

# EBIOS

RISK MANAGER

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THE GAME

Facilitator's booklet

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# INTRODUCTION

This game is a tool for EBIOS *Risk Manager* trainers. By using it during a training course, it allows the introduction or validation of the acquired general concepts to the method as well as their relationships. As the games take place in a cooperative manner within a group, the role of the facilitator is essential to allow them to run smoothly and above all the effective transmission of information, while maintaining the playful aspect of the game.

The animation of the game consists of:

- Present and ensure the proper implementation of the rules of the game,
- Introduce the context of the scenario that will be played and answer the players' questions to specify the elements that may be necessary for them,
- Allow players to discover or deepen key concepts throughout the game.



In fact, the purpose of this booklet is to:

- Specify the expectations of the facilitator at each turn of the game,
- Share animation tips,
- Facilitate the parallel between the game and the concepts established by the EBIOS *Risk Manager* method.

# CHECKING THE CONTENTS OF THE GAME BOX

Each scenario consists of a certain number of cards, which will be necessary for the smooth running of the game. Checking the material ensures that the game can run smoothly.

For information, here is the material of the basic box, including the BIOTECH scenario:

- 1 play mat;

- 48 cards;



- 7 Risk Scenario cards;



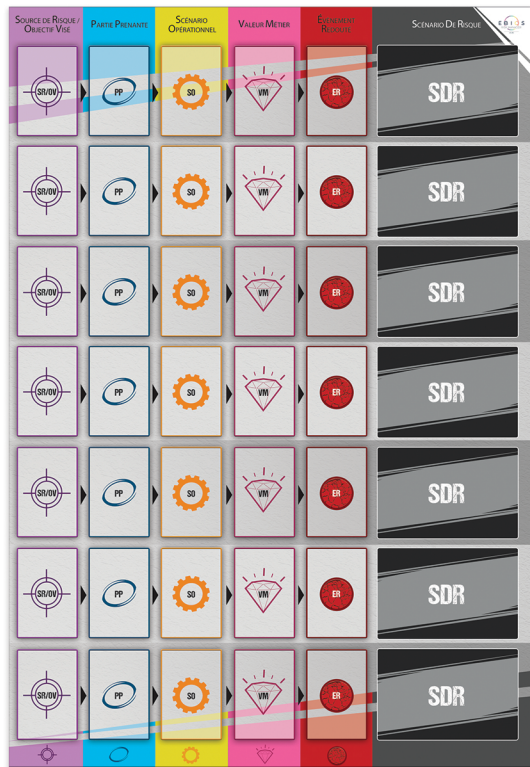
- 2 dices;



- Color Tokens;



- 1 rule of the game.



## PLACE IN THE EBIOS RM TRAINING

The educational objective of this game is to allow each player to discover, understand and explore the concepts used during an EBIOS *Risk Manager* risk analysis.

The purpose of this game is therefore not to go into detail about the ISS, the technical aspects, or to make a real risk analysis. It is therefore advisable to insist on the assimilation of the basic concepts, and to adapt the course of the game according to the skills and levels of the group of players.

To make the most of the benefits of this game, each trainer will be able to adapt their use according first of all to his personal appetite for the role of facilitator, but also according to the trained audience and their initial knowledge.

Two alternatives are offered to articulate the game with the usual EBIOS Risk Manager training:

- Start the training with play. This requires a simple presentation of the concepts of the game, and will allow you to come back to them in more detail later during the training by facilitating their understanding,
- Conclude the theoretical presentation with the game. At the end of the presentation of the method, playing allows you to check that the concepts and their respective links are understood.

Note: The concepts to be presented are: BA, RO/TO, IP, OS, Security Measures, Gravity and Likelihood.

Finally, the recommended table capacity is a minimum of two (2) players and a maximum of four (4) players. If your training includes more people, it is advisable to make several game tables, which requires several boxes.

The objective is to foster an internal culture of cooperation within each group while simultaneously cultivating a competitive challenge between groups. This structure also encourages inter-group debriefing sessions to capture lessons learned regarding identified operational challenges and effective resolution strategies.

# PRESENTATION OF THE RULES OF THE GAME AND THE SCENARIO

## Presentation of the overall objective

For a game to run smoothly, it is essential that players understand what is expected of them. The first thing to do is to explain to them how to "win". The objective of one part is to identify the risks related to the current scenario. Once a risk is completely identified, players will have the opportunity to take security measures to reduce the likelihood of the risk, and therefore be less exposed to it.

In addition to the rules of the game itself, it may be interesting to emphasize the fact that there are 7 unique scenarios to find, formed by the combination of 5 cards, one of each type. On the other hand, players are free to choose and combine the security measures they will have to protect themselves, so there are several acceptable risk treatment solutions.



