

# **GAMES, EXERCISES AND SIMULATIONS**

## **SIMULATING COMMUNICATION DURING BLACKOUT SITUATIONS: A ROLE-PLAYING GAME<sup>1</sup>**

**Mihaela TEODOR\***

**Bogdan TEODOR\***

**Alin POP\***

### **Context**

In an era of total digital dependency, the total collapse of our communication infrastructure is a catastrophic scenario that demands proactive planning. This paper presents the critical insights, operational breakthroughs, and strategic failures uncovered during a table top role-playing simulation that tested community resilience under a total grid collapse. By asking participants to navigate the immediate loss of cellular networks, internet, and power, the simulation aim to evaluate the viability of low-tech relays, emergency radio infrastructure, and analogue courier systems under intense time and resource pressure.

A blackout represents an extended and unforeseen interruption of the electrical power supply at a local, regional, or national level for a significant period of time, affecting infrastructure, the economy, daily life, and the functioning of institutions. A national blackout can be generated by multiple causes: chain technical failures (as happened in Venezuela in 2019), natural events, cyber-attacks (Ukraine, 2016) or acts of sabotage, human errors during maintenance operations (Spain, 2025),

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<sup>1</sup> Disclaimer: the material reflects the authors' opinions and beliefs and does not represent the opinions, policies or the views of the Romanian Intelligence Service or the "Mihai Viteazul" National Intelligence Academy.

\* Senior Researcher PhD at "Mihai Viteazul" National Intelligence Academy, Romania. Email: teodor.mihaela@animv.eu. ORCID: 0000-0002-1421-8612

\* Associate Professor PhD at "Mihai Viteazul" National Intelligence Academy, Romania. Email: teodor.bogdan@animv.eu

\* PhD Student at Babes-Bolyai University, Cluj-Napoca. Email: alin.pop.radio@gmail.com

grid overloading and the occurrence of an imbalance between production and consumption (a risk announced in Romania during the 2025 Easter Holidays), or a combination of these factors. During a blackout, authorities act swiftly to manage the crisis, ensure public safety, and restore essential services. Institutions must demonstrate transparency, speed, and coordination in decision-making to minimize negative effects, and communication becomes vital for preventing panic, limiting negative consequences, and ensuring a swift return to normalcy (Honeyager, November 2, 2022).

Citizen behaviour during a 72-hour national blackout evolves rapidly from simple initial curiosity and logistical adaptation (seeking resources, using cash) toward a deep state of anxiety generated by the information vacuum and the collapse of communication networks. As the crisis prolongs, society polarizes between spontaneous community cooperation actions (sharing resources, protecting the vulnerable) and manifestations of panic or urban insecurity fostered by darkness and the lack of visible authority. These dynamic underscores that the successful management of a prolonged power outage depends not only on technical repairs, but especially on the government's capacity to maintain public order and deliver clear messages through alternative channels to prevent social collapse.

**The role-playing game approach.** To address these institutional and psychological vulnerabilities this paper introduces the role-playing game, *Communication Strategies in Blackout Situations*, alongside an analytical breakdown of its primary outcomes. The simulation of the game *Communication Strategies in Blackout Situations* was executed by 33 selected students representing eight distinct Romanian universities. The exercise was hosted as a core operational module during the Fifth Edition of the Strategic Communication, Digitalization, and Security Summer School held within the "Mihai Viteazul" National Intelligence Academy from September 17 to 19, 2025.

The core value of utilizing a role-playing exercise lies in its unique ability to simulate and document emergent resilient behaviours in real-time experiences and enable researchers and practitioners to learn from these experiences. In this type of game, participants assume roles of

various characters as well as their duties and tasks as specified in a scenario uncovering institutional gaps, test alternative communication methods, and improve decision-making under high-stress conditions.

### **Aim and objective of the game**

The aim of the simulation game was to explore the importance of strategic communication during a 72-hours nationwide blackout (without electricity, mobile internet and partial classical telecommunications) in a European country, with implications for national security. Central to the exercise was the breakdown in communication between authorities and citizens during a blackout, testing how both groups cope with intense time pressure, unpredictable variables, and a total information scarcity.

