Hybrid CoE

European Centre of Excellence for Countering Hybrid Threats

Multinational Medical Coordination Centre/

European Medical Command

Federal Office of Civil Protection and Disaster Assistance

German Federal Office of Civil Protection and Disaster Assistance

RESILIENT RESPONSE 2020 (RERE 20)

ANNEX-A_ WARGAME DEVELOPMENT, PLANNING AND ORGANISATION

CONTENT ANNEX A
- WARGAME DEVELOPMENT, PLANNING AND ORGANISATION

1. WARGAME DEVELOPMENT AND ORGANISATION

In the planning process, two execution procedures were taken into consideration from the beginning on. In addition to planning the wargame as a face-to-face event, the possible case of an online participation was also considered.

Figure 1: Wargame Planning Process

With the core objectives of practising the decision-making process and the communication between nations and entities, the complexity of the processes also became clearer in the planning phase.

There were promising signs to conduct the wargame as an on-site event in the summer months, but the rising COVID-19 infection figures in early autumn made it clear that the majority of the Training Audience (TA) will participate online, and only a minimal presence on site can be realised.

The general overview (see Figure 1) shows the breakdown of the processes for the TA and for administration and support.

The methodology used for the development of RERE 20 consisted of several distinct processes. The first process was the selection and definition of the topics to be wargamed. The topic selection was done in a "customer-based" fashion with a view onto the real world pandemic and experiences from pandemics in the past, together with SMEs on the civil and military side.
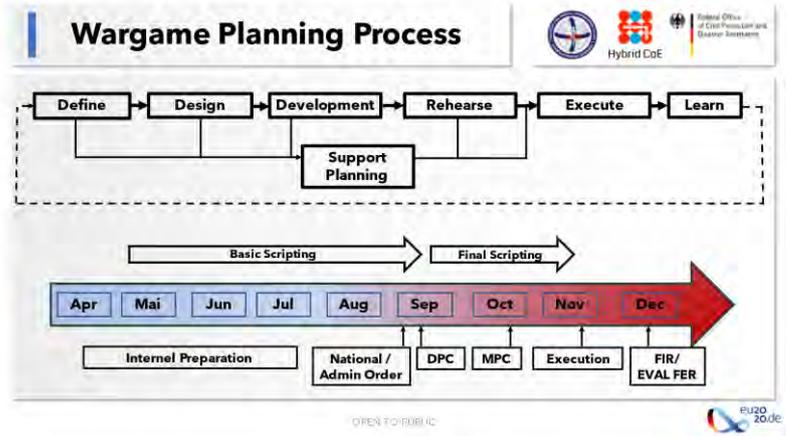
Figure 2: Wargaming

The starting point was the question of how to transform a pandemic situation into a fruitful wargame.

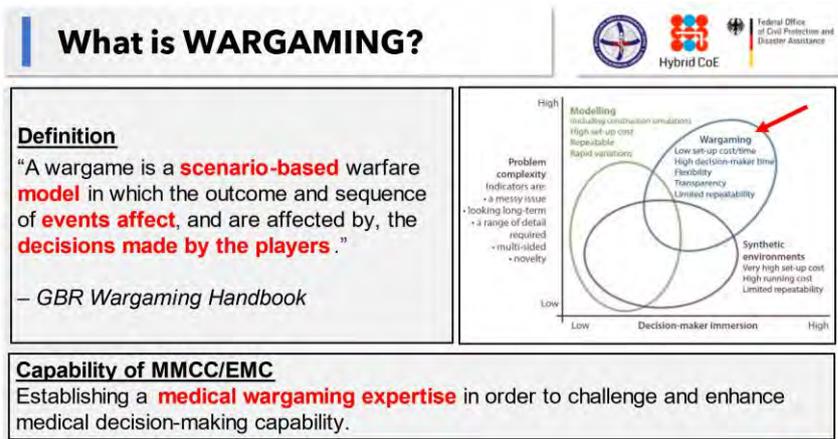The decisions of the players should be at the centre of the wargame. These decisions must influence (injected) events in a comprehensible way and within a given portfolio of decision options. The thought here was that the wargame would become difficult to control if the decisions were not narrowed down to a limited number. The basic gameplay decision was the idea to play in 4 turns, and each turn played should last about 3 months. Due to the expected limited possibility for an on-site exercise the classification of all data has always been taken into consideration, as it would directly influence the ability to perform the exercise. Currently no tool that can be used for classified communication with the required number of participants from different nations and institutions over such a long period for an exercise has been identified yet. Due to the selected data and the generic approach of the exercise, it was possible to use a commercial off-the-shelf solution (COTS).

