

# **I PRO 319**

## **Decision Making Tool for Warehouse Logistics Pricing**

### **Midterm Report**

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in consultation with  
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**Sponsors** Warehouse Education and Research Council &

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**Illinois Institute of Technology**  
March 22, 2007

## 1. Objectives

The IPRO 319 team's objective for this semester is to update and modify a model of a distribution operation which will aid companies seeking to outsource logistics operations. However, the team's main objective is to add a Request for Proposal tool to the existing model allowing companies to determine the effectiveness of outsourcing different aspects of warehouse operations. This team hopes to generate willingness in its members to establish an environment conducive to team-oriented goals, as outlined in the objectives below. Successful completion of the goals presented here will require each participant to gain useful experience and knowledge regarding teamwork, inter-professional skills and specifically warehouse logistics pricing. For the spring semester, the team has set forth the following objectives:

- Analyze existing model (Shipping, Manufacturing, Transportation, etc.) in terms of being user-friendly and effectiveness at accurately predicting cost versus revenue and whether the operations input should be outsourced.
- Refine the current model given the suggestions of a surveyed group, not differentiating the contributions of the IPRO students from the software users.

Progress: Under development, code from the first semester has been reviewed. The idea of using a surveyed group external to the IPRO team has been removed due to time constraints.

- Research costs associated with logistic processes.
- Develop a multi-purpose activity outsourcing tool for common use called "Request for Proposal"
- Develop the model with a more in-depth setup, beyond that of just what the FAQ team suggests, including not just the request for proposal, but a request for information tool.

## 2. Results to date

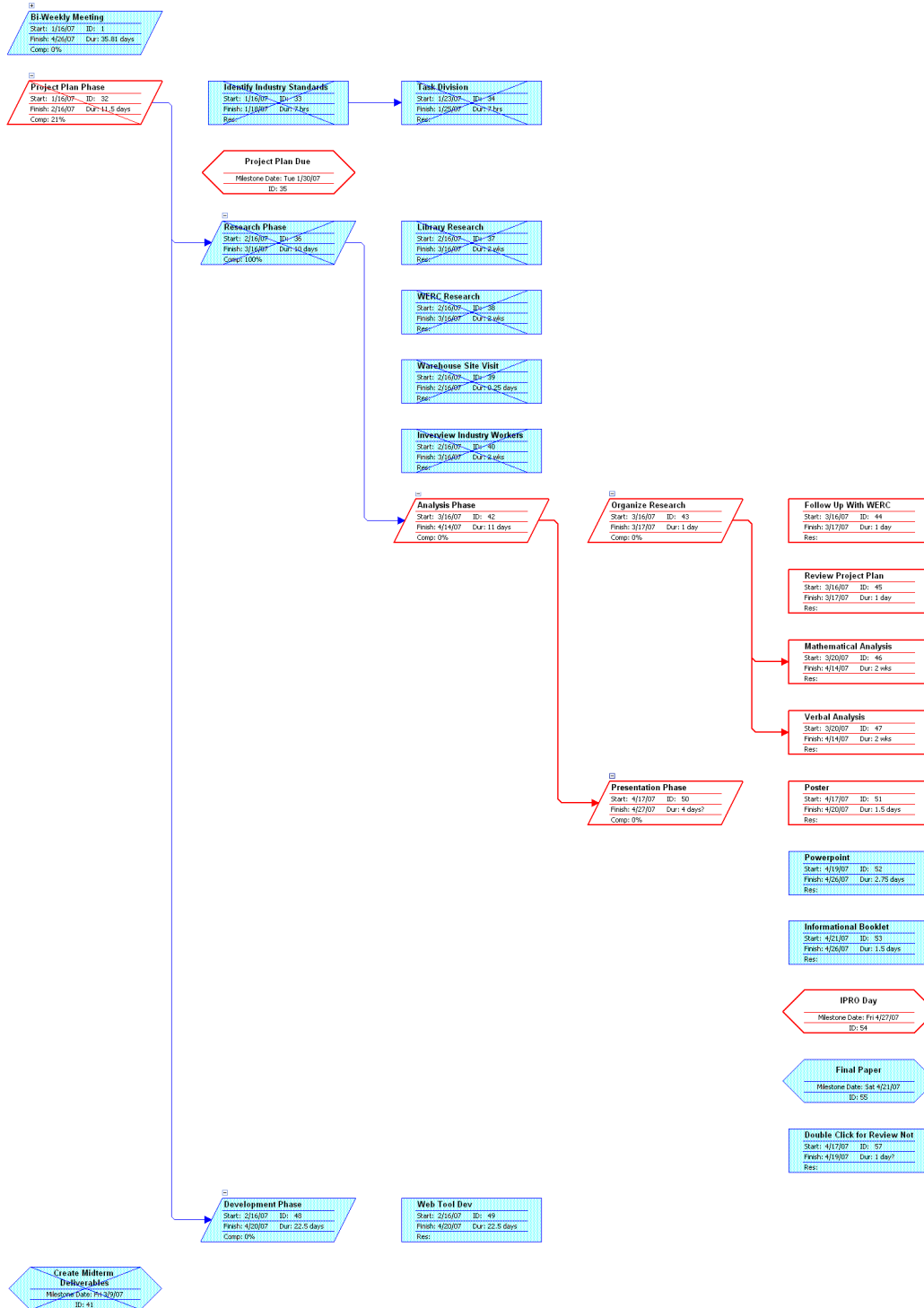
Current IPRO 319 results closely resemble the expected outcomes of the team set in front of them two months ago. Analyzing the model was first of our objectives which we successfully achieved throughout the course of this semester. We finished the process of implementing the updates to the tool in order to make an advanced up to date version that corresponds to the model. Setting a new user-friendly interface has been a goal that our programming team has chosen to achieve and so far we have finished the design of it and are currently implementing it.

