implementation of tasks in the task properties;

start and finish – calendar dates according to the start of a task and its completion. Dates can be entered manually or moving the boundaries of the diagram (Fig. A.7.33).

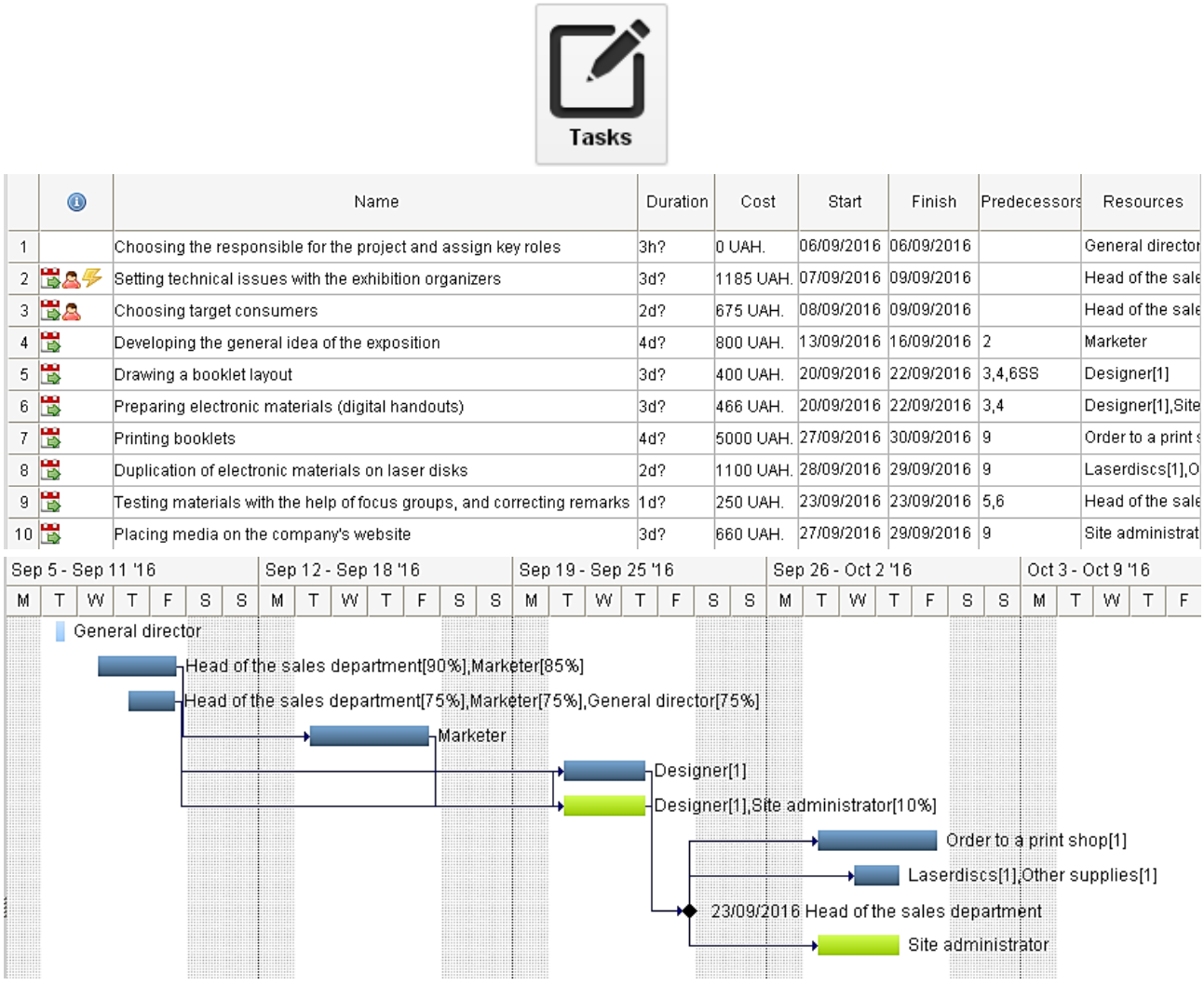


Fig. A.7.33. **The window of the module of tasks (processes)**

To create a new task, enter its name in the appropriate field or open the card of a blank record (by double-clicking the left mouse button on the sequence number, or by pressing the function key F2, having put the cursor in any field, or via the main menu item Actions – Properties, or by clicking the

element on the toolbar). The window of properties for elements of the "Tasks" module is the most functional, it allows the user to manage almost all other modules and properties (Fig. A.7.34).

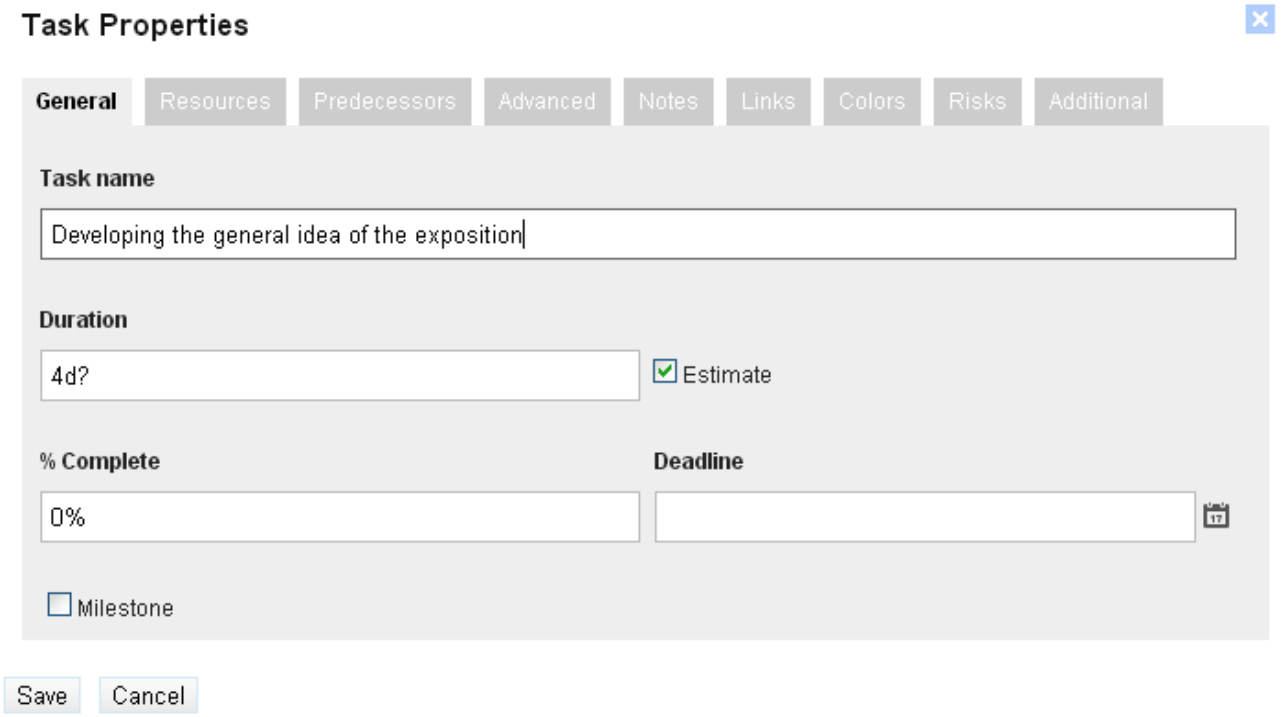


Fig. A.7.34. **The task properties window (the card of a task)**

Adding information in the tabs "Notes", "Links" and "Risks" is done the same way as in other modules; the "General" properties tab contains additional fields provided only to describe the tasks.

If the function of preliminary estimation is selected, the planned duration of a task can be set initially in the window and be adjusted then in the summary table. The percentage of completion does not affect other modules, it just shows the progress of the work. If the deadline for performance is set, the graph displays the reminder (the deadline should logically coincide with the end day or be after it, but the earlier date is also possible – for example, when there is a desired completion date and the acute deadline). If the current task is assigned as a project milestone, the schedule will display a special icon . Milestones of the project in all tasks are exported to external calendars (in the form of files stored on a local machine or integrated into an online calendar).

Resources for the current task are assigned on the "Resources" tab, if previously entered in the relevant module. The "Units" field is a must for selected resources, it shows the number of units used (for a resource of the material type) or the load factor from 0 to 100 % (for the labour resource type) (Fig. A.7.35).

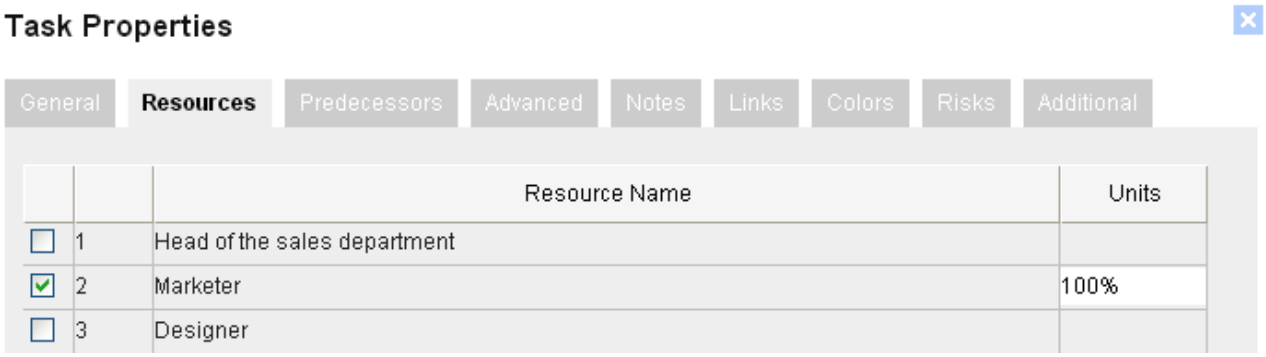


Fig. A.7.35. **The tab of resources of a task**

If the marketer, the head of sales and the director consulted about the choice of the target audience for about 3 hours during the time allocated for the process (within 2 working days, the maximum allowed time for this makes 4 hours per day), the work duration will make 18 hours and costs – 675 UAH:

(62.5 + 50 + 0) UAH/hour x 3 hours x 2 days = 675 UAH.

If they were busy for all 4 hours during the working day, the total labour costs would amount to 900 UAH:

(62.5 + 50 + 0) UAH/hour x 4 hours x 2 days = 900 UAH.

Another option of costing in case of underemployment is to indicate the workload in %. For example, 3/4 = 0.75 hours per day:

(62.5 + 50 + 0) UAH/hour x 4 hours x 2 days x 0.75 = 675 UAH.