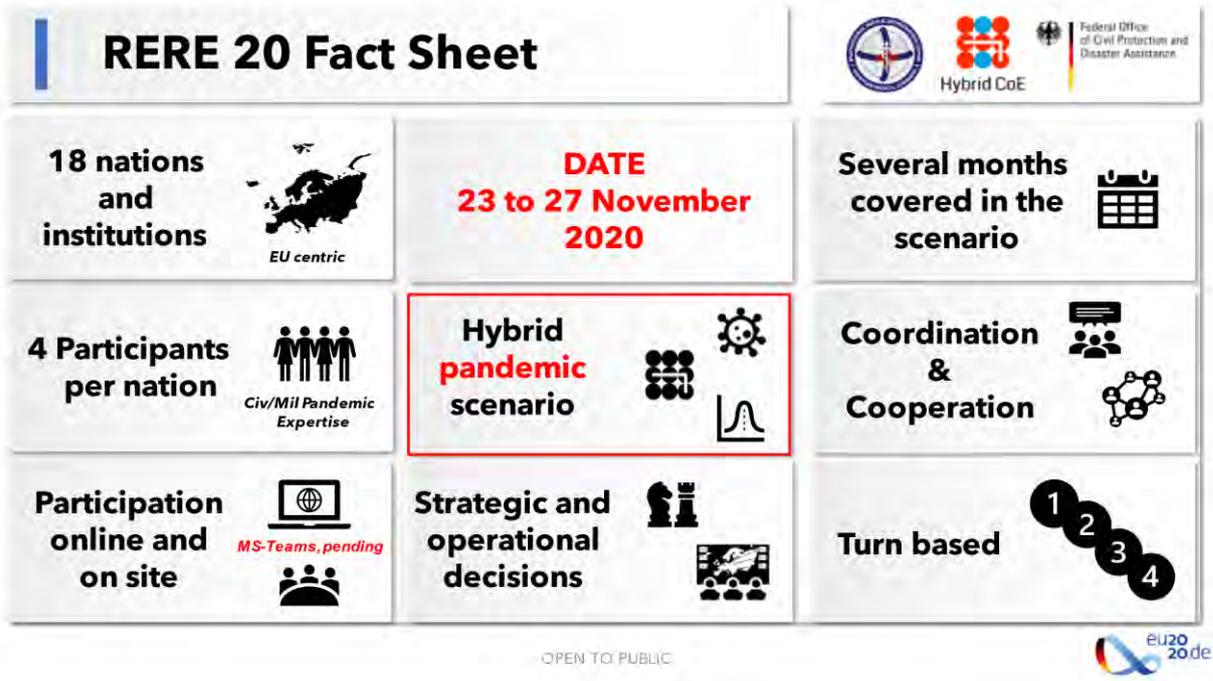An overview about the main topics can be seen in the following figure.

