

Extending Flexible Digital Table-top Concepts to Promote Recurrent Exercising

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ABSTRACT

While crisis exercising is a marginal phenomenon in most organisations and thus cannot be given the main attention of the upper management, it cannot be neglected. It is requested to be recurrently performed in order to keep crisis plans and managers at all levels updated and ready when an unexpected event strikes the organisation or the society at large. Reports from the inability to keep up a recurrent exercising has resulted in many suggestions for digital support. The present paper explains how looking at distinctive computational capabilities in cheap and available software can be the ground for shaping a recurrent work with crisis preparedness including exercises for lay crisis management teams.

Keywords

Crisis Management Teams training, table-top exercises, exercise design, learning management systems (LMS), IT artefact.

INTRODUCTION

This paper discusses how IT can be theorised in research on low-cost and generally available exercise techniques. The discussion is based on reports from trials where ordinary learning platforms (Learning Management Systems, LMS) were used to support table-top exercising. This limits the discussion somewhat but the questions raised have a general applicability when discussing cost and availability. Previous research on perceived issues with exercise frequency in crisis management teams outside the rescue forces has pointed to a broader scope than the mere exercises themselves. Municipal crisis response coordinators and county-level officers in charge of crisis preparation and communication requested digital solutions that support the entire process plan-conduct-evaluate and also inter-organisational sharing of exercise material (see e.g. Magnusson et al., 2019).

That “Digital platforms for crisis exercises may offer significant potential by fostering collaboration, innovation, and knowledge exchange” has recently been evidenced by Sørensen et al. (2025, p. 1) in a scoping review. The present paper will emphasis low-cost by a slight permutation of words: “Digital platforms may offer significant potential for crisis exercises [etc.]” – eliminating the limitation to platforms for crisis exercises and instead rely on our earlier results demonstrating how more general digital platforms can be used to keep costs low and make the solutions accessible across organisational boundaries. This is particularly suitable when discussing formats for table-top exercises, as trainers in general employ ordinary appliances such as whiteboards and PowerPoint files. The fact that the format is simple makes the issue about low exercise frequency more intriguing. This work-in-progress paper addresses motivational inhibiting factors for the adoption of more flexible formats for table-top exercising, that is, formats that would otherwise help organizations to adopt more frequent development of capabilities and rehearsal of crisis plans.

The discussion here is rooted in studies where LMSs have been used as a tool for planning, designing, conducting, and eventually as a record for evaluating the exercises – exercises which can be described as “table-top” but sometimes ran distributed (participants not physically co-located) so the word “table” is just to indicate an exercise format where injects are given by the trainer and trainees do not summon staff to physically take actions but merely indicate what staff and other resources they would employ in response to the threats described in the injects.

An LMS is not simply just placing all files belonging to a table-top exercise in one container, but rather allowing that trainees as much as the trainer will be commenting in the exercise area in the LMS (an area normally called “course” or “course page”; Bellström et al. 2020). LMSs also support structuring courses for a temporally ordered publication of information and assignments (injects). Their “interactivity” is probably better suited than cloud-based repositories and shared workspaces for typical table-top structures, but nothing in the arguments below hinges on the terminology (LMS vs. workspace). We employ more basic dichotomies when analysing an interactive tool such as an LMS. The aim is to find a set of research proposals for better use of LMS flexibilities.

PROBLEM BACKGROUND

“Only four out of ten companies have a crisis plan” alarms the new Swedish Civil Defence and Resilience Agency (2026) based on an interview study with 1000+ managers. Crisis management teams (CMTs) outside the professional rescue services face well-documented challenges in maintaining a sufficient exercise frequency where crisis plans as well as individual managers and key staffs’ capacities can be honed. Earlier studies have shown that the obstacles extend beyond the conduct of the exercises themselves. Instead, they arise across the entire plan–run–evaluate cycle, where organisational conditions, time constraints, and cultural factors often limit the ability to exercise regularly (Grunnan & Fridheim, 2017; van Laere & Lindblom, 2019).