The key objectives of the simulation game were: identifying communication vulnerabilities and the lack of preparation; identifying alternative communication channels (walkie-talkies, satellite phones, and manual signalling when cellular coverage fails); developing crisis communication competences; understanding how citizens react under uncertainty, time pressure, and limited resources and what they expect from government during long-term power outages. The idea of the game was to demonstrate our hypothesis that in a modern society highly dependent on electricity, analysing the impact of a blackout is essential for developing strategies for prevention, efficient communication, and response.

### **The following introductory scenario was presented:**

“Dear participants, please take your seats and listen carefully. We are out of energy!!!!!!!

You are the National Crisis Cell. Your primary weapon is not engineering—it is information. However, information is scarce. Your mission is to develop a strategic communication plan to manage public panic, secure critical infrastructure, and deliver vital survival instructions to the citizens using only non-digital, alternative channels. Time is your enemy. The stability of our nation rests on your ability to coordinate, react swiftly, and communicate effectively under pressure. Assume your roles. The 72-hour countdown begins now.”

The participants should analyse the impact of a blackout on society (institutions/infrastructure/citizens) and the development of a communication strategy by a European government in the event of a 72-hour national blackout, highlighting the objectives of the communication strategy and the required concrete communication actions, the responsible institutions, and the communication method/channel used (including recommended key messages).

**Organizational details.** The participants were divided into three teams of 10 to 13 people, simulating a national crisis communication cell. The participants were emergency managers from different institutions, organisations and companies involved in power, telecommunications, and other critical infrastructure. These entities play an essential role both in transmitting information and in ensuring a continuous flow of relevant data and information to the population, aiming to propose an efficient communication strategy in the given context focusing on preventing panic, maintaining public order, and guiding the population in the absence of digital channels.

The teams were representing the institutions responsible for ensuring effective communication. In this respect, each team could use various artefacts, such as an Internet-based power grid coordination system, computers with e-mail, phones, maps, and also communicate face-to-face and using a white-board, which they would not be able to do in their usual distributed setting during actual emergency event. Data collection methods included direct observation by two observers, traces of artefact use (telephone, white-board, Internet), and log-files of the incidents in the scenario.

**The game was structured in four steps:**

➤ **Step 1 (40 minutes debate in plenary session or in groups):**

The coordinator presented the context and the request for each team to identify the impact of a blackout on society/ individual level (minimum information was provided). The crisis cell had to establish in 40 minutes how a grid collapse instantly paralyzes modern life: a) economic and financial collapse such as payment and supply chain failures or business paralysis; b) social and critical infrastructure

disruption such as water and sanitation failure, transport paralysis and healthcare strain; c) psychological cascades such as the information vacuum, isolation panic; d) security and public order threats such as systemic darkness, resource contention and first responder overwhelm; e) citizen-level everyday implications such as domestic paralysis and total disconnection etc.

*Step 1 primary outcomes from all of three teams:*

**a. Economic and Financial Impact:**

- All areas involving connectivity and communication are affected (mobile phones are out in 30 minutes in urban areas, fixed networks in 4 hours, no emergency communications, cloud centres in 72 hours).
- Sudden interruption of POS operations, ATM cash withdrawals, bank transfers/operations.
- Production stoppage, disruption of supply and food distribution chains, spoilage of perishable goods, and economic losses.
- In the financial sector, possible cancellations of transactions, contracts, agreements.

**b. Social Impact:**

- Blocked access to basic services (water, heating, electricity), healthcare, public administration, and financial services.
- Increased vulnerability in defence.
- Increased risk of accidents in the road sector.
- Lack of energy and backup systems can cause panic.
- Prevents direct communication and access to remote communication services (social media and other information channels).

**c. Psychological Impact:**

- Chaos, panic, epidemic, perishable medicines and food, lack of access to vital resources either or improperly stored
- Local communities can become panicked, aggressive, chaotic, easily influenced leading to increased vandalism against institutions, store networks, etc.
- The blackout highlights dependence on interaction, support, security, routine, comfort, communication, and constant access to information.