The programming group has also finished their goal of identifying the previous IPRO's source code for the tool and was able to set up working version. Also, the RFP sub-group has finished its task of creating RFI-RFP templates that can be put on the WERC server so companies can just filling in their requirements and sends them out to other companies to help them realize their outsourcing needs.

The RFP sub-team researched many RFIs from online sources and different companies in an attempt to design our necessary template that is to be integrated into our model. We are also in the final stages of finishing the FAQ section of the tool that will help users with their needs.

In terms of deliverables IPRO team have RFI, RFP templates samples, programming team created description files of all the container classes of the program and FAQ team has developed word type document with actual FAQ, values were identified. All of these current results addressing problem directly and indirectly (programming team mid section outputs) and have a huge impact on the solution to the sponsors problem.

### 3. Revised Task / Event Schedule





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The team is currently following the schedule originally proposed in the project plan. There have been no changes to important project tasks pertaining to the problem solution or project design. The only change to the timeline is the warehouse visit, which was rescheduled for March 23, 2007.

Please refer to the network diagram for summary tasks or sub-tasks pertaining to IPRO deliverables. Refer to the Gantt chart for all associated due dates, a revised estimate of hours needed and number of team members needed to complete each sub task.

The research phase of the project has been completed and the division into four sub-teams has occurred for further development. The division was based on the fact that the team will deliver several types of deliverables:

- Mathematical MS Excel model
- Web-based model
- Verbal sections for the model, *Suggestions* and *FAQ*
- RFI/RFP – New model
- IPRO deliverables, such as the poster and PowerPoint presentation

Sub-team members were selected in accordance to everyone’s interests, previous experiences and abilities. The following is a list of the members, roles, and majors at IIT. See section 4 *Updated Task Assignments and Designation of Roles* for sub-team assignments.