A recurring problem is scheduling and participation. Crisis managers and key staff typically have demanding operational roles, making it difficult to secure a common time slot for a full-day or half-day table-top exercise (Berlin & Carlström, 2015). Even when time can be found, unexpected events or everyday operational pressures often reduce attendance or limit engagement, a pattern noted in multiple exercise-evaluation studies (Beerens et al., 2020; Olsén et al., 2019). As a result, many organisations struggle to follow the recommended recurrence for crisis exercises (MSB, 2017).

Another challenge relates to organisational culture and leadership expectations. Some managers hesitate to expose uncertainties or gaps in preparedness in a joint exercise setting where their decisions may be scrutinised by colleagues from other units (Stern, 2014; Baron, 2005). In addition, the prevailing notion that “real” exercises must be synchronous, co-located, and fast-paced contributes to the perception that exercises are resource-intensive events, further discouraging experimentation with more flexible formats (Rotstein, 2007; Skryabina et al., 2017).

Taken together, these issues help explain why even low-cost formats like table-top exercises tend to occur less frequently than intended. Earlier attempts to develop specialised crisis exercise software (e.g., prototyping approaches) have shown that tailored systems risk becoming too domain-specific or resource-demanding, limiting adoption (Magnusson et al., 2019), while scoping reviews have emphasised the potential of digital platforms to enable collaboration and knowledge exchange (Sørensen et al., 2025). At the same time, research has emphasised opportunities in re-using widely available digital platforms, such as learning management systems (LMS), which offer low entry barriers and familiar interaction patterns (Bellström et al. 2020).

As Magnusson et al. (2019, p. 91) noted, “Prototyping can lead to specifications that make software easy to use but may at the same time result in very specific solutions that are dependent on the system emerging.” With the decision to base trials on general LMSs the solutions are not less specific – rather, they often consist of utilising specific functions in specific ways which of course make them very specific and particular. Therefore, the focus must be on more generic aspects such as how interactive features affect the planning and conduct of the exercise. In their renowned article, Orlikowski and Iacona (2001) emphasised the importance of theorising the IT artefact for information systems research to be “qualified to offer essential insights and perspectives.” Researchers should not take IT artefacts for granted but engage in “explicit theorizing about specific technologies with distinctive [...] computational capabilities [...] used for certain activities” (p. 131).

In order to suggest the general platforms’ utility for promoting recurrent exercising, a set of concepts is needed in order to reveal the basic traits (the distinctive computational capabilities) that the concrete exercise designs have been exploiting to various degrees (that is, for *certain* activities, not just for “conducting a crisis management exercise”). For the characterisation of alternative table-top formats we rely on concepts presented by Pettersson (2022) to pin-point what can be exploited in repeated plan–conduct–evaluate cycles.

METHOD

The table-top exercises “assisted” by LMSs were already in the plans of the professionals who acted as trainers during these events (except for the very first where researchers and first responders role-played functions of a municipality to experience an exercise fully computer-mediated). Thus, the trainees were real trainees, and the trainers were real trainers. The teams were generally small, mostly 4-7 members, representing units within larger organisations. Although a trainer would normally prepare supporting presentations and documents, in this study, a researcher ensured that the contents appeared in an LMS and demonstrated different possible layouts for the trainers. In some cases, the trainer gradually took over some of the LMS preparation. Our experience includes the *LearnPress* plugin in WordPress and Canvas; we also trialled the Moodle derivate *Studera* and recently also the *Samarbetsrum* (= “Collaboration room”) hosted by Swedish network for Municipalities and Regional government.