The difference between the 1st and 2nd options is that the last does not reduce the overall length. On the contrary, reducing the previously set process time can change the start or the end date of a job if the specified time is reduced by more than one day.

The appearance of a warning that the task is assigned with overloaded resources (the icon with a human) means that a work resource is involved in several parallel tasks. In case its load is not reduced, the payment will be

calculated based on the number of tasks. This may be either a mistake in the calculation of the workload or the planned appointment of works.

The "View" menu includes a command "Filter by Resource". It allows the user to check which tasks involve a single resource and its value. For example, the site administrator participates in the "Preparing electronic materials (digital handouts)" and "Placing media on the company's website" (Fig. A.7.36).

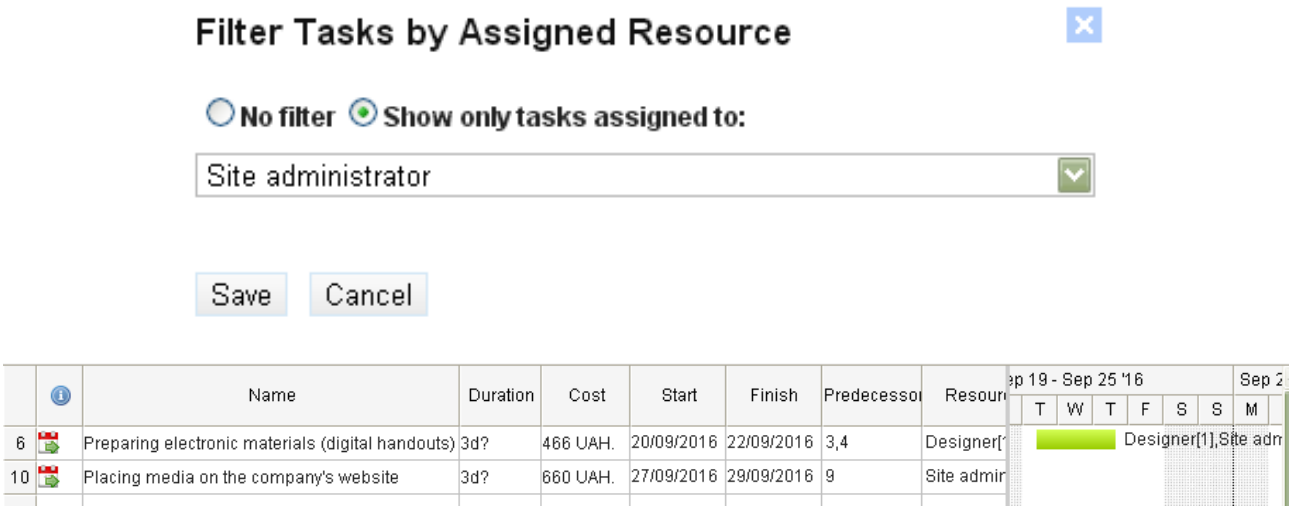


Fig. A.7.36. **Displaying tasks for one resource**

Tasks can be combined according to the required or desired order of their start, execution and completion on the "Predecessors" tab (Fig. A.7.37).

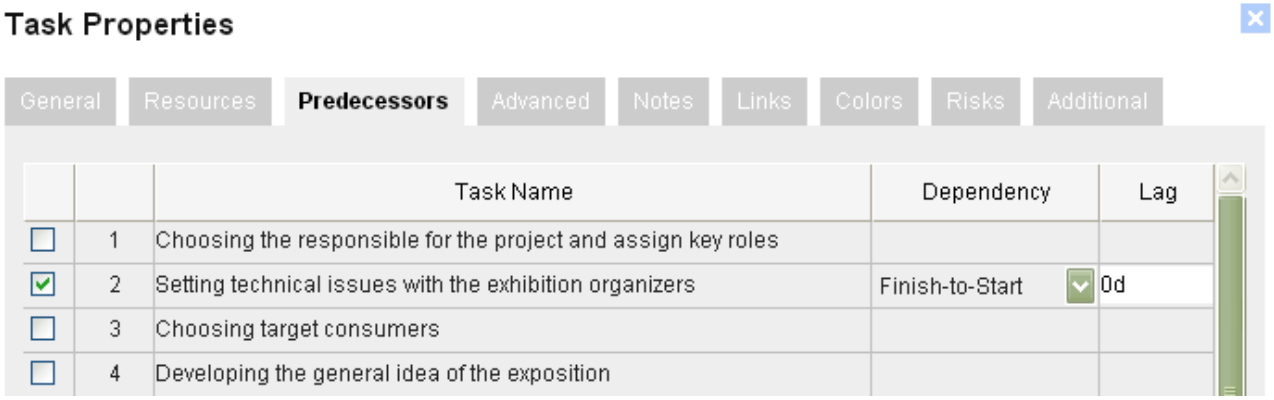


Fig. A.7.37. **Assigning the dependency of stages (works)**

Some processes cannot begin prior to the other's having ended. For example, a general idea of the exhibition cannot be developed without agreeing on the organisational issues.

There are several ways to select the tasks to be combined:

holding the Ctrl key, click the left mouse button on the task sequence number field – thus the processes that are not neighbouring are selected;

holding the Shift key, click the left mouse button on the task sequence number field, release the mouse button, press the "down" – "up" keys to select adjacent tasks that are located before or after the selected task.

The selected tasks can be linked as follows:

a) through the "link" icon on the toolbar (for task separation the "unlink" command is used);

b) via the main menu option "Actions", the command "Link tasks / Unlink tasks";

c) via the "Predecessors" tab of the task properties card (however, only two successive processes can be linked, be careful not to confuse the names of tasks while editing them after the steps described in "a" and "b").

Links between tasks will appear on the Gantt chart (Fig. A.7.38).

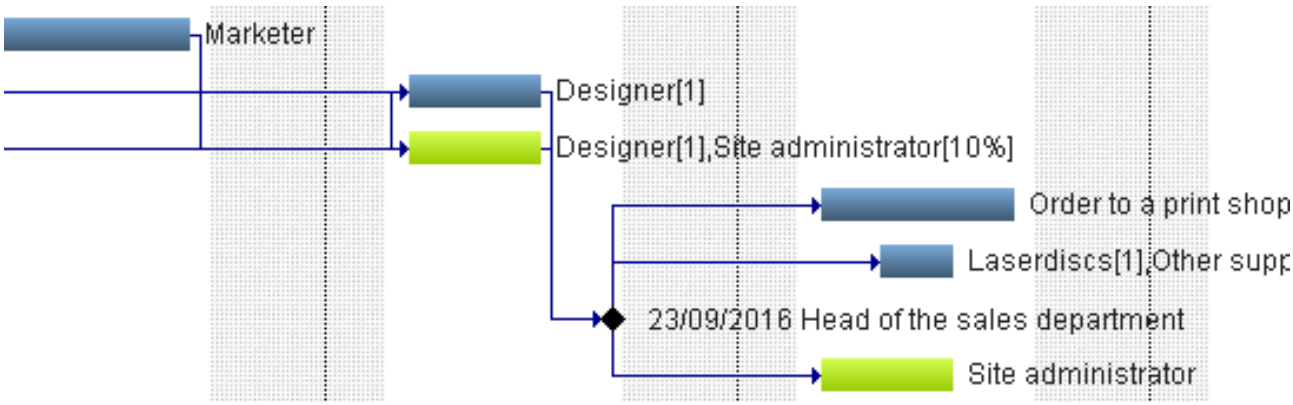


Fig. A.7.38. **Tasks with predecessors**

There are 4 types of dependencies (Table A.7.1).

Table A.7.1

Task dependencies

Icon	Dependency	Description
	Finish-to-Start	A task cannot start until its predecessor finishes
	Finish-to-Finish	A task cannot finish until its predecessor finishes
	Start-to-Start	A task cannot start until its predecessor starts
	Start-to-Finish	A task cannot finish until its predecessor starts

The use of resources is clarified on the "Advanced" tab. A specific date can be set for possible restrictions from the drop-down list (Fig. A.7.39).

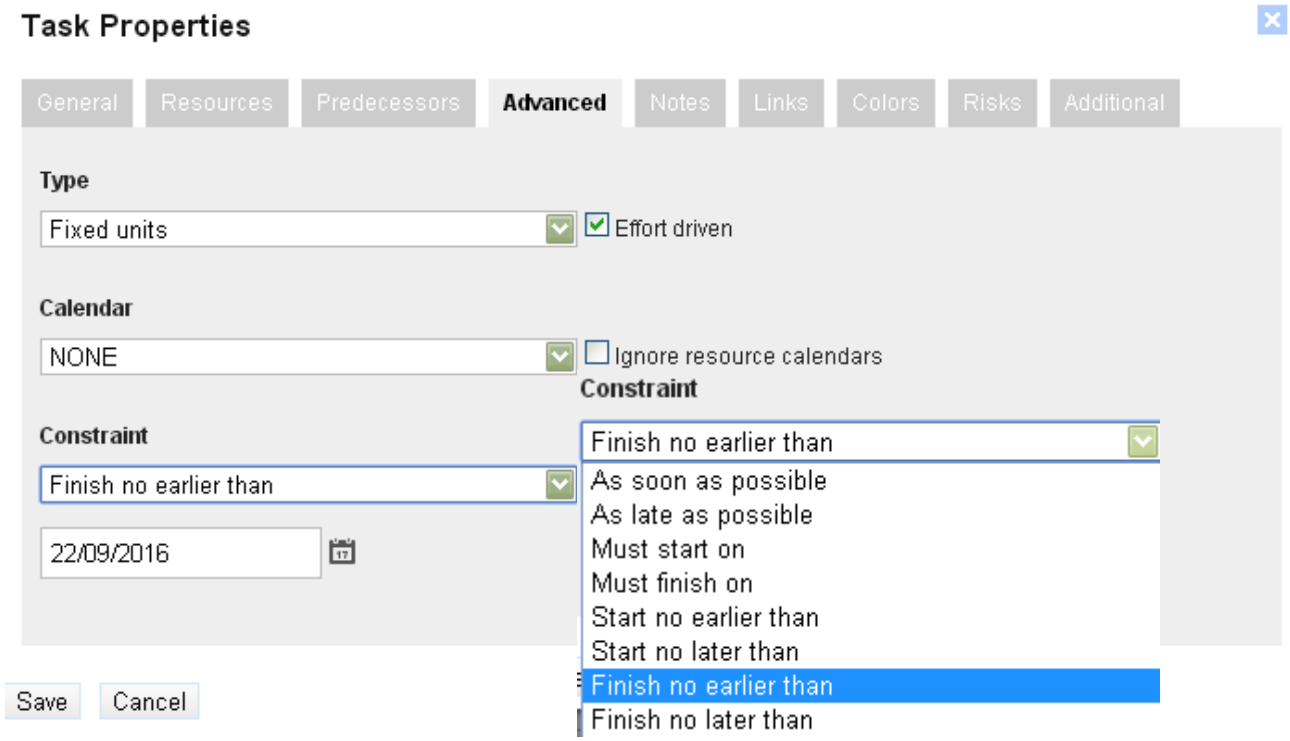


Fig. A.7.39. **The tab of advanced task properties**

The mode of limitations are the following (Table A.7.2):

Table A.7.2

Types of limitations for task resources

Name	Description
Fixed units (default)	When you change Work or Duration, the Units value remains constant, either Work or Duration is recalculated according to the formula
Fixed duration	When you change Units or Work, the Duration value remains constant, either Units or Work is recalculated according to the formula
Fixed work	When you change Units or Duration, the Work value remains constant, either Duration or Units is recalculated according to the formula

The block design for tasks on the Gantt chart and signatures of properties in the tasks table can be changed on the "Colors" tab (Fig. A.7.40).