Name	Role	Major	Other
Khanh Duong	Time keeper	CPE	
Uchenna Egwu		ME	
Justin Ma		AE	
Arthur Mcanally		CS	
Kristin Mrozinski		ARCH	Warehouse & RFI/RFP experience
Douglas Oh		EMGT	
Nickolay Schwarz	Team leader, Master scheduler	CS	IPRO-experience
Sarah Stone	Secretary, Weekly Timesheet Collector/Summarizer, Minute taker	PPPS	Warehouse experience
Aleksandar Sudar	Team leader (assistant)	CHE	
Hee Jeoung Yu		CPE	
Arthur Zavala	Agenda Maker	PHYS	IPRO-experience
Herb Shields	Professor		

**4. Updated Task Assignments and Designation of Roles**

Our current organization is the same and no changed occurred in the organizational structure due to the amount of results provided by this structure (refer to section 2). Where are though revised subtasks in the subteams because of individual skills and abilities.

**Team Leader:**

Nickolay Schwarz

**Assistant Team Leader:**

Aleksandar Sudar

**Minute Taker:**

Sarah Stone

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In charge of recording decisions made during meetings including task assignments or changes under consideration.

**Agenda Maker:**

Arthur Zavala

Responsible for creating an agenda for each team meeting. This provides structure to the meetings and offers a productive environment.

**Time Keeper:**

Khanh Duong

Responsible for making sure meetings go according to agendas.

**Weekly Timesheet Collector/Summarizer:**

Sarah Stone

Responsible for collecting weekly timesheets from each member of the team and updating everyone with a summary report.

**Master Schedule Maker:**

Nickolay Schwarz

Responsible for collecting schedules from all the team members and developing a master schedule, which tells the team when members are available and how to contact them.

<b>Development (programming) Team</b>		
Develop the online tool based on web technology.		
<b>Name</b>	<b>Role</b>	<b>Responsibilities</b>
Schwarz, Nickolay	Sub-team leader	Overall
Khanh Duong		Design and backend development
Arthur Mcanally		Design and backend development

<b>FAQ Developing Group</b>		
Modify and improve existing model, develop manual of how to use it.		
<b>Name</b>	<b>Role</b>	<b>Responsibilities</b>
Sarah Stone	Sub-team leader	Overall
Douglas Oh		Variables, formula identification
Hee Jeoung Yu		Questions and answers
Kristin Mrozinski		Questions and answers

<p><b>Request for Proposal Team</b></p> <p>Responsible for the development of multi-purpose pricing based outsourcing tool</p>		
<b>Name</b>	<b>Role</b>	<b>Responsibilities</b>
Justin Ma	Sub-team leader	Overall
Uchenna Egwu		RFI development
Aleksandar Sudar		RFP development
Arthur Zavala		RFP development

**5. Barriers and Obstacles**

The IPRO 319 team had obstacles and barriers similar to all groups during their forming and storming phases of team building. However, our IPRO was a continuation of last semester’s project therefore arise problem of understanding what are we required to do so the goals were unclear. The final project deliverable was demonstrated mid-semester which cleared many questions that our group had. Had this demonstration been shown earlier, our group would have had a clear idea of what the goal of our project was.

Another barrier is that our group was divided into sub-teams and communication was not effective enough to allow objectives to be clear to the sub-team leaders. The sub-team leader’s absence during our scheduled meetings left the team clueless because we did not officially assign someone as a substitute leader who had a clear idea of what to do. Fortunately feedback session and discussion with all team members helped us to get on track. Comments were made, acknowledged and improvement is under progress. Apart from that one of the other obstacles we have met was the understanding of tasks to be done in complex world especially what is required by the tools we are ought to build. We have faced this issue early on and resolved it by having interviews with experts in warehouse/distribution business and identifying RFI, RFP structure. Sub team discussion along with brainstorming and information from experts allowed us to select the model of RFI, RFP that want to use.

Our knowledge of ethics , individual skills and abilities allows us to advance through the project effectively without ethical problems. We do realize that there is a possibility of barriers or obstacles that can appear during later work. Some of them could be lack of time, difficulty of modeling the warehouse, programming complexity unrealistic, loss of interest of the members and others. However, we are ready to face them and solve them both independently and as a team.