The twelve exercises were realistic but the realisations were part of an explorative wayfinding effort between researchers and trainers. From spring 2018 to the end of 2021, one pilot and nine ordinary exercises were conducted. Two scenario-driven discussion seminars involving stakeholders and experts from different organisations were conducted in February 2020 and April 2021 (Bellström et al., 2020; Pettersson and Venemyr, 2021). These discussion seminars were scenario driven and did not differ much from ordinary table-top seminar exercises. In addition, in 2021 we observed videoconference exercises conducted by a company that utilised other kinds of digital support tools after initially testing an LMS in two videoconference exercises in December 2020.

The exercises conducted contained four to six modules, as described in the following section. Basic information are provided in Pettersson (2022) with some insights that will summarised further below. Data collected included e-mails, meeting notes, LMS course pages (i.e., exercises), observation notes, interview notes and recordings, and data from the LMS, namely inputs from participants and time stamps. Ethical approval had been obtained from the university’s ethics board and the participants were aware of the dual purpose of exercise and research and gave consent for data use. Analysis has included tracing reaction to various features but also developing the use of LMS features, proposing new uses and new scheduling schemas and implementing these when trainers found it fitting. For this Work-in-Progress paper we categorise motivational inhibiting factors for the adoption of more flexible table-top formats.

CONCEPTUAL BASIS FOR DISCUSSING COMPUTATIONAL CAPABILITIES

Team performance is essential rather than individual team members’ performance – so the basic question is: How should trainees interact? The exercises that this discussion relies on were generally divided into 4-6 steps or modules: 1) Scenario, and participants role assignments; 2) Possible short term consequences described by each CMT member; 3) Team creates a situation report and a general action plan; 4) Specific actions are defined by each participant or participating function; 5) “One week later”: reconsider the situation; 6) Evaluation. Admitting the use of an LMS’s functions for interaction, it is possible to assess these modules for use in a typical “distance education” format rather than only for the typical co-located synchronous table-top format. Module 1 and 2 could possibly be given as individual assignments or to small groups within the team. But here arises a conflict with “assignments” within an LMS, as students’ submissions to these are by default only seen by the teachers. However, LMSs have blog-like discussion functions with threads, which can be used for the comments to the injects, which means that all participant can see these. Questions to the trainer and answers from the trainer (perhaps the CMT leader) can also be seen by everyone.

Thus, it is feasible to think in terms of asynchronous exercises, and thus also physically distributed exercises as people are not in the exercise at the same time. However, as these exercises are not only training the individuals but also the team as such, it is important to let participants read each other’s comments to the trainer’s injects, so that actions proposed are informed by the growing body of responses and possibly inquiries are made. Thus, even if everyone can pursue Module 1 when they have time, no one should start Module 2 before everyone has completed Module 1. To conclude, in an asynchronous exercise, the timeframes for each module should preferably not follow directly upon each other.

On the other hand, Modules 3 and 6 can benefit from synchronous formats even when slotted in an otherwise asynchronous and discontinuous series of modules. In fact, even a co-located and synchronous exercise can work well in discontinuous format – one case showed that participants discussed the slowly unfolding exercises also during breaks in the ordinary working day (Pettersson, 2022, p. 870).

There were several concepts highlighted in Pettersson (2022):

- *Synchronicity*: **Synchronous** vs. **Asynchronous**
- *Continuity*: **Continuous** sequence of modules vs. **Discontinuous** sequence of modules
- *Location*: **Co-located** vs. **Distributed**

- Response and discussion format: **Writing vs. Speech**
- Delayed interaction: **Write before reading/speaking** in synchronous speech-based discussions stifles group think (and was appreciated by trainers for this reason)

Flexibility for the trainees can be defined by the three first dichotomies (the right-hand alternatives offer more flexibility)

Flexibility for the trainer/designer would also include the two other features. This underscores the capabilities of LMS-like platforms. Writing was used also in oral discussions to respond as a team and sometimes individually.

Before presenting a new analysis of how LMS flexibilities can be planned intentionally through a series of exercises, we summarise what has been presented before concerning benefits at the exercise level.