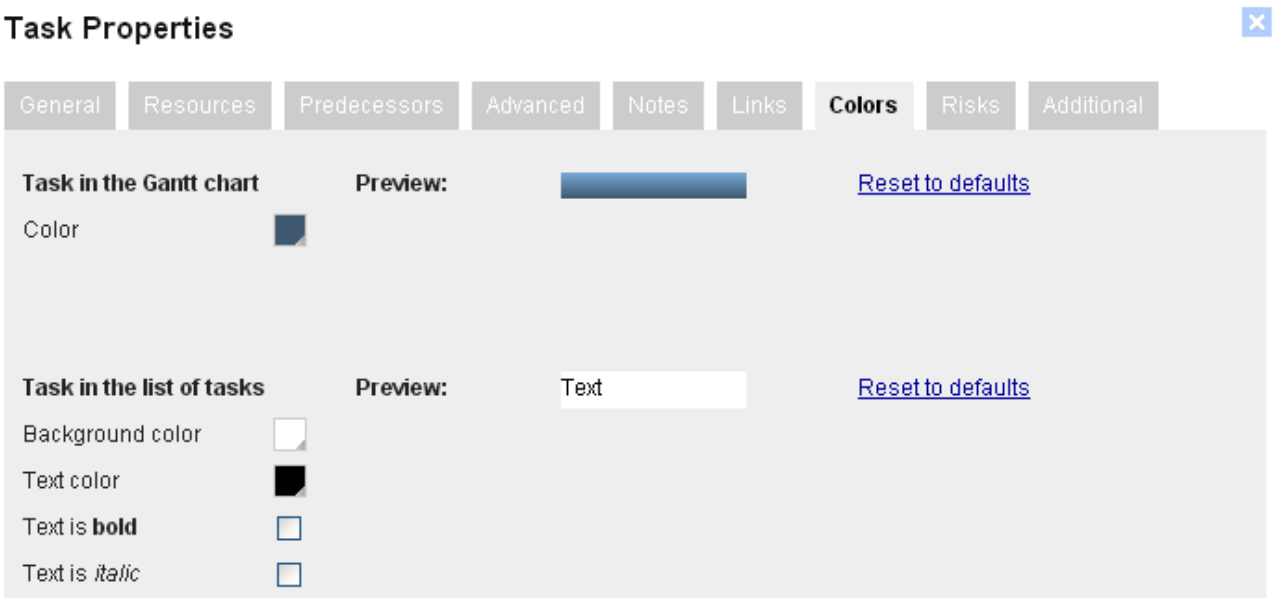
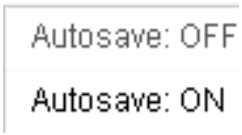


Fig. A.7.40. **The tab "Colors" for designing processes on the Gantt chart in the task properties window**

The total project costs are displayed when clicking the command "Show root summary task" of the "View" item in the main menu (or the costs for a selected resource if the filter is set) (Fig. A.7.41).

		Name	Duration	Cost
0		**"Preparation for the exhibition UITT-2016"**	16d?	10536 UAH.
1		Choosing the responsible for the project and	3h?	0 UAH.
2		Setting technical issues with the exhibition or	3d?	1185 UAH.
3		Choosing target consumers	2d?	675 UAH.
4		Developing the general idea of the exposition	4d?	800 UAH.
5		Drawing a booklet layout	3d?	400 UAH.
6		Preparing electronic materials (digital handou	3d?	466 UAH.
7		Printing booklets	4d?	5000 UAH.
8		Duplication of electronic materials on laser di	2d?	1100 UAH.
9		Testing materials with the help of focus group	1d?	250 UAH.
10		Placing media on the company's website	3d?	660 UAH.

Fig. A.7.41. **Viewing the total project costs**

To save current work on the project use the "autosave" function 

or press periodically the command button "Save to Google drive". 

.

The project file is saved with the extension *.gantter if you choose the option "Save to Google Drive" or "Export to local Gantter file"; with the extension *.xml if you select the option "Export to Microsoft Project (download)". An external file created with the Gantter or Microsoft Project software can be opened via the "Import" commands (Fig. A.7.42).

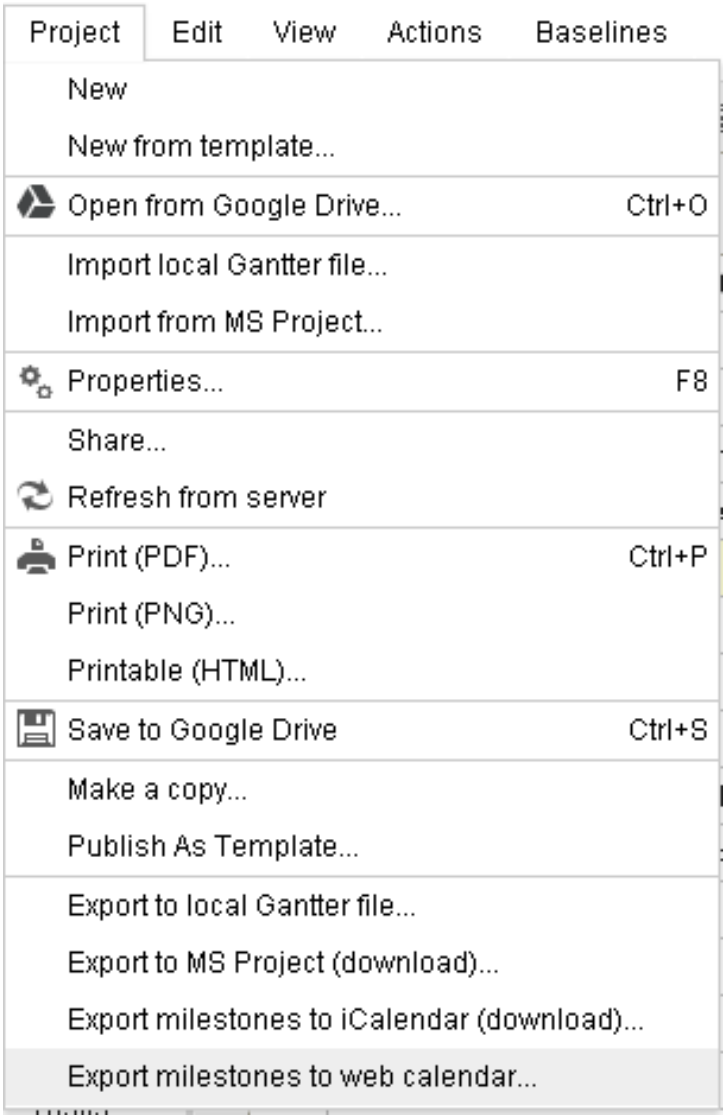


Fig. A.7.42. **Options for saving the work file of a project**

Selecting the "Print" command stores the table of resources and the Gantt chart in an external file (of the "pdf", "png" or "html" type) as an image. The previous work on the image design is not supported, and if the schedule is too big, the entire width of the same resolution remains still.

The project can be saved as a template ("Publish as Template").

Milestones for tasks are exported either as a single file in the *.ics format, which can be opened with special applications for electronic calendars, or the calendar integrated into Google.

Project milestones can be imported through the interface of the Google Calendar via a link or using the function of the calendar import.

Annex 8

Ramus software for creating models of business processes

The models of business processes should be built using Ramus Educational software during the training. Ramus is the system of modelling and analysis of business processes.

The main functions of the system are: development of graphical models of business processes in IDEF0 and DFD notations; development of business regulations, processes, job descriptions and other performance standards.

The features of Ramus software are:

the support of navigation through a model;

templates of frequently used diagram types;

the possibility to undo the last action;

the "intelligent" behaviour of arrows;

the unlimited number of attributes of different types;

the automatic construction of hierarchical trees in classifiers;

report templates that can be exported and imported in the XML format;

flexible graphical user interface;

cross-platform architecture – availability in MS Windows, Mac OS, Linux.

Local, network and educational versions of the product are available. For training tasks, the Ramus Educational version is needed, which only provides for local work and is limited to functionality.

Ramus Educational has the following limitations compared with the commercial local version:

no report editor;

the navigation through a model is not supported;

a limited list of available classifiers of attributes [http://www.ramussoftware.com].

Creating the IDEF0 model in Ramus

To create a new project using Run Ramus Educational, fill in the fields of the author, project name and model name. Choose an IDEF0 model (Fig. A.8.1).

