



# OPERATION DIGITAL BUTTERFLY

## Guide to the Game

Version: 1.1  
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Adaption aus Operation Digitale Ant:  
<https://github.com/NutriSafe-DLT/operation-digital-ant>

## Preparation

### Goal of the Game

The goal of the game is the entertaining awareness raising and education of the players regarding the vulnerabilities of supply chains and the risk of insider threats.

### Player Count

The game can be played with 3-4 teams and each team can consist of 3-5 players. So the game can be played with 9-20 players.

### Structure

For the game to work well, it is a good idea to complement the game with an introductory lecture and a concluding discussion. The introductory lecture should include the thematic complexes of insider threats (definition, types) and the associated extraordinary attack possibilities as well as resilience of supply chains. In the concluding discussion, it is useful to discuss possible defensive measures against the developed attacks using the NIST categories *Identify*, *Protect*, *Detect*, *Respond* and *Recover*.

### Duration

The total duration depends on the structure of the introductory lecture and the discussion. The game round, the presentation of the attacks and the evaluation round usually take between 90 and 120 minutes. Altogether, about four hours are to be expected.

## Game Materials

### The Board

The board consists of the floor plan of an organization integrated into a supply chain, with various technical and non-technical assets. The crosshairs mark the points that are to be harmed by the attack (e.g. customers in the supply chain). The evaluation of the damage potential is later based on this.

### Role Cards / Scenario Cards

The role cards are always specific to a given board and indicate the roles within the organization of the insider threat actors played by the teams. Alternatively, scenario cards can be used instead of the role cards to determine the boundaries for the teams.

### Character Cards

The character cards are an essential part of the teams' decks. Here, role, intention, motivation and justification to oneself should be entered. This information should be considered in the plausibility assessment later.

### Scene Cards

The scene cards allow for the notation of the attack paths and tell stories developed by the respective teams. The team fill the scene number, location and the action itself (in continuous text or bullet points).

### Security Measure Cards

Using these cards, the teams each define a security measure that will later apply to all teams. The measures defined by the teams should later be included in the plausibility assessment.

### Rating Cards

The evaluation cards specify how the teams should evaluate each other. This is done in the categories *Plausibility of the Role*, *Plausibility*

*of the Story* and *Damage Potential*. Any bonus points collected are added to this.

## Game Flow

### 1) Forming Teams

The players are divided into balanced teams (see above for the number of players). It makes sense to distribute the players in such a way that as many different competences as possible (e.g. from different departments or divisions) come together within one team.

### 2) Picking Roles / Scenario Definition

Each team openly draws a role from the role cards. The order in which the rolls may be drawn can be decided by dicing. The role card indicates the position of the insider played by the drawing team. Alternatively, teams can be given a free choice of roles. In this case, a scenario card is presented instead of the role cards. This scenario is then the basis for the stories of all teams.

### 3) Game Round

The game lasts 55 minutes. During this time the teams are separated so that they cannot influence each other. During the first 10 minutes the teams are supposed to familiarize themselves with the board. After that the players have the following tasks in the game round:

- Filling the character card according to the drawn role card
- Creating an attack path: Players tell a story using the scene cards. In each scene, the location where the action takes place should be entered. The plot can be written down in continuous text or in bullet points. It is important that everything relevant is written down, because only that will count later. It is important to make sure that the numbering of the scenes is correct. A team can gain bonus points by including rooms or objects in the attack path (either as an attack target or as a means to achieve the goal), which are marked on the board with a flag symbol.
- Filling out the defensive card (security measure): By using the defensive card, the players define a security measure that will later apply to ALL teams. The measures defined by the teams should later be included in the plausibility assessment. When defining the measure, it is important that the players fill out the card in such a way that the measure does not disrupt their own attack path, but undermines other attack paths (e.g. of the other teams) as much as possible.
- Assigning a spokesperson: Each team should assign a spokesperson who will present the character, the developed attack path and the security measure.

### 4) Presentation of the Attacks

Speakers assigned by the teams present the characters, attacks and security measures developed by the teams. It is helpful for the other teams to take notes for evaluation during the presentation.

### 5) Rating Round

In the evaluation round, one team is always evaluated by the other teams. A rating is always given by the whole team in consensus decision, not by individual players. The order in which the teams are evaluated can be decided by throwing the dice (highest number first).

The players have the following tasks in the rating round:

- Points are awarded to the other teams according to the rating cards. For the main categories *Plausibility of the Role*, *Plausibility of the Story* and *Damage Potential*, 1 to 10 points are awarded for each. In addition, a team can earn bonus points by including rooms or items in the attack path (either as an attack target or as a means of achieving the goal) that are marked with a flag symbol on the game board. The number next to the flag symbol indicates the bonus points to be achieved. For the bonus points, it is decided in each case whether the team receives the bonus points or not, a partial allocation is not possible.
- The team afterwards will present the ratings, with a short reason for the score in each category. It is a good idea to note this when determining the points.
- Assigning a spokesperson: Each team should assign a spokesperson to present the ratings.

## Game Rules

- 1) No Internet research may be done in the game round. The players should rely solely on their knowledge and creativity.
- 2) Is discussed in the rating round after the presentation of a score, this is indeed desired, since this generates additional knowledge, but the assigned score remains untouched thereby. It may not be changed afterwards.
- 3) You can use objects and infrastructure that are not on the game board. For this purpose a team can simply make assumptions. However, these assumptions are considered in the plausibility evaluation by the other teams.

## Optional Rules

In addition to the procedures and rules mentioned above, one or more additional rules can be used. In the following, useful rules are described, but you can also use your own rules.

### Optional Rule 1:

Information technology (e.g. infrastructure, servers, databases, end devices) must be included in the attack, either as an attack target or as a means to achieve the goal.

### Optional Rule 2:

The attack must plan not to be identified as an attacker.

### Optional Rule 3:

The role cards are not drawn openly, but hidden.



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