PREVIOUS INSIGHTS FROM THE SERIES OF EXERCISES

The experience from the rather broad range of table-top-like exercises conducted revealed several reasons why it is easier to agree on an exercise plan when the exercise is mainly asynchronous and discontinuous. As presented in the Problem Background, scheduling is normally the main problem. With flexible formats, prolonged scheduling negotiations are avoided as people are scheduled to exercise within time frames rather than on exact hours. Whether inexperienced CMT leaders are hesitant to traditional exercising is hard to tell from our 12 exercises, but it is definitively easier for each participant to adapt time requirements: newly employed can take their time to read up and reflect on actions. As expected, documenting is mainly automatic if everyone writes; no need for extensive report writing. Moreover, for participating organisations that planned several exercises, only slight redactions of structures and materials were needed before reuse. Also, synchronous exercising is well supported by LMSs as demonstrated by six of the trials. A mainly asynchronous exercise or a discontinuous synchronous exercise can easily be reused for an ordinary co-located exercise.

To these benefits of enabling exercising at all comes also some organisational learning benefits that directly stems from the asynchronous, discontinuous format. Paradoxically, this less realistic training format provides for a greater reality check of certain aspects compared to synchronous exercises where the whole CMT gathers in the same room: an exercise can run concurrently with other activities and thus reveal who in an organisation actually can be busy with crisis management if other duties have to be attended to at the same time (Pettersson, 2022). Furthermore, the reliability of internet connections is tested when participants are not gathered in the same room but assume they can participate from anywhere. Hard lessons (we had three cases) can thus be learned to the benefit for future videoconference CMT meetings whether these are summoned for exercises or real crisis management. One further benefit for the slow-paced discontinuous format is that it allows for checking documents – Grunnan and Fridhem (2017, p. 88) warn that “exercise participants often do not prepare or look at read-ahead material at all, which results in information overload and high degree of uncertainty when the exercise begins.” From our study, a collaboration exercise with module-by-module assignments with individual replies is real enough to increase peer pressure and prioritisation of reading documents. In contrast, a mindful reading would be hindered if reading happens in a fast-paced exercise (cf. Gonzalez, 2022).

Discontinuity lessens the burden to assure that everything is right from the start. A bit paradoxically, in the crisis response literature there is often remarks on how important it is to plan an exercise well, as if unplanned events should not be allowed to occur in an exercise on handling the unimaginable. However, “Choices or simple mistakes during planning or conduct can easily lead to exercises that do not provide the necessary learning points for the organization and for the individual participants.” (Grunnan & Fridheim, 2017, p. 80). Naturally, field exercises ending without really practicing the skills in focus would constitute a great waste of resources. Even table-top exercises missing their learning points are demotivating and would probably prolong activation of the next exercise. So, let discontinuity be not a reason for sloppy planning but just an opportunity to repair: “In connection with studies of traditional exercises, it emerged [...] that employees were seldom given the opportunity to correct mistakes in one and the same exercise. Such opportunities could have contributed to learning” (Berlin & Carlström, 2015, p. 493, our translation). The sparsely populated schedule of a discontinuous exercise opens up opportunities for the “active coaching during playing” developed by van Laere and Lindblom (2019, p. 43): “it soon felt as a waste of time to let [trainees] be confused for a long time and wait for the debriefing to conclude that they were stuck. [...] we intervened by asking questions [...] we triggered a moment of reflection (a mini-debriefing)”.

However, to these arguments for having some exercises in discontinuous formats one must add that there was some hesitance in some cases; if not by the trainers, at least by some who would be trained which in turn made one municipal crisis response coordinator to hesitate. These hesitant voices is the rationale for the present analysis to identify a strategy for promoting LMS flexibility. Noteworthy, it is not about team work per se, as the CMT members are not necessarily working as a team when questions arise about when to exercise. Theory of team work

(e.g., Salas et al., 2024; Flin et al., 2026) is not directly relevant to the issue we bring up in this paper. Neither is it a question of stakeholder representation in decision processes (Radianti & Pilemalm, 2025) as far as we can see.