Figure 3: Fact Sheet RERE 20

2. WARGAME STRUCTURE

After the development of COVID-19 had made it clear that the wargame would primarily take place online, the question arose as to how the control of the exercise could be implemented in practice.
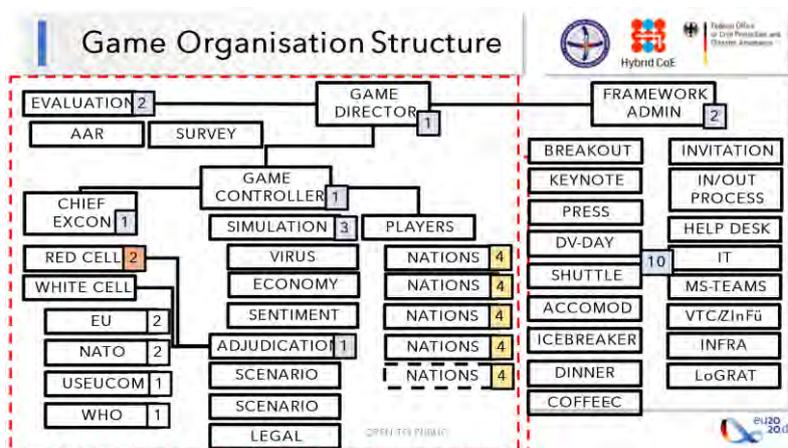

Figure 4: Game Organization Structure

The necessary processes are summarised in figure 4.

The figure illustrates the initial considerations. It is clear that the nations would be controlled via the game controller and that a way had to be found to connect the red and white cells. Due to the expected delay in the reports on Microsoft Teams, the platform on which the wargame would be executed, a core staff presence had to be established in the EXCON and Simulation Cell.

5

Figure 5: Game Organisation Structure

The participants consisted of more than 117 experts from health, civil protection and security sectors of 12 national teams as the TA and 5 organisations, as figure 5 shows.

Belgium (BEL), Italy (ITA), Ireland (IRL), Lithuania (LTU) and Poland (POL) had to cancel their participation at short notice due to the development in the real world COVID-19 second wave.

3. WARGAME PROGRAM

In cooperation with the Hybrid CoE and BBK, MMCC/EMC designed the requested exercise program. It consisted of a 2-week wargame with a preparation/rehearsal part in the first week and exercise execution during the second week. Travel days for the supporting participants were on Sunday, 22 November 2020, and Monday, 23 November 2020. The MMCC/EMC team used Tuesday, 17 November 2020, until Friday, 20 November 2020, to prepare the wargame and integrate EXCON, Facilitator, HICON, and LOCON into the exercise wargame environment.

The first week's program was divided into 5 phases:

a. Preparation and familiarisation (briefing, exercise layout, game rules, IT support, etc.)

b. Refinement of game rules (reasonability/feasibility check)

c. Tape drill (exercise execution adjustments, interaction between Response Cell (RC) and FAC, etc.)

d. Dry run (synchronizing vignettes and procedures)

e. Final preparations (setting the conditions for arrival of all Trusted Agents)

The second week from Monday, 24 November 2020, until Friday, 26 November 2020, was the main execution phase of the wargame. Figure 6 shows this week, divided into 8 phases:

a. Preparation and familiarisation of TA (briefing, keynote speech, exercise layout, game rules, IT support, etc.)

b. Execution of Turn 1: Initial response to the pandemic on Tuesday

c. Execution of Turn 2: Managing the pandemic on Wednesday morning

d. Execution of Turn 3: Second wave phenomena on Wednesday

e. Execution of Turn 4: Overcoming the pandemic on Thursday

f. Education sessions (breakout sessions with game turn-Review) of TA each day

g. Evaluation sessions (After Action Review) of EXCON and Simulation Cell each day

h. Evaluation sessions (After Action Review) for TA with Adjudication Cell each day

Figure 6: Wargame Program

3.1. Wargame exercises explained

A wargame is defined as *"a simulation of a military operation, by whatever means, using specific rules, data, methods and* procedures.*"[1]*

A military wargame is the employment of military resources (staff) in training for military operations, either exploring the effects of procedures (tactics) or testing strategies without actual combat. Wargames involving two or more (opposing) parties allow for better coordination between cooperating organisations (units), observation of opponents and own procedures (tactics, techniques and procedures, in short TTP).