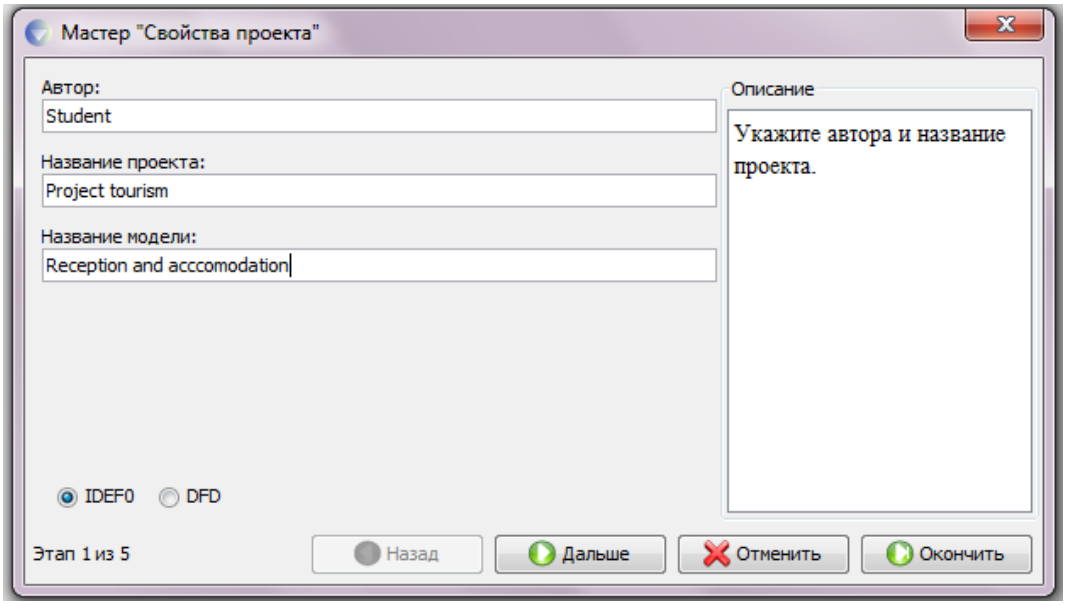


Fig. A.8.1. **The Project Wizard Window (Stage 1)**

Go on and indicate the organisation for which models of business processes are to be created in the next window (Fig. A.8.2)

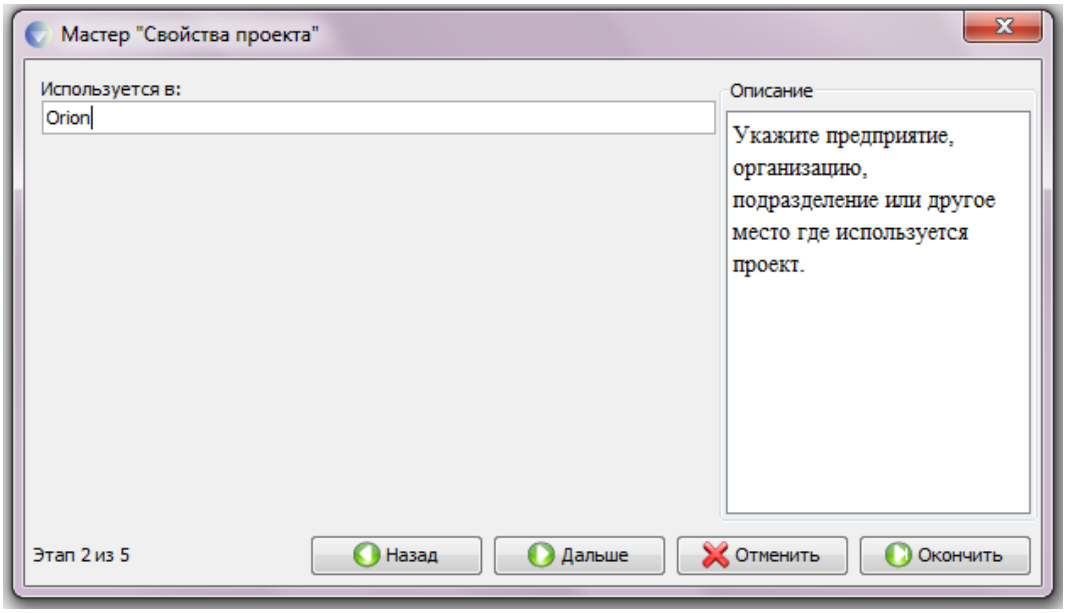


Fig. A.8.2. **The Project Wizard Window (Stage 2)**

At the next step, briefly describe the project for business process modelling (Fig. A.8.3).

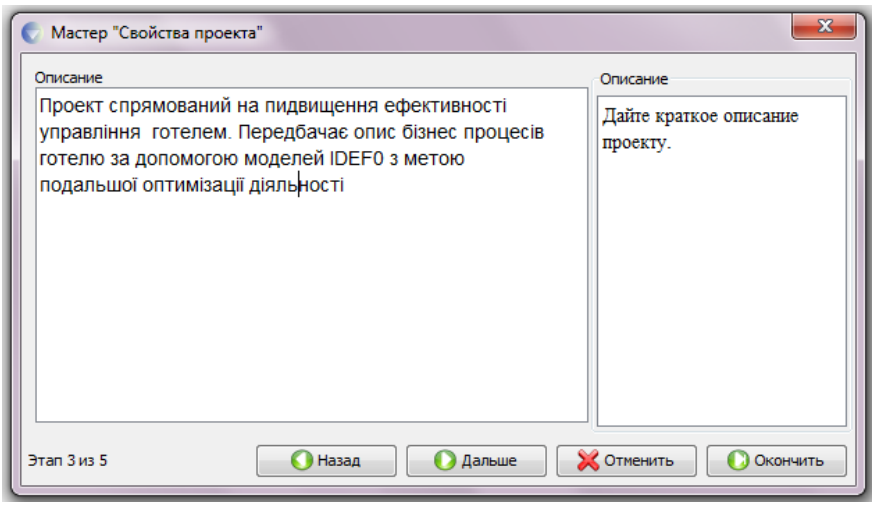
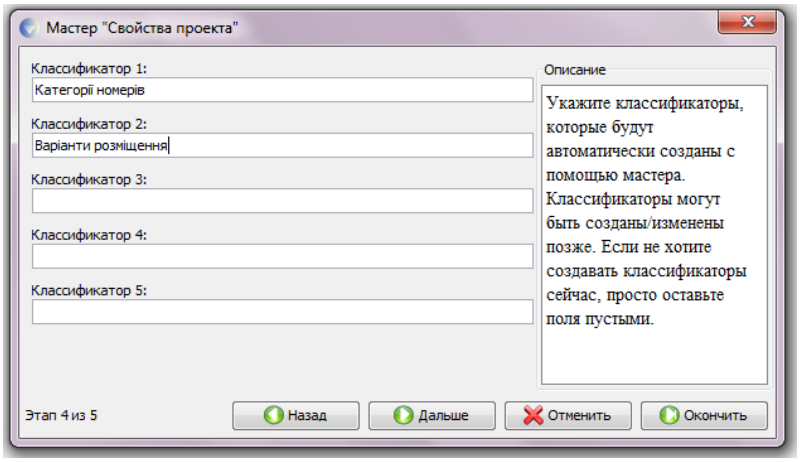


Fig. A.8.3. **The Project Wizard Window (Stage 3)**

Basic classifiers used in managing business processes in their chosen field are further specified and their settings are made (Fig. A.8.4).



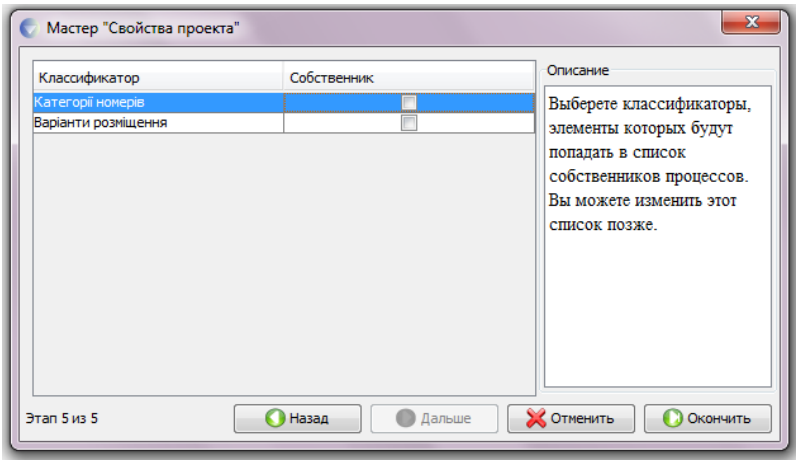


Fig. A.8.4. **The Project Wizard Window (Stages 4 – 5)**

After completion of the project creation stage, the main menu of Ramus Educational and workspace for building diagrams open (Fig. A.8.5).

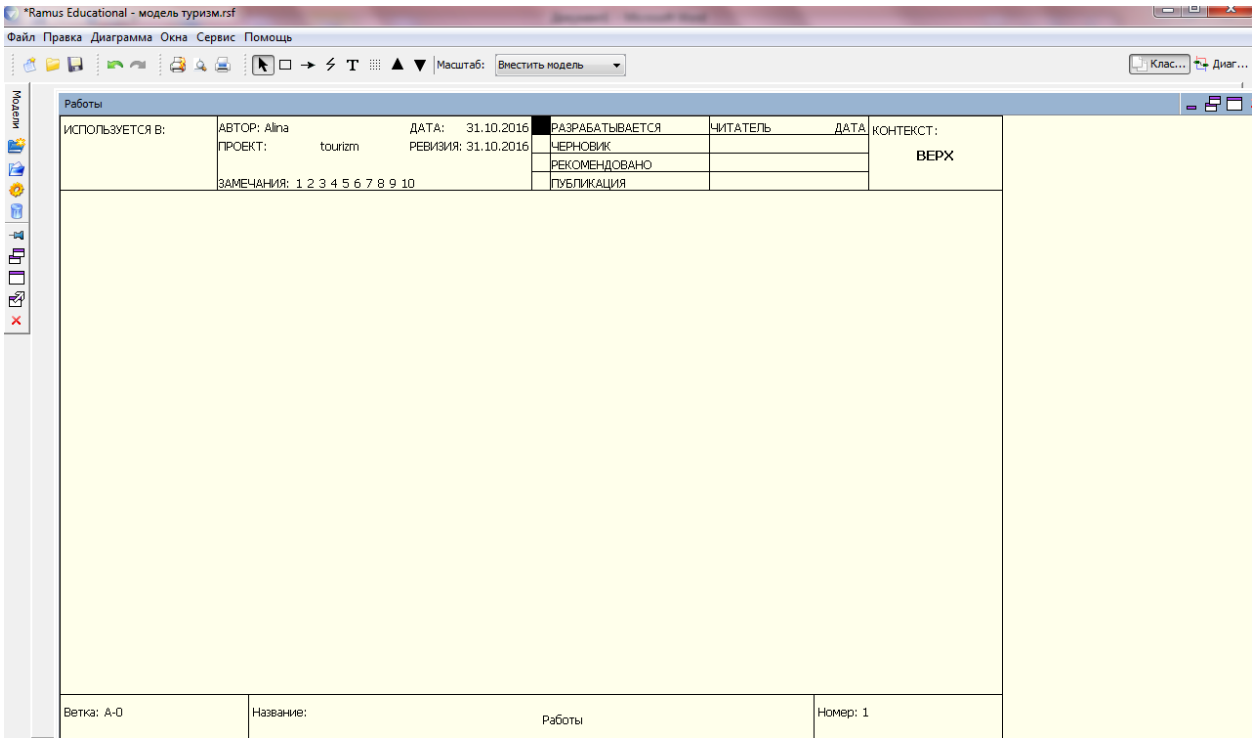


Fig. A.8.5. **The workspace of Ramus Educational for building a new model**

The diagram toolbar with the following buttons is used to create models of business processes:

– the cursor mode;

– the mode of adding a functional block (process);

– the arrow mode;

– the tilde mode;

– adding a text block;

– enabling / disabling the net;

– go to the parent diagram;

– go to the child diagrams.