Furthermore, it is important to explain that it is a cooperative game, within the same table, everyone plays together, but nothing prevents you from challenging each other between tables. The evaluation of each game is easily done by calculating the number of impact points received during attacks, and which depend on both the players' ability to have identified the risks, their choice of security measures... and a little luck.

## Overview of the rules

To present the rules, simply use the rulebook. Be careful, however, that the players have identified the three phases of the game that will follow one another:

- Associate cards and concepts according to their hands, positioning them on the board,
- Identify, purchase and position security measures in the face of the risks they have identified, and according to their budget,
- Simulate the attack, through a roll of the dice, on one or more risks and identify their consequences

It must be explained that these 3 phases are replayed 3 times at least. The solution cannot be fully completed before because players will only have all the necessary cards at the end of these 3 iterations. In addition, if players have not managed to identify all the risks after 3 iterations, a 4th round may be proposed. Indeed, succeeding in identifying all the risks, and therefore completely completing the game board, is important from an educational point of view and to help with the debriefing at the end of the game.

## Presentation of the scenario context

Finally, to start the game, don't forget to introduce the scenario that will be played, in order to set the scene and immerse the players in the adventure. The default scenario included in the basic box is BIOTECH, and background elements can be found in the appendix to this booklet to help you understand it.



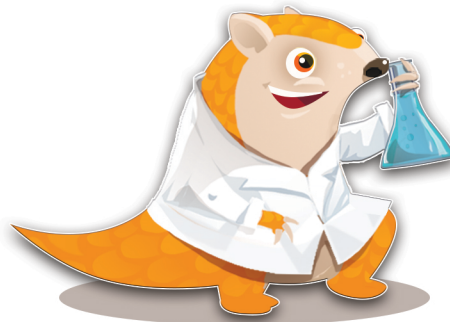
# ANIMATION TIPS

As a trainer, you are in charge of monitoring how the games unfold and how the members of a group interact to form a collective.

Indeed, even in groups of 4 people, you can be confronted with several player profiles. Some may remain in the background, so they will have to be encouraged to give their opinion by questioning them directly, for example. Others may naturally position themselves as group leaders, and monopolize actions or words.

Once again, it is up to you to pay attention to this and allow the emergence of a balanced collective, with simple actions:

- Position the players around the table so that everyone can read what is written on the game board and the cards,
- Do not give a job role to players. This may seem interesting but in the context of this game it may limit the exchanges and may constrain the players to a single point of view,
- Avoid giving the cards to one person when they are dealt. Possibly deal a card to each player. This will allow everyone to read their card to the others and allows them to exchange in the group,
- In the event that several game tables are organized in parallel, remember to "mix" the profiles in each table.





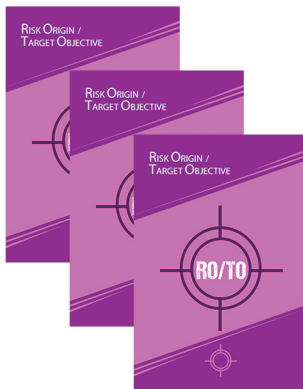
# GAMEPLAY OF THE GAME TURNS

The first step during a game round is to provide players with their new cards. The rules remind you of what must be distributed at each stage.

On the first turn to initiate the game, it is important to give players a copy of each Business Asset. At that point, the players must be aware of this concept, or it must be introduced to them, making it clear that it is the "elements to be protected". It is also recommended to remember at this time that players can ask the facilitator in the first turn, but also in the following rounds, for other copies of these Business Assets (see rulebook).

During the first phase of distribution, it will also be necessary to distribute:

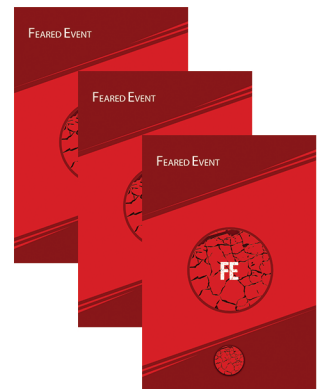
3 RO/TO



3 OS



3 FE



Again, the dealings of each new card type are an opportunity to recall or present the underlying concept.

Note: Even if it may seem trivial with the game board, it is important as an animator to check that the players position the cards in the right columns. In case of error, it could be due to a confusion between several concepts.

As soon as players start thinking about the risks, they'll have the opportunity to ask you for missing cards, similar to IP and FE. It will be necessary to guide them so that they think about this possibility, but without giving them the solution directly.

Note: Scenario validation can be easily done by asking for the “coding” of the risk, i.e. the succession of identifiers of each cards forming the risk. On the other hand, be careful not to invalidate a proposal as soon as a card is not the right one, as this will give an indication to the players.