Wargames immerse participants in an environment with the required level of realism to improve their decision-making skills and/or the real decisions they make. Analytical ('discovery') wargames are used to explore national, strategic, operational and tactical issues across the full spectrum of military activity.

For the RERE 20 wargame, it is important to note that "a scenario-based warfare model in which the outcome and sequence of events affect, and are affected by, the decisions made by the players"[2] is what provides the value of wargaming. That value is achieved by reviewing and evaluation/analysis in the aftermath of these decisions, actions and outcomes during the so-called breakout-session. For the on-site team of EXCON, an after-action review (AAR) was set up.

3.2. Elements of a wargame

The following elements together form a wargame.

    a. **Aim and objectives** are essential to ensure that a problem to be wargamed has been properly defined and clearly framed; they also provide a direction in which to work.

    b. **Setting and scenario** provide the environment in which the game play takes place. Both are designed based on data and sources.

        1) Setting: The background story that describes the historical, political, military, economic, cultural, humanitarian and legal events and circumstances that have led to the specific current exercise crisis or conflict.[3]

        2) Scenario: The scenario is designed to support exercise and training objectives and, like the setting, can be real, fictionalised, or synthetic as is appropriate. It gives the participants a context for their decision-making and it

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[1] Peter Perla (2011): The Art of Wargaming

[2] UK MoD Wargaming Handbook

[3] NATO Bi-Strategic Command Directive 075-003 Collective Training and Exercise Directive – Working Draft, 28 January 2020   8

must be carefully determined how the scenario may affect the factors they are most interested in exploring.[4]

c. **Players**, and their **decisions**, drive the essence of the wargame.

d. **Simulation** can be computer-assisted, digitalised or manual. Models built on data reflect the execution over time contained in the wargame.

e. **Game rules**, a database and procedures are required that have to be followed by the TA in order to direct TA behaviour within the given exercise specifications (see also ANNEX C).

f. **Adjudication** is the process of determining the outcomes of player interactions.

g. **Supporting personnel** and SME are normally required to assist with the design and delivery of a wargame.

h. **Analysis** based on the collected data during the game is normally required to help us understand what happened and consolidate the benefits of wargaming.

3.3. RERE 20 wargame scenario

The game design was derived from a war game developed by the US Naval War College senior wargaming expert Pete Pellegrino. During an intense preparation phase of seven months, the MMCC/EMC developed the war game's architecture, scenario, simulation, rules and force generation. The war game scenario covered several months of an emerging pandemic, in which crisis response decisions had to be made at national and international level in order to minimise the negative impact of the pandemic.
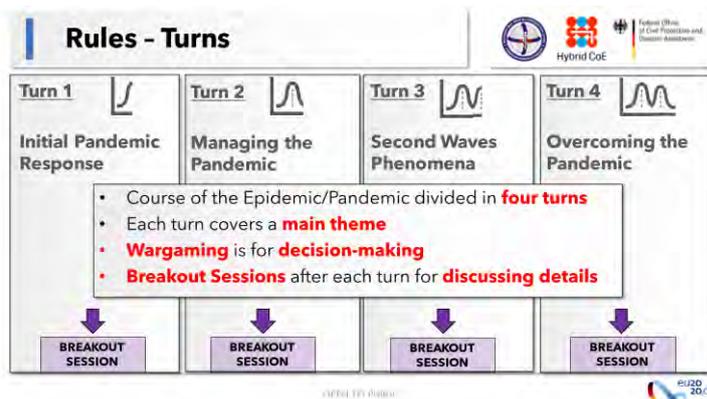

Figure 7: Rules - Turns

It simulated a crisis environment with a focus on European countries and organisations and was divided into four turns: the first Turn: *Initial response to the pandemic*, the second Turn: *Managing the pandemic*, the third Turn: *Second wave phenomena* and the fourth and last Turn: *Overcoming the pandemic*.