- Communicate at regular intervals, encourage interaction between communications and mutual aid.
- d. *Impact on National Security:*
  - Increased vulnerability to external attacks due to systems operating at partial, not full, capacity.
  - Internal vulnerability as there is a possibility of increased aggression fuelled by the crisis through the spread of false news and misinformation via alternative communication channels.
- e. *Impact at the Citizen Level:*
  - Health problems for some dependent on certain treatments and medicines, unable to travel (e.g., no elevator access)
  - Vulnerable groups: elderly and sick people, pregnant women, children.
  - Risk of vandalism and aggression towards institutions and store networks, supply chains; crime rates increase (video monitoring fails).

**Briefing session and determination of supplementary documentation requirements for step 2 and presentation of different materials regarding crisis communication best practices.**

➤ **Step 2 (discussion 80 minutes in groups):**

Having in mind the impacts they had to develop rapidly a communication strategy for a European government in the event of a 72-hour national blackout, highlighting: the objectives of the communication strategy, the specific communication actions required, the responsible institutions, the communication method/channel used and possibly recommended key messages. In principle, answer the following questions:

- What are the needs for information of the target audience/ audiences?
- What are the objectives of the communication strategy?
- What should be communicated to the public at this moment?
- In what form should it be communicated to the public and by whom?

Imagine minute by minute on the first day, then by the hour on the following days and fill in the following table building step by step the communication strategy. Assign a suggestive descriptive title to the strategy. The scenario included frequent updates on new problems or solved problems in the electricity grid, but also injuries and casualties to electricity restoration workers, media and political pressure, terror threat, demands of other critical infrastructure, and a simulated casualty in the team of emergency managers that was studied. Dependencies between electricity and telecommunications networks also demanded re-prioritisations in order to secure a synchronised restoration effort.

To simulate time pressure, the exercise coordinator introduced unexpected events (injects) at fixed intervals:

Day	Minute/ Hour	Assessment of effects and identification of information/communication needs	The institution responsible for returning to normalcy and crisis communication (identify and assign the role of each institution to a team player)	Required communication action/backup communication tools (identify and analyse availability in the event of a power outage)	Communication channel/method based on target audience and accessibility/availability (identify) and construct possible necessary messages
☉ Day 1 First 12 hours action plan - Initial Shock and Information Blackout	Minutes 0-15	Assessment or notification of national power grid failure and identification of information requirements (what priority information do citizens expect).	e. g. assessment and communication		
	Minutes 15-30	Determining nationwide effects, specifically regarding communication systems.			
	Minutes 30-60	Nationwide impact assessment, with a focus on critical infrastructure and essential services.			

	Minutes 60-120	Social and psychological impact assessment. Total isolation found. Lack of communication leaves people isolated and vulnerable, driving potential social tensions.			
	Minutes 120-180	Water and fuel distribution systems are compromised due to the inability of pumping stations and refineries to operate without electrical power. Immediate measures and communication are vital.			
	Minutes 180-360	Determination of the need for effective crisis communication management. Internet and television networks cease operations upon the exhaustion of electrical energy storage sources in data centres.			
☉ Day 2 – Stabilization and confidence building	Hours 24-30	Assessment of the population's state of mind and identification of information requirements.			
	Hours 35-40	Assessment of the spread of rumours and misinformation, and the need to counter them through rapid and accurate information on the situation.			

	Hours 40-48	Assessment of blackout cause. The collapse of communication infrastructures generates a dangerous information vacuum, fuelling panic and facilitating the spread of fake news.			
☉ Day 3 – Recovery and recommendations	Hours 48-60	A preliminary report detailing the causes and measures taken is published.			
	Hours 60-71	A plan for the gradual reconnection of the grid is published.			
	Hour 72	Assessment of the blackout end, methods for situation evaluation, and adaptation. The blackout concludes with an official message.			

At the end of the simulation, each of the three teams must present to the evaluators: the exact list of how they transmit messages in each phase (e.g., Public Radio, MAI megaphones, flyers left in mailboxes by postal workers/firefighters); crisis messages and the official statement imposing traffic restrictions; the simulation of a press conference by the spokesperson of the crisis cell with a three-minute speech.