Finally, at the end of a turn, i.e. when players have a proposal for card placement, they must ask you to validate their scenarios. Be careful, players are only allowed one proposal per turn per scenario, and you should not direct them more than necessary. All you have to do is tell them if the scenario is correct or not.

Note: If there are multiple tables in parallel, it is recommended that you advance them in a synchronized manner, and this validation step can be used as a waiting point before each group is ready to start the next round.



When the scenarios proposed by the players are validated, the players will determine the budget they will have for this iteration in order to buy security measures. The budget has a fixed part, and a random part drawn by the dice.

Players must then, depending on their budget, purchase security measures to put in place, but only on completed scenarios. Be careful during this phase to refocus the debate if necessary. Once again, the objective of this game is not to go into the details of the ISS, but it is necessary to check that the measures chosen apply to the scenarios that correspond to them and that these are completely identified.

Finally, the last phase consists of simulating an attack by rolling a 20 die, and comparing the result obtained to the likelihoods of the OSs found. It is important to understand that an attack can be carried out on scenarios that are not complete. Indeed, you have to explain to the players that when you are the victim of an attack, you don't necessarily know the attacker, or the modus operandi for example.

Finally, at the end of the game, we must address the notion of residual risk, explaining that risks can occur despite the measures in place.

Note: Why use dice to materialize skills and ability to do? In real life, things don't always go according to plan. The use of the dice makes it possible to materialize hazards and uncertainties. In cyber, there are also opportunities attacks, bounce attacks or broad-spectrum attacks, and for which you are not a direct target. The implementation of security measures at each turn ultimately reduces the consequences of these uncertainties.



# FINAL DEBRIEFING

Once the game is over, take a few minutes to allow players to share their feelings and review the highlights encountered.

Note: To prepare this game, think about noting the highlights related to the method, the players' questions, etc. throughout the game.

Here is an example of possible questions:

- Do you think that the experience you have just had has been a success (in terms of appropriation of the concepts)? In what way?
- Please describe your overall experience of the exercise. In your assessment, what specific aspects of the game design, mechanisms, or animation require future improvement?

Review the educational objectives of the game and question the group about the knowledge and concepts they may have discovered and/or acquired during the role-playing.

Here are examples of a possible questions:

- In 3 words, what did you learn today?
- Give something you learned (or reviewed) today.
- What concepts did you not know before today?
- After today's experience, what elements would you like to deepen in the rest of the training? (In case the game took place at the beginning of the training).

Note: For this debrief, it is necessary to remember to specify the context of the evaluation. It is question of the game and the game, not of the training as a whole (there is an evaluation sheet for this at the end of the training).

# GLOSSARY

Abbreviation

Description

**EBIOS RM**

*EBIOS Risk manager*

**FE**

Feared Event

**SM**

Security Measure

**IP**

Interested Parties

**OS**

Operational Scenario

**RO/TO**

Risk Origins / Target Objectives

**ISS**

Information Systems Security

**BA**

Business Assets

# ANNEXES

The default scenario included in the basic box is BIOTECH. To help you get started, here is a background and comments on some maps.

## General context of the Biotech company

BIOTECH is a biotechnology company manufacturing vaccines. It does not have an in-house IT department and uses an IT service provider for the outsourcing and maintenance of its entire fleet (user workstations, servers, operating systems, office software, etc.).

It is estimated that employees have a low level of maturity when it comes to digital security and that there is only a basic awareness of digital security when employees take up their jobs. Although there is no CISO, there is an IT charter.

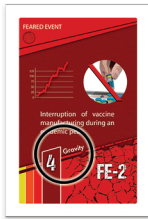
BIOTECH outsources part of its R&D to an external laboratory.

The game begins the day before the annual flu vaccination campaign, for which BIOTECH is one of the vaccine suppliers.

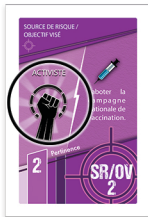
These elements will allow players to understand that cybersecurity is built in a broad context, taking into account the state of the threat, a context specific to the object of study, etc.



## Notes on some of the game's maps



FE-2 : Note that the severity of the Dreaded Event (here of 4) is an indicator of the level of impact on the company in the event of an occurrence.



RO/TO-2 : It is possible to find the same source of risk (in this case, an Activist) on another RO/TO



OS-3 : Note that the likelihood of the Operational Scenario (here of 4) is indicative of the probability of the OS occurring.



IP-5 : This card does not represent an Interested Party as such, but rather an absence of an Interested Party.



SM-01 : This Security Measure is a so-called "Governance" measure. Other SM may have a primary focus of "Defense," "Protection," or "Resilience."

This booklet was designed and written by the EBIOS Club.

To share your feedback and for any inquiries:



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