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## **Detective Game – what killed the project?**

### **Purpose**

The purpose of the deductive tabletop game is to apply Earned Value Management (EVM) for the monitoring and control of a software project as part of teaching project management.

### **Goals and objectives**

#### **Goal**

On the cognitive level, the learning objective of the game is to reinforce EVM concepts and to teach the competency to apply basic EVM calculations covering the cognitive levels remembering, understanding and application in accordance to the revised version of Bloom's taxonomy of educational objectives (Anderson and Krathwohl, 2001).

#### **Objectives**

After the game session, participants will be able to calculate and interpret variances and performance indexes (Cost Performance Index (CPI) and Schedule Performance Index (SPI)) to monitor project progress as part of Earned Value Management.

### **Primary target audience**

The activity is intended to be used as part of project management courses (either as part of a university course or professional training) targeted to teach project management professionals and students. A pre-requisite for the application of the game is that the participants have a basic understanding of project management and earned value management taught, e.g., through lectures.

### **Group size**

The game should ideally be played with several groups, each composed of about 4 participants.

### **Duration**

<b>Phase</b>	<b>Duration</b>
Explanation of the activity and distribution of material	10 min
Analysis of the project materials	60 min
Debriefing and identification of winner	20 min
<b>TOTAL</b>	<b>90 min</b>

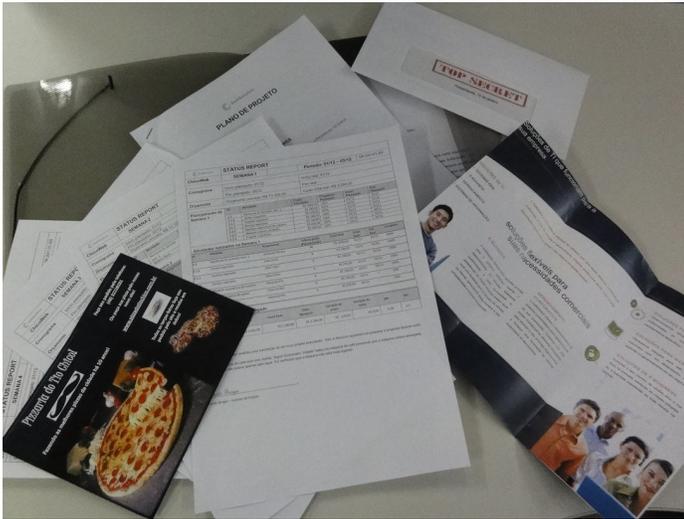
### **Physical setting**

Room size depends on the number of groups providing sufficient space for each group for playing the game. At least one large table (or several small ones used together) should be available for each group.

### **Materials and equipment**

Slides for the explanation of the game

Project folder containing: Company brochure, Pizzeria brochure, Project charter, project plan, status reports (week 1 – week 4), payroll, contraction letter, customer complaint letter, answer sheet, tips sheet  
Solution sheets



### Process

The game takes place in the context of a hypothetical software company, SoftSolution that finished a software project for the development of a pizza ordering web site for Tio Chico's pizzeria. The project failed and now the company is contracting the players as consultants in order to identify what went wrong. Therefore the players receive a set of project documents including, e.g. the project charter, project plan and the status reports of all 4 weeks of the project duration.

The players then have to analyze the project documentation and revise its monitoring and control. Therefore, the students have to complete the calculations of schedule and cost variances as well as the performance indexes for week 3 and 4 of the project. In addition, based on EVM the students have to indicate for each week of the project, if there has been a schedule and/or cost overrun as well as try to identify the possible causes.

For each correct calculation and correctly identified overrun, the groups receive a point. The winner is the group of players obtained the largest number of points.

Once finished the analysis phase, the results are presented by the instructor and questions of the students are discussed.



Figure 1. Students of a Project Management Course of the Information Systems Undergraduate Course at the UFSC - Federal University of Santa Catarina/2011.

### Debriefing main points

Debriefing is directed to reflect on the usage of EVM to track the progress of the project, including discussion questions, such as: What do the performance indices reveal? How did your project perform regarding the performance indices? Why did this happen (e.g., why did you did the execution take longer than planned?) as well as demonstrating its importance.

In a second part of the debriefing, the objective is to briefly reflect on the activity as a learning opportunity, discussing questions, such as: What did you learn through this activity? How can you apply this in your daily work?

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### References

Anderson LW, Krathwohl DR (eds) (2001) A taxonomy for learning, teaching, and assessing: a revision of bloom's taxonomy of educational objectives. Longman, New York