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[4] Peter Perla (2011): The Art of Wargaming

3.3.1. Simulation models

Three simulation models have been adapted for the exercise: a virus model, an economic model and the so-called sentiment model. These models were influenced by pre-defined decision-options. The option of using so called wildcards, a possibility for the nations to develop their own creative additionally solutions (decisions), was chosen 54 times during the 3-day game, 16 of these decisions where so "out of the box" that they needed extra adjudication from the adjudication team. All models are based on country sheets prepared in advance and co-tested by the nations. A complete overview of COUNTRY SHEETS can be found in ANNEX C.
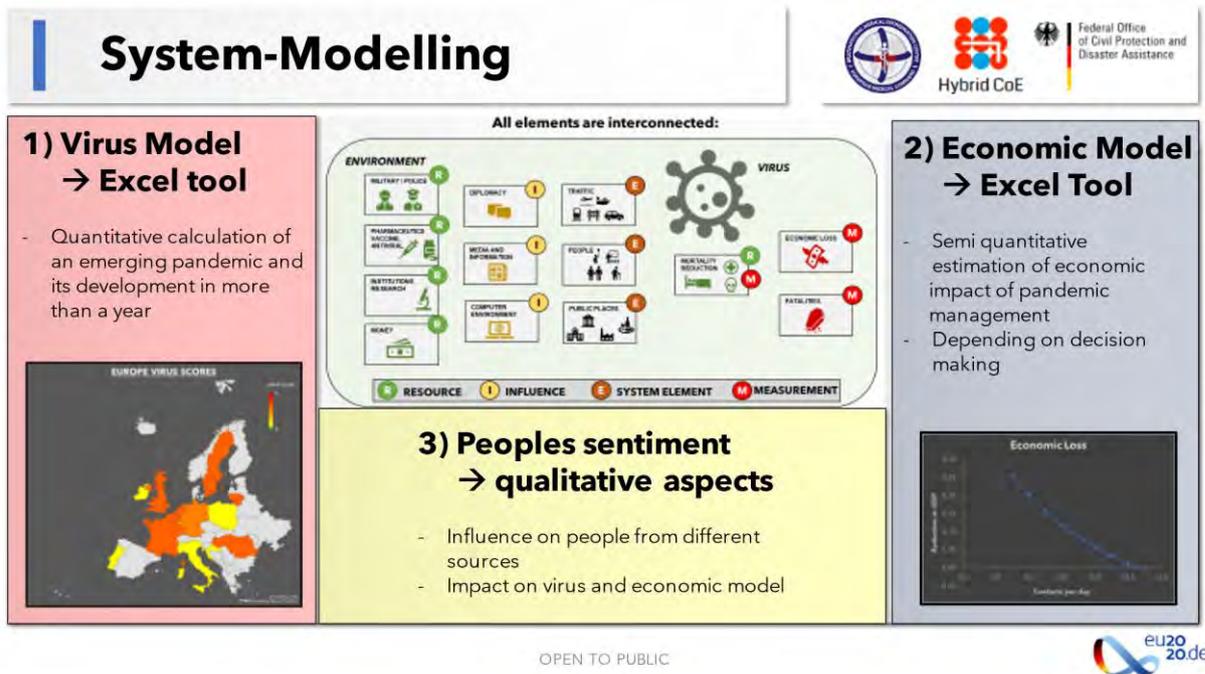

Figure 8: System-Modelling

3.3.2. Breakout sessions

The breakout sessions after each turn were used to discuss details and provide better knowledge of different actors and institutions of NATO and especially EU (instruments of EU Civil Protection Pool and rescEU capacities), as well as cooperation mechanisms and providing additional information regarding hybrid threats.

3.4. RERE 20 wargame - Game rules

During the Main Planning Conference (MPC), the (Core) Planning Team, in collaboration with the Trusted Agents, developed a set of game rules to make the gameplay as realistic as possible and as generic as necessary. During the gameplay, some of the rules were further refined in coordination with the Trusted Agents (Facilitators), the EXCON and the adjudication team. A complete overview of GAME RULES can be found in ANNEX D.