A context diagram – the highest level diagram – is firstly created. To add a process diagram, switch to the mode of adding the functional block and click on the work area to build a diagram. The block of the process will appear (Fig. A.8.6).

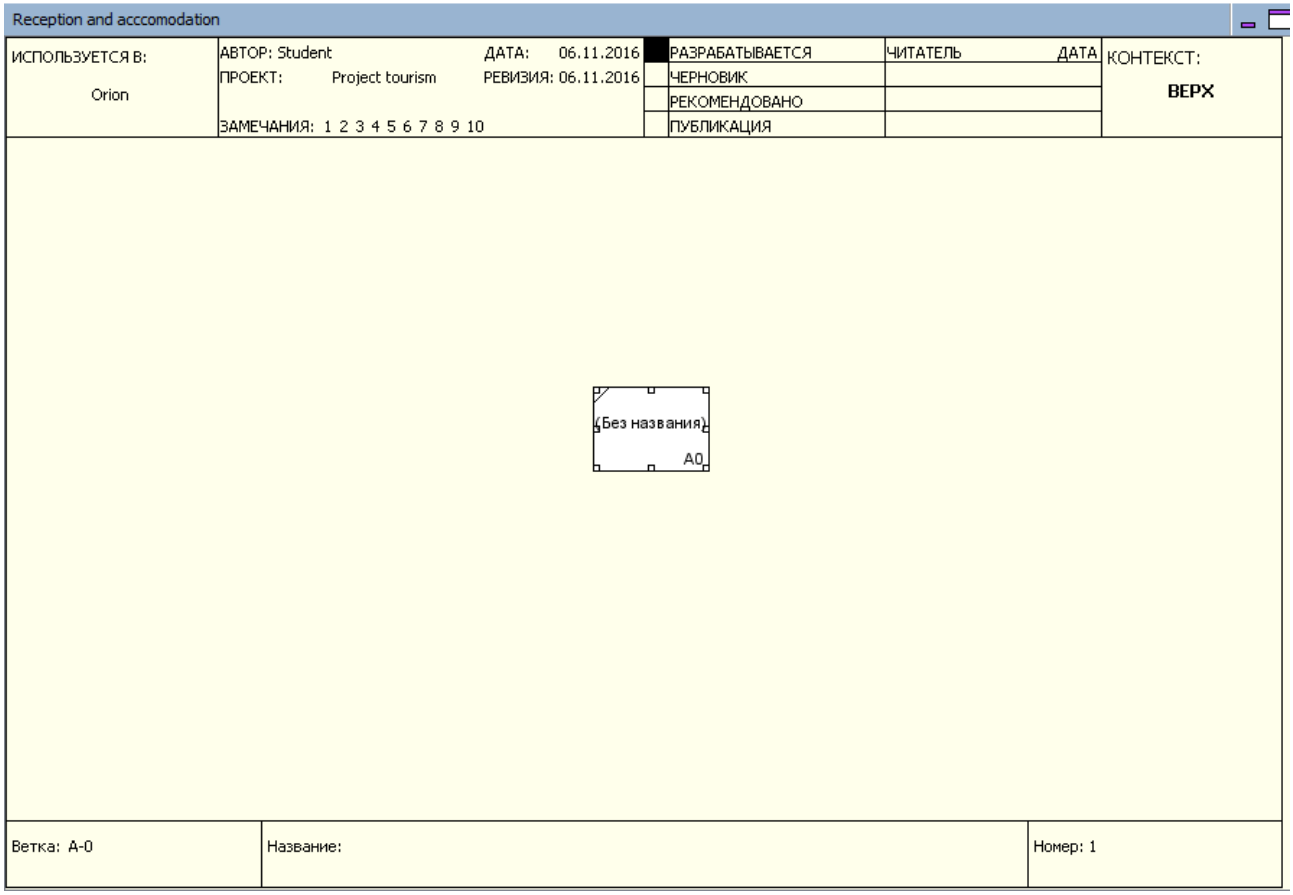


Fig. A.8.6. **The block of the process**

After creating the process, give it a name and set its parameters – open the process properties by double-clicking on the process (Fig. A.8.7).

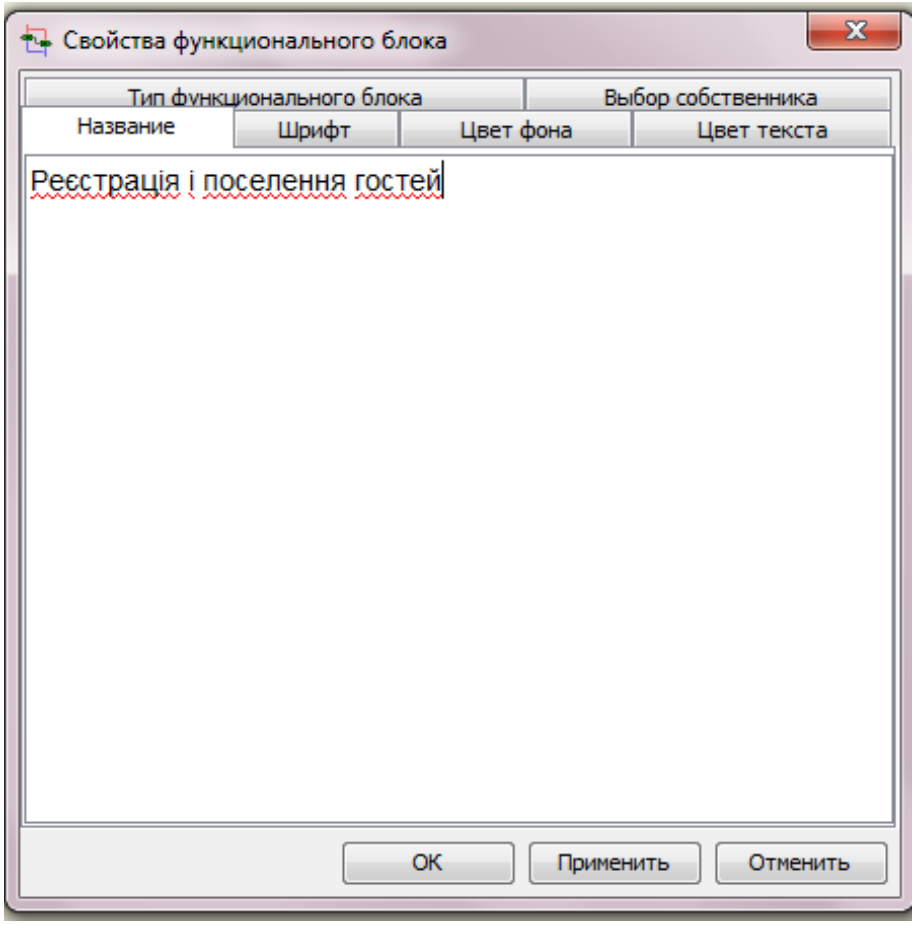


Fig. A.8.7. **The process properties window**

The process block can be moved and scaled on the diagram. After saving the project properties, the named top level process appears on the diagram (Fig. A.8.8). As has been mentioned, the diagram which contains the top-level process is called contextual.

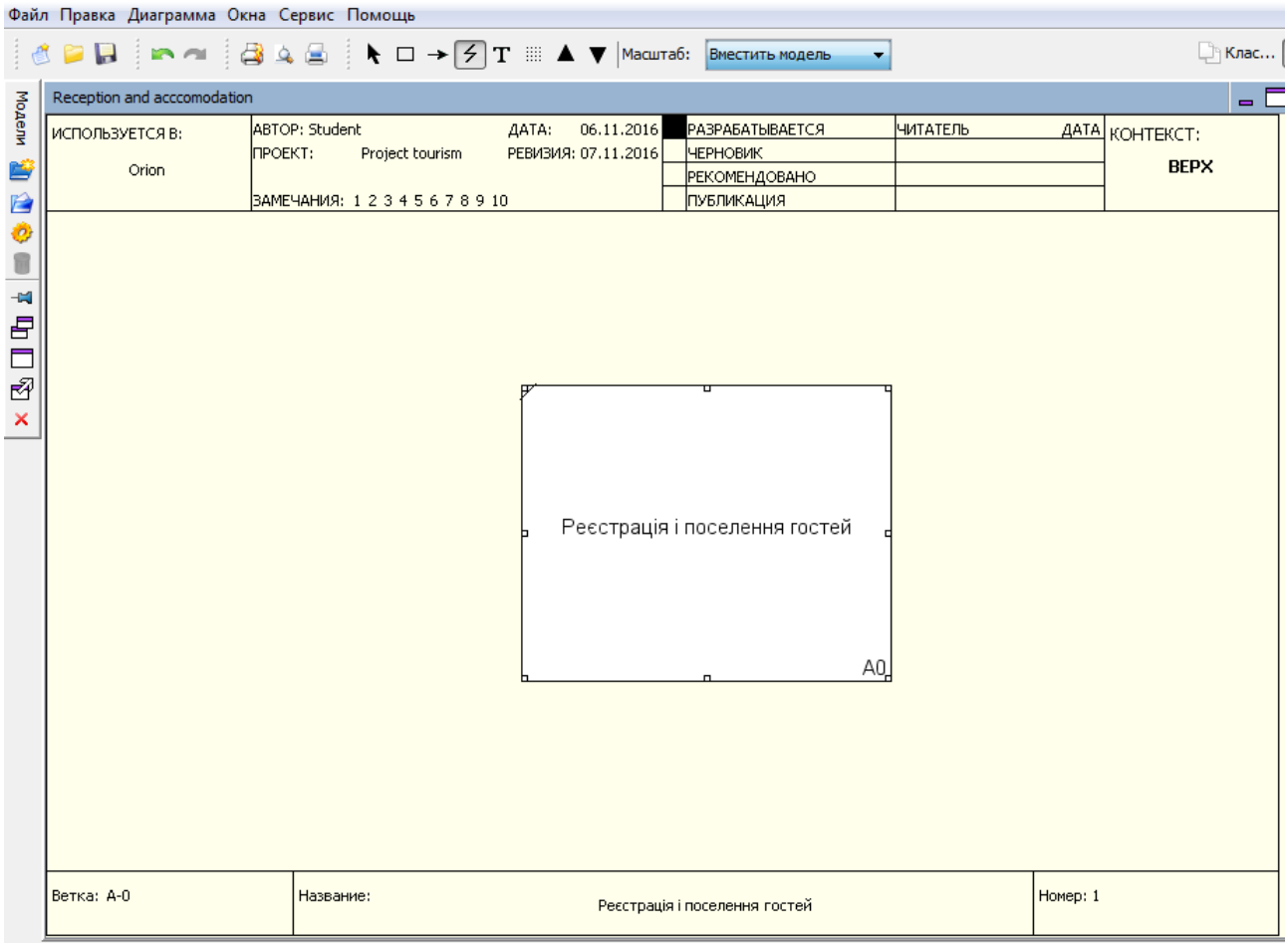


Fig. A.8.8. **The top-level process**

The upper level process is subject to decomposition – dividing into subprocesses. To create the decomposition diagram, select the demanded process and click on the toolbar button ▼ – "Go to the child diagrams". Specify the model (in our case IDEF0) and the number of functional blocks, into which the process is decomposed, in the window of the new diagram type creation (Fig. A.8.9). The number of units on the child diagram can be changed – the process block can be added or removed on the diagram later.