POST-HOC ANALYSIS OF RECORDED SOURCES FOR HESITATION

i) Reasons for hesitation and possible mitigating counter-arguments

We have distilled six arguments against new formats: some are based on a feeling that whatever combination of flexible formats for the modules, the exercise will not be thrilling enough; some others are reflecting more general circumstantial matters. Either way they lead to procrastination. To these arguments we have gathered mitigating suggestions from insights as the above. This should still be seen as a work-in-progress but some elaboration is found in Table 1. However, while it is possible to find at least one counter-argument for each argument against new formats, the validity of flexible formats rests ultimately on an assumption of a sequence of exercises, some being less flexible and as close to real CMT work as possible especially when it comes to synchronous actions and tight time frames. Even if researchers and trainers had a recurrent exercise cycle in mind, some exercise-starved CMTs probably did not have this, as will be explained in the following section before we outline our analysis of how LMS flexibilities can be introduced in exercise practices.

ii) Reframing the exercise cycle

Even if we are proposing really low-tech (as measured by today's standards) as a versatile tool for breaking the stalemate cycle, we recognise the problem to work in new formats. This has been realised in many other application fields of IT and of technology in general. Roger's *Diffusion of Innovation* (2003, p. 16-18) speaks about "trialability" and "observability". Notably, it would be hard for trainees to make trials and observations as they seldom exercise. An implication of this would be for trainers who want to trial flexible formats, whether they are in-house security managers or external municipal crisis response coordinators, to plan for a series of exercises (Venemyr, 2025, p. 11), and moreover not dress everything as "exercise" to avoid preconceptions of what an exercise should be. An elaboration on concepts for flexible exercise formats within a frame consisting of several cycles is presented in subsection *iii*. We will not connect here to Argyris's and Schön's (1996) single- and double-loop learning, but the arguments are related. As already remarked, a mainly asynchronous exercise or a discontinuous synchronous exercise can easily be reused for an ordinary co-located exercise, why the LMS as a hosting device provides for easy reuse between steps in such a multi-cycle frame.

iii) Research Proposals for Better Use of LMS Flexibilities

Rather than presenting an exercise in a way that it risks to be perceived as a boring and somewhat out-of-the-scope toiling with individual writing assignments, the first entry of Table 1 indicates the possible positive effect of pointing to a later round presented as a pulse-raising exercise where everything should work smoothly under time pressure. To reach that stage, there are some preliminaries to walk through as a team. The question is how to present this idea. Following are some tentative approaches to be tested. (For now, in an ongoing project concluding in 2026, the study is limited to map presently evolving practices.)

First, a greater emphasis on including trainees in constructing the exercise could make even the few sceptics accept the discontinuous and sometimes asynchronous format. The learning effect of constructing a crisis exercise should not be very far from pretending a real case, as noted in Table 1, row 3. That might be debatable, but at least it would be a question for research. We have suggestions for the set-up but will not elaborate it here as it would vary between teams what is feasible, and the degree of voluntarism must be controlled. A problem would be if only some in the group engage in the construction phase.

Another interesting research question would be whether the following effect can be observed: With the ownership people will feel when they have properly worked out at least the structure if not all the details of an exercises (compare Bratteteig and Wagner, 2016, p.427, "contributed to creating choices"), it might be much easier to agree on running it (whether discontinuously or continuously). That is, in this research agenda, learning effects of an individual exercise is not as interesting as effects on exercise frequency (one can trust the professional security officers or coordinators to make meaningful exercises; we discuss motivational framing).