*Step 2 primary outcomes from all of three teams:* They had minimal information, and a one-page best practices guide for various communication scenarios during crisis situations such as: Build your plan. Understand and take responsibility for the issue. Take the initiative in communication. Adopt immediate measures but avoid risky or chaotic actions. Be transparent. Communicate effectively with your audience. Provide the public with updated information. Ensure that you do not disclose unnecessary information. All three groups were really

interested to cover the requirements, however they realized after almost two hours of gaming that a crisis cell have a real responsibility and a difficult job: to efficiently communicate.

➤ **Step 3 (30 minutes presentation of strategies in plenary session)**

They had to choose a name and a representative for the team and to present the communication strategies. Each group had 10 minutes for their presentation and for discussion. They were asked to not forget that they were the ones who represented the institutions responsible for ensuring effective communication in crisis situation. These strategies with three names: Team 1 – The Best; Team 2 – Alpha; Team 3 – Chaos.

*Step 3 primary outcome - one of their communication plans:*

a. Public information needs: what is the status of the situation, whether remediation work is ongoing, the estimated time for resolution, what to do, if necessary, how to behave to minimize losses.

b. Strategy objectives: to calm the population, to guide the population towards appropriate behaviour message: the situation is being solved message type: empathetic → conveying a sense of “safe & security”, promoting population resilience to prevent panic.

c. How to communicate: by radio, the ministry of internal affairs uses vehicles with loudspeakers to transmit messages in the locality and convey measures existence.

d. When to transmit messages: according to sensory organs' schedule related to mealtimes in the morning → a more comprehensive package, followed by additional updates during the day (lunch or evening)

e. Communication channels: radio, vehicles with loudspeakers.

f. Institutions: Ministry of Internal Affairs (message communication and social panic prevention), Ministry of National Defence, Special Telecommunications Service, Protection and guard service, Ministry of health, Ministry of transport, Ministry of energy for network remediation, involvement of private companies in case of public-private partnership existence.

➤ **Step 4 (120 minutes plenary debriefing and team management optimization feed forward)**

**Group debriefing:** analysis of the exercise results, challenges encountered, and successes achieved (ways to optimize and feed foreword). During the simulation the staff that observes the exercise focused on specific patterns in behaviour, communication, artefact use, in order to evaluate the display of deliberate actions related to resilience by the participants. Those two observers acted as complete observers not participating or interacting with the participants during the simulation. The debriefing session started with the observer presentation of an overview of the planned and unfolding events of the game. The concluding remarks were that simulating communication during blackout situations through role-playing games was a powerful experiential learning tool designed to train crisis teams, emergency personnel, and the public on how to function when technology, power grids, and mobile networks fail.

**Collecting the feedback:** participants shared their experiences and proposed improvement suggestions (more time, specific roles, resource allocation and availability with impact on communication volume, etc.). In their feedback the participants highlighted that it was their local knowledge and experience from similar events what influence their decision-making and consequently information seeking.

**Annex 1: Instructions for facilitators, observers, and rapporteurs:**

- Recapitulate the theme and stages of the exercise whenever you find it necessary, reminding participants of the requirements.
- Intervene to encourage participants to be active, rather than providing them with ideas to complete the framework.
- Offer support in the actual completion of the framework if necessary, and in selecting a representative to present the results.
- Intervene if required to ensure they complete the entire exercise within the allocated time.
- Observe teamwork dynamics, difficulties encountered, and potential areas for optimization.

➤ Alternatively, remind them of the six principles of effective crisis communication: speed of reaction; correctness; credibility; empathy; respect; solution-orientation).

➤ Depending on how the team discussions evolve, you can unlock the situation by suggesting ideas about the key questions expected to be answered in such situations:

- Who is handling the problem?
- Who is affected? Is the situation under control?
- What can we expect?
- What should we do?
- Why did this event happen (facts will be reported and concrete data will be mentioned)?
- Did you know such an event could happen? Why it was not prevented?
- What else could go wrong?
- When did work begin on rectifying the situation?
- What do these facts/information mean, and what are their consequences for the citizens?
- What negative elements/data are you hiding?<sup>2</sup>

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<sup>2</sup> See details on: [https://www.cdc.gov/cerc/media/pdfs/CERC\\_Introduction.pdf](https://www.cdc.gov/cerc/media/pdfs/CERC_Introduction.pdf)

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