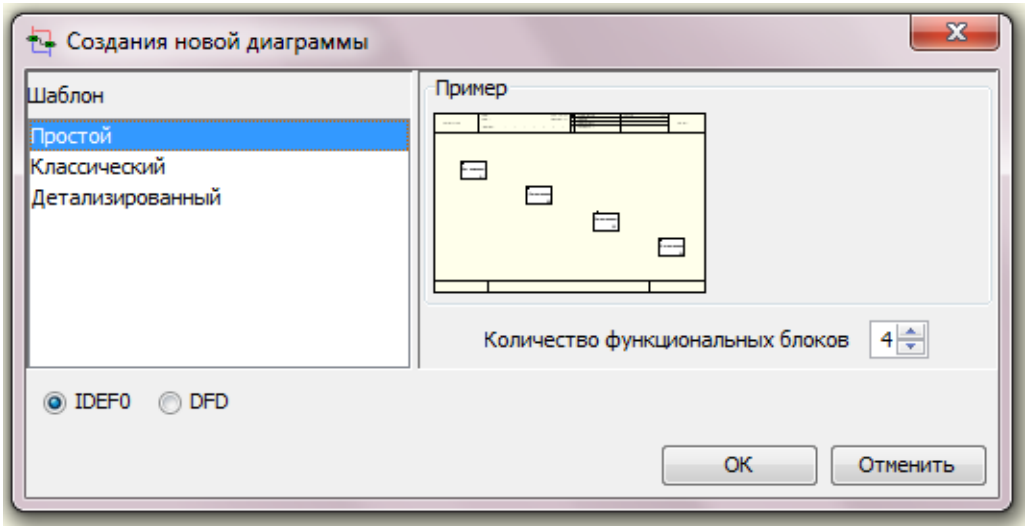


Fig. A.8.9. **The window of creation of functional decomposition diagrams**

For example, create a diagram (Fig. A.8.10) with four subprocesses within the top-level process "Registration and accommodation of guests".

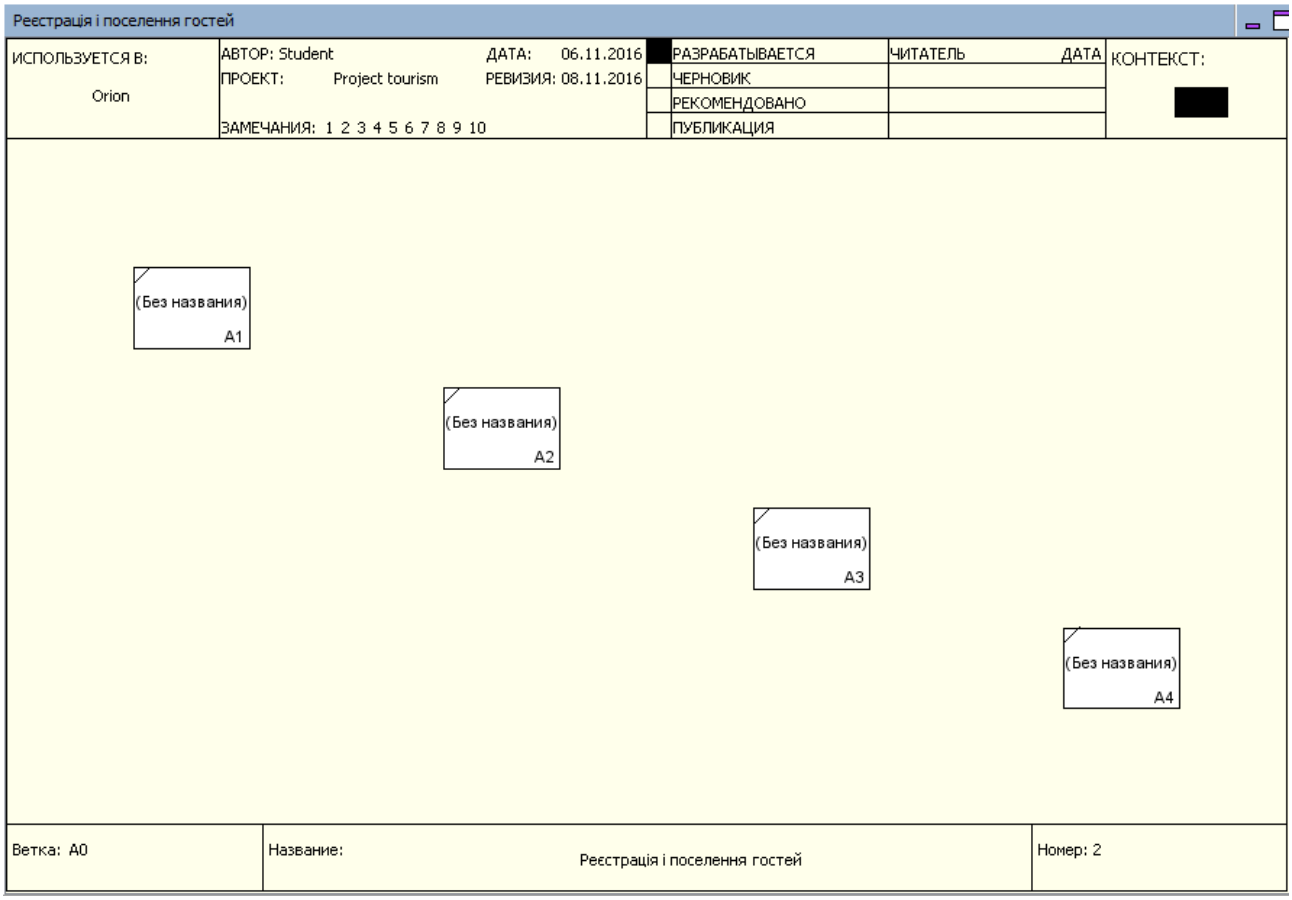


Fig. A.8.10. **The functional decomposition diagram**

Fill in the name and properties of each process one by one (Fig. A.8.11).

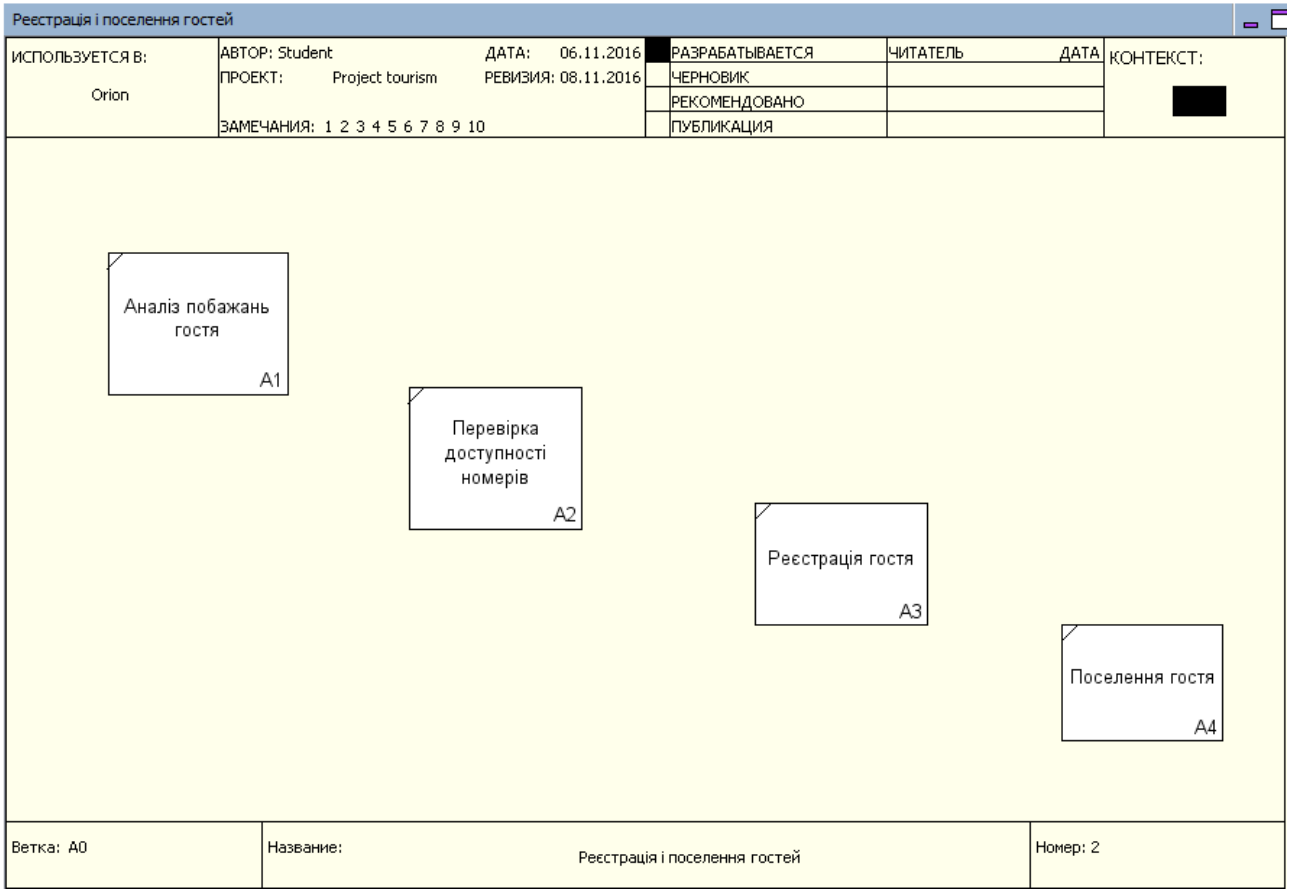


Fig. A.8.11 **The functional decomposition diagram with named subprocesses**

Switch to the context diagram, determine the output process and create outgoing arrows on the chart.