Asynchronous exercise planning as an on-going activity keeps a crisis mind alive, why a "discontinuous" work with the exercise scenario would be beneficial to maintain. It presupposes a recurrent vetting of risks and preparedness. Touting a follow up of the planning cycle as a dress rehearsal in slow motion (cf. Gonzalez, 2022; Donovan et al., 2015), might be a way to continue the discussion on preparedness, crisis plans, logistic arrangements for a real CMT meeting, while also reinforcing the notion that active but discontinuous work is a

Table 1. Reasons for hesitation and counter-arguments

Arguments against new formats	Counter-arguments based on possibilities offered by discont. and asynch. formats
1. The trainee expects a pulse-raising event. Discontinuity is not experienced as intense enough, not a “real” crisis exercise.	Some trainees suggested time-limited response to the inject(s) in an asynchronous module to make asynchronous exercising more exiting. One trainee also compared with an interactive program used in a previous exercise.
2. Seemingly not developing rapid response capabilities and overall rapid co-working. Again, discontinuous format is not experienced as intense enough, not enough for “real” crisis management.	<p>Good collaboration is grounded by understanding^a – asynchronous discussion gives everyone possibility to ponder injects and responses. Giving individual responses before reading others’ responses prevents group think.</p> <p>Discontinuous format increases the possibility to exercise essential parts of synchronous communication by simply making exercise possible.</p> <p>Discontinuous synchronous formats beside solving scheduling issues also allow for more reflection around the performance.^b</p>
3. The target group agrees it would be good to exercise more, but planners find engagement lacking and do not want to risk losing a commitment by proposing a less thrilling format.	<p>Asynchronous work can be presented as planning the next exercise.^c Thereby no request is yet put on trainers to use the LMS for exercising, neither to exercise asynchronously.</p> <p>In an exercise, let trainees propose the next inject (even a new sub scenario) – when into an exercise, the crisis think runs productively. Develop this to the next exercise.</p>
4. “We don’t have the time right now.”	The CMT must be reminded that dealing with crises will always be concurrent with the ordinary operations. Busyness can be explained as the reason for why the exercise should run right now (but discontinuously to give occasions for thinking on crisis handling at various stages of urgent operations).
5. Unstable network connections – “shouldn’t we wait until we can meet all of us?”	The discontinuous format makes this a less fatal condition, and any synchronous module in the exercise can be taken as a test of connectivity.
6. “We like to sit together”/“Normally we sit together”	That is a good practice, but cannot be supposed to always be possible. Exercising distributed and testing connectivity is therefore good.

^aWe see *grounding* (Clark 1996) as one of the more important things of training an CMT. Here grounding includes a more general shared understanding of whom they are and what resources are available in total, that is, not only a shared understanding of the situation at hand (the scenario).

^bCompare Gonzalez’s (2022) findings how much faster learning is if initial training is slow and reflective.

^cWith ref. to sources where crisis trainers express that “much is learned in planning an exercise” (e.g. Wik et al., 2017).

valuable part of preparedness. Another angle of motivating why the exercise should be run in slow-motion can be to turn the “We don’t have time right now” argument up-side down: “Before running the exercise for real, you need to stress-test the role assignments. You need to choose a period when your organisation has a heavy and demanding workload. We run this role stress-test as when we prepared the exercise scenario, incident by incident, everyone will have time to commenting when time allows, but you can also note when a module was hard to squeeze into your schedule and why it was hard. What are the conflicting assignments? You can even change role with someone else in the team, if you think this solves both the normal operation and the crisis response.” A third argument could be to search for connectivity issues, and one or two of the modules could be run synchronously (in fact, in our study no exercise ran fully asynchronously except the very first).

The concomitant research questions to a slow-motion exercise cycle could pertain to measuring how extensive the answers are, and if misconceptions occurring in the previous cycle re-appears. In a way, these represent the ordinary evaluation inquiry concerning team progress. Research on the effect on repeated exercising is better directed to the understanding that participants have (and experience to have) of the benefits of dress rehearsal and role stress-test. Are they prepared to re-run a synchronous module if some of the CMT failed to show-up or an asynchronous module if some failed to respond? Do they learn to handle the discontinuous format as an asset when experiencing a heavy workload? Questions might vary with what functions this organisations normally fulfils, but there should be general lessons to learn on how a trainer can get managers to gauge and exploit the flexibility offered by different table-top formats.

We learnt that date-setting was the hardest problem, and set dates could even be revoked. An important question would be if the team can agree on a time for the “real” exercise, the third cycle in our outline of repeated exercises. The discussion of the date can be pursued within cycle one and two to see whether engagement helps. Our study trialled in one exercise a request for what would happened next (Module 5, synchronous). This met with a host of suggestions. This and other evidences revealed that a few steps into a scenario, participants are engaged and full of anticipation and expectations (Pettersson & Venemyr, 2021). Can this engagement also propel a willingness to finally set the date for the fully synchronous exercise? One can even experiment with simply extending the ongoing cycle to the next cycle by setting the added modules in one synchronous session.

Eventually, the team would reach a cycle promised to be the “real thing”. By now, the team would be conscious of where rapid decision making is needed. They would also be rather comfortable to work discontinuously and asynchronously, with shorter synchronic sprints (as Module 3 in the exercise outlined in “Conceptual Basis...”). So, would some teams decide to rather run also the fully synchronous exercise discontinuously? Slot in half an hour here and half an hour there, giving themselves too much time to digest the hottest problem complexes of the scenario – two weeks rather than two hours? This is hardly a risk as scheduling should adapt appropriately to the capacity requirements that needs to be tested. Nevertheless, the format might not be the traditional table-top exercise.

Table 2 sums up these preliminary ideas for research questions for more frequent CMT capability-building by more or less covert introduction of flexible exercise design based on some typical LMS capabilities.

LMS FEATURES OUTSIDE THE MENTIONED CONCEPTUAL BASIS

Not all LMSs are equally suitable. Besides varying degrees of usability, there is also a variety in functionality. This attempt to investigate how to utilise some distinctive computational capabilities should not be seen as “deterministic”. Certain features support flexibility but a service thus featured does not *generate* a frequent exercising. We seek approaches to overcome the bottlenecks reported in several studies.

The ubiquitous use of LMSs and cloud-based workspaces is as essential as high usability even if neither was mentioned in the conceptual basis section above. Both characteristics are taken for granted, as they are the reason to at all investigate what the implications can be of certain computational capabilities to alleviate scheduling problems and facilitate planning and evaluation. Nevertheless, restrictions in access to a company or municipality LMS might make it hard to use the LMS to support inter-organisational exercises or to allow shorter interactions with an external expert in an exercise. This could also stifle inter-organisational sharing of exercise structures and illustrative material from, e.g., mock social media (a wish for training materials have surfaced in various interview studies; cf. Magnusson & Wik, 2023).

Inter-organisational sharing may sound as compromising security and privacy. However, it is not the contents of a specific exercise round that are shared or reused in the next exercise, but exercise structure and background materials. Naturally, there is a limit to how sensitive the data can be that is inputted before and during exercises if an “ordinary” web service is used. In our study, the organisations that participated in the LMS exercises simply reminded the participants that no classified information should be entered. However, there could be national solutions, at least for public organisations. American FEMA (2021) shows this. In fact, a smaller investigation during 2025 of a newer Swedish services led to the present research ideas:

The Swedish association of municipalities and regions, SKR.se, has launched a blog service where each region and municipality can use one “collaboration room” (*Samarbetsrum*) of their own for free. For a fee, a local government can add more meeting rooms. An informal mock exercise we conducted in a collaboration room confirmed the viability of the conceptual framework by revealing why the service is not sufficient as an effective exercise support. It also showed that adding a few system-related control concepts make some weaknesses clearer. Nevertheless, the SKR initiative shows the viability of a national platform which could solve much of the security concerns – there are also national thematic discussion fora for local governments in this service. Noteworthy is that it is used as a support for courses offered by SKR (and its subsidiary Adda, who developed *Samarbetsrum*).