To create the process output, start the arrow mode on the toolbar, jump to the process block and click on it when the cursor takes a triangle shape (Fig. A.8.12). Then drag the cursor to the right border of the model building field and make a second click on the border that is highlighted in black (Fig. A.8.13). Thus, the arrow showing the process output has been created (Fig. A.8.14). The arrows of the contextual diagrams will be transferred to the decomposition diagram.

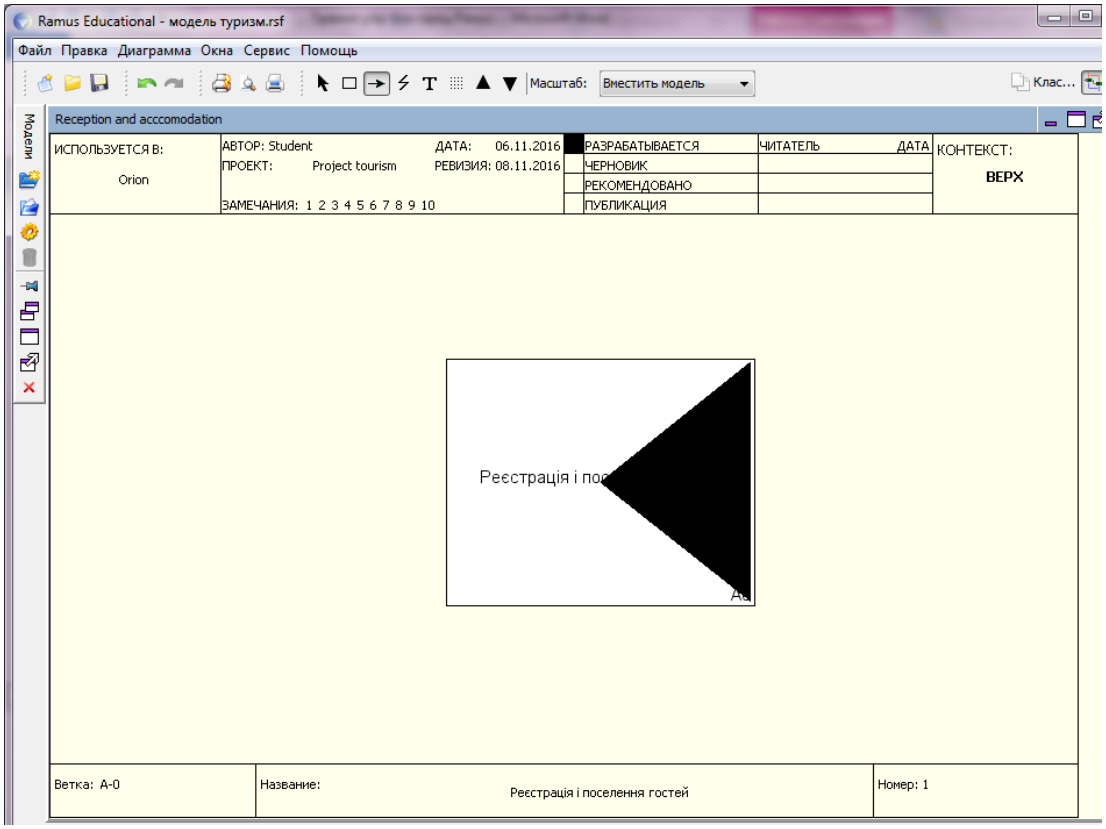


Fig. A.8.12. **Creating the process output (Step 1)**

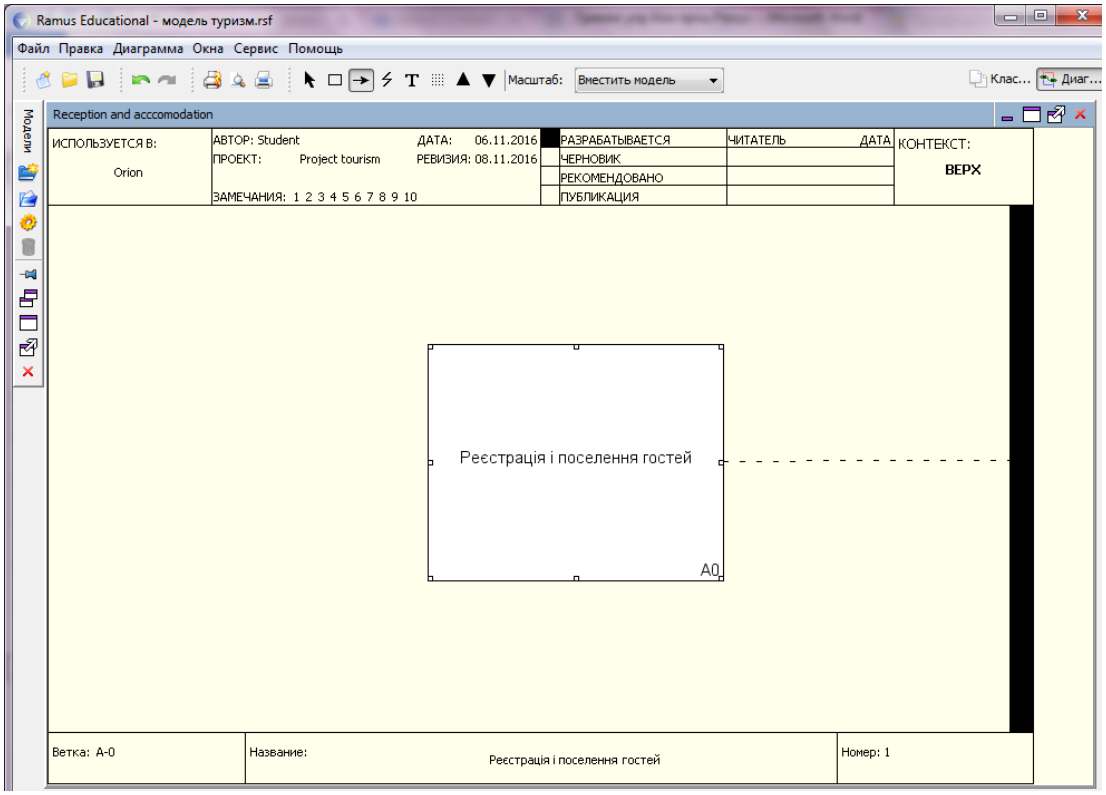


Fig. A.8.13. **Creating the process output (Step 2)**

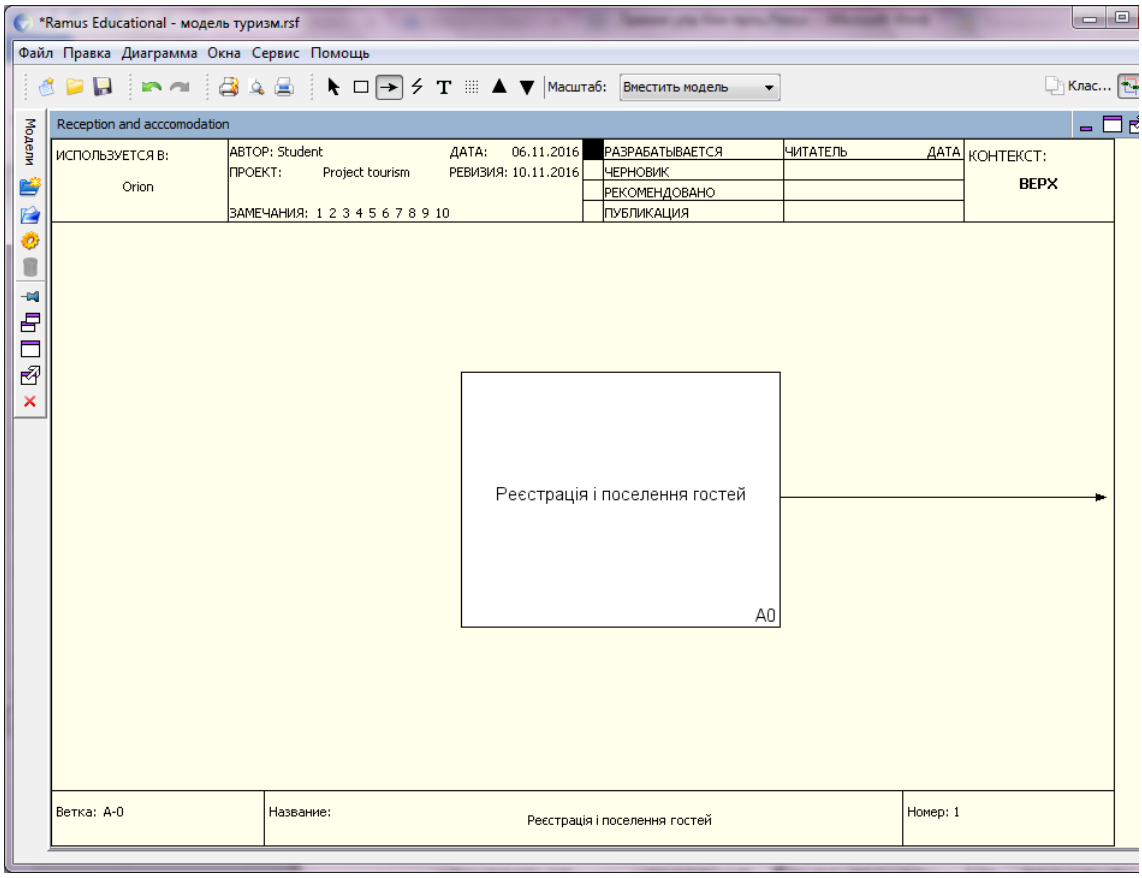


Fig. A.8.14. **The created process output**

Other arrows are created by the same principle. When creating business process inputs, start from the left border of the diagram and lead the arrow to the left border of the process. When creating the managerial (control) arrow, highlight the top border of the diagram firstly, then the upper border of the process block. When creating the arrow of mechanisms, highlight the bottom border of the diagram firstly, then the bottom border of the process block.

The diagram with the arrows of inputs and control mechanisms is presented in Fig. A.8.15. All created arrows are displayed on the functional decomposition diagram (Fig. A.8.16).

Complete the diagram by connecting subprocesses with each other, so that the output of the previous process is the input to another process. Combine the arrows that were moved from the context diagram, with the process blocks, and define intermediate inputs – outputs between the processes. The functional decomposition diagram is shown in Fig. A.8.17.

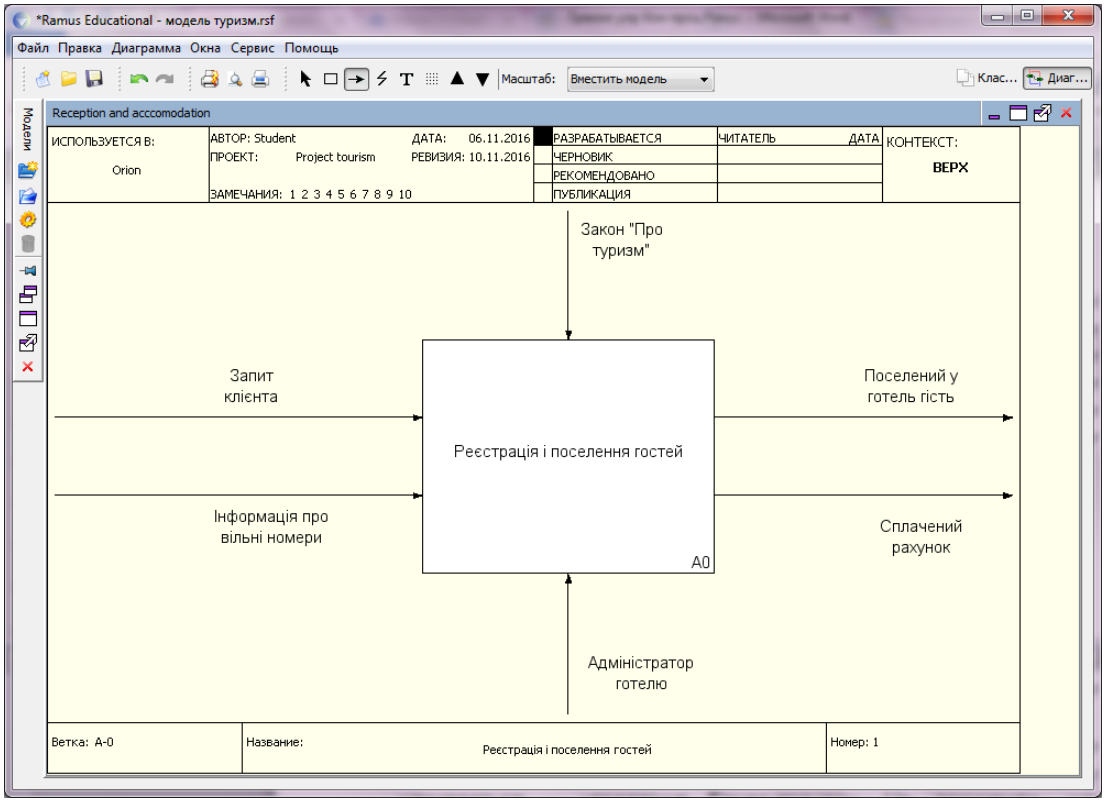


Fig. A.8.15. **The context diagram**

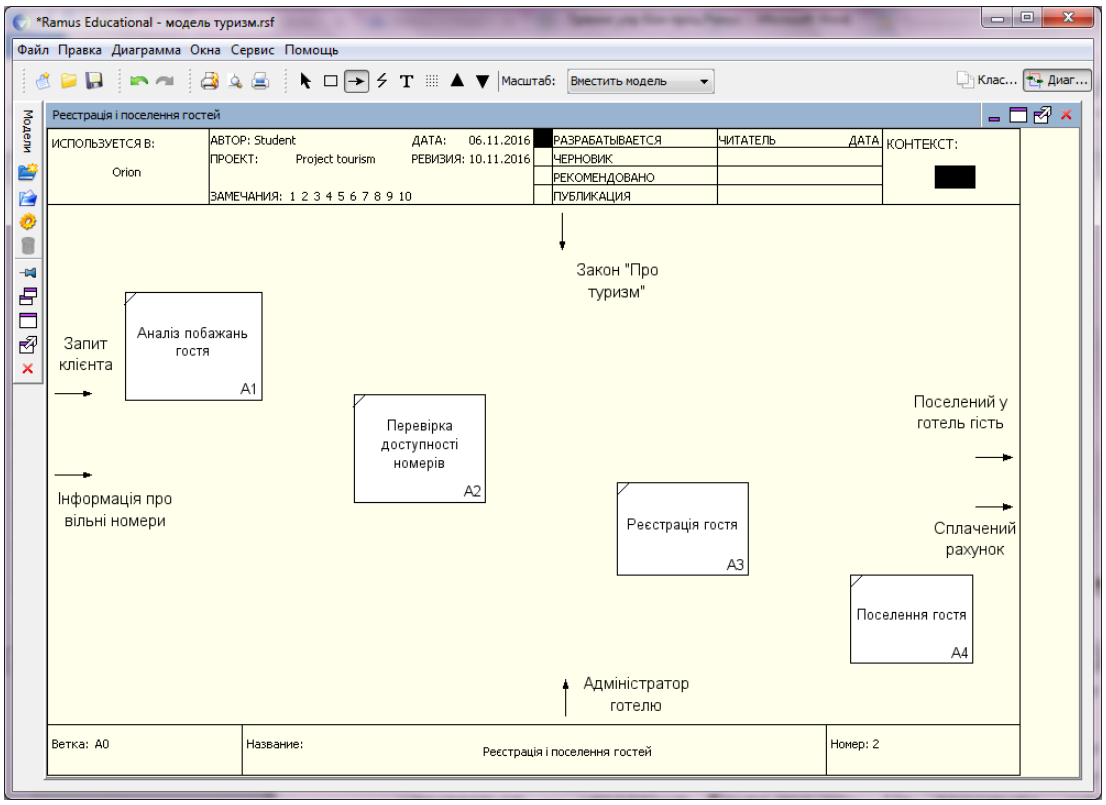


Fig. A.8.16. **The functional decomposition diagram**

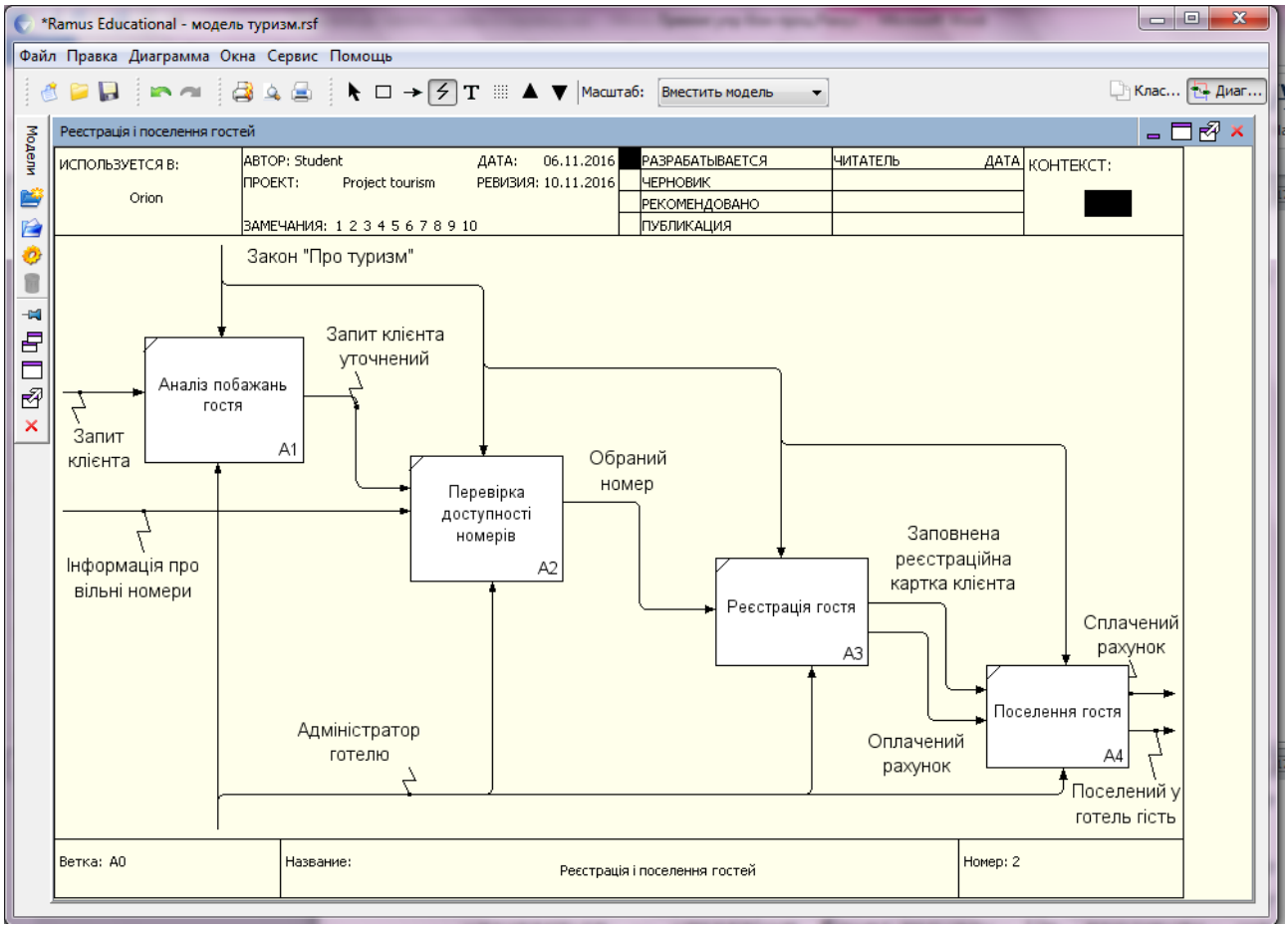


Fig. A.8.17. **The completed functional decomposition diagram**

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НАВЧАЛЬНЕ ВИДАННЯ

БІЗНЕС-ПЛАНУВАННЯ У ТУРИЗМІ

Методичні рекомендації
для проведення тренінгу
для студентів спеціальності
242 "Туризм"
першого (бакалаврського) рівня
(англ. мовою)

Самостійне електронне текстове мережеве видання

Укладачі: **Дехтяр** Надія Анатоліївна
Гниря Аліна Вікторівна

Відповідальний за видання *О. А. Сущенко*

Редактор *З. В. Зобова*

Коректор *З. В. Зобова*

Подано методичні аспекти організації тренінгової форми навчання у процесі підготовки фахівців галузі туризму, а саме: структуру і зміст тренінгового заняття, самостійної роботи студентів в межах тренінгу, форми контролю та критерії оцінювання ефективності тренінгу.

Рекомендовано для студентів спеціальності 242 "Туризм" першого (бакалаврського) рівня.

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