Table 2. Research questions when trialling new work routines*

N.B.: “work routines”, not “exercise routines” as the latter might unduly limit the discussion on scheduling issues.

Cycle	Research question / trail design feature	Activity
1	Effect of inclusion in computer-based scenario planning on acceptance of discont. and asynch. working formats	Planning, developing scenario incl. all details, setting reasonable scheduling of next cycle
1	Is the learning effect of planning a crisis exercise similar to participating in exercise?	– “ –
1	What is the team’s status if only some participate in the elaboration of scenarios?	– “ –
1	Does any ownership feelings increase the willingness to set a date for a cont. synchronous event?	– “ –
2	Is dress rehearsal in slow motion acceptable? (Does a previous discont. asynch. building of scenario mediate acceptance of more discont. formats for exercising?)	Discont. exercise
2	Is the counter-argument about stress-testing role assignments appreciated?	Discont. exercise during a stressful period
2	Is the counter-argument about testing connectivity appreciated?	Running synch. exercises discontinuously and distributed
2	Is the CMT prepared to re-run a failed module? (Any need to rescheduling the following modules?)	Running discontinuous exercises
2	Do they learn to handle the discontinuous format as an asset when experiencing a heavy workload?	Running discontinuous exercises
2	Are slow exercise formats conducive for generating suggestions for the next module (inject) and the next exercise?	Writing individual answers before reading others. Discussion can be synchronous.
3	How are date-setting a “real” exercise influenced by the engagement in slow exercise?	Planning the pulse-raising exercise
3	Is there any tendency that the CMT prefers to run the fully synchronous exercise discontinuously?	Planning the pulse-raising exercise

* Based on some prominent computational capabilities of LMSs, in particular: Hosting files, injects, configuration of answer modes (text only or file uploads, comment before seeing others’ comments, structure, links to video meetings).

We were also inspired by the *Further Education Service (Fortbildningstjänsten)* of the Swedish Civil Contingency Agency (2025, renamed from 2026). It is a national resource for education targeting firefighters and other rescue services, but it also provides guides for training. Local organisations can register an account domain in which local coordinators can check firefighters’ courses taken and annotations on exercise participation and outcome. The website stresses how beneficial it is to integrate the course material in local education and training. Above, some research tracks were proposed concerning increasing preparedness thinking in less professional crisis management teams, but rather than igniting a table-top exercise by a “course” we proposed a more hands-on work, albeit intermittent, in the form of collaborative scenario development. This in order to erase the single-event thinking.

CONCLUSION

While crisis exercising is a marginal phenomenon in most organisations and thus cannot be given the main attention of the upper management, it cannot be neglected. It is requested to be recurrently performed in order to keep crisis plans and managers at all levels updated and ready when an unexpected event strikes the organisation

or the society at large. Table-top exercises is a recognised method to test both crisis plans and the understanding and coordination of crisis management teams, and moreover to develop plans and CMT members. Through the years, exercise frequency has not met expectations, and simplifying for trainers to set-up such exercises has been a goal for national contingency agencies. Simplicity in scenario arrangements is stressed as well as concrete support are given by publishing exercise templates for planning, conducting, and evaluating for municipalities and companies to use. Nevertheless, there is still room for improvement, why we here presented work-in-progress on conceptualising other approaches than further simplifying the content of exercises or investing in expensive interactive systems, which most organisation outside the rescue forces cannot afford. We have previously reported on using the omnipresent Learning Management Systems in tabletop-like exercises. While usability in general is no longer an issue for this kind of systems, the availability of their distinctive computational capabilities could constitute a line of inquiry in itself to provide guidance for trialling “boundary object”-like internet services. Here we discussed organisational inertia to adopt flexibility and proposed research inquiry based on lessening the focus on the individual exercise while still checking the problems of scheduling and other things.

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