Blueprint
The Future of Exercise Design

BLUEPRINT IS AN EXERCISE PLANNING TOOL that allows for collaborative Master Scenario Event List (MSEL) creation and exercise planning. Blueprint provides a solution to the logistical and lifecycle management problems associated with traditional spreadsheet-based MSEL creation. In addition to enhancing the creation of a MSEL, Blueprint also integrates with other components of the Crucible Framework allowing for seamless configuration of an exercise.

Collaboration
Blueprint allows system administrators to assign content-developer permissions to users responsible for working together to plan an exercise. These content developers, commonly known as exercise planners, can create and edit MSELs on the platform. Planners can be assigned to create MSEL events, usually referred to as injects, write and modify the content of injects, or to approve the final state of an inject. These planners can work collaboratively on the MSEL, seeing each other's changes in real time.

Users with the right access permissions can access the same version of the MSEL in real time, which eliminates the confusion inherent with emailing copies of Excel spreadsheets across organizations. In summary, Blueprint allows users to view, edit, create, and approve events on the MSEL.

Exercise Integration
Blueprint is the newest application designed as part of the Crucible Framework. It can configure other Crucible applications to build an exercise based on the MSEL. Specifically, Blueprint interfaces with Player, the Collaborative Incident Threat Evaluator (CITE), Gallery, and

Steamfitter. These core applications are used to present inject information and exercise data to participants.

Exercise Design
Blueprint further simplifies the creation of the MSEL by allowing users to select and define simulated entities, attacks, timeframes, participating organizations, and more.

Blueprint maintains templates for various types of information commonly reused in exercises, such as MSELs and organizations. Exercise planners can create templates, select them for inclusion in a MSEL, and modify them for a specific exercise. This results in a great deal of time saved.
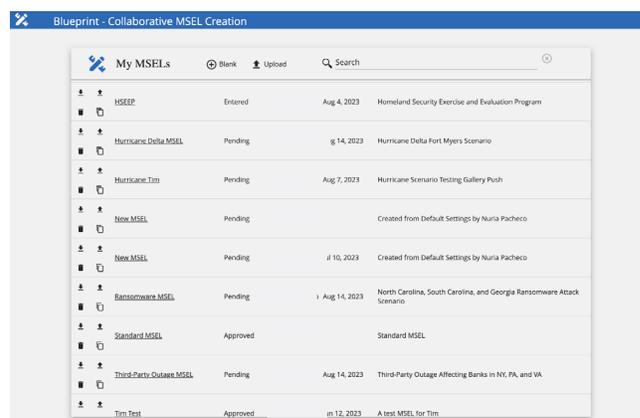

Figure 1: **Blueprint Home Page**

What are Blueprint's Features?

Create/Upload a MSEL
Blueprint gives users the capability to create a MSEL from scratch or to upload a saved MSEL and continue editing it in the application. This key feature streamlines user experience by eliminating the friction of external applications, such as Excel spreadsheets, and providing a more user-friendly approach to help users visualize information. To further simplify the process, Blueprint

contains templates for common MSEL formats that can be used as a starting point.

Edit a MSEL

After uploading or creating a MSEL, users can edit existing information as well as add additional information to the MSEL. This function improves configuration management—now users can collaborate to edit the same MSEL, instead of sending their edits to a user responsible for manually compiling all the edits together. Enabling users to access the MSEL on-demand also ensures that everyone has the same copy of the MSEL on the day of the live scenario and reduces confusion.

When adding events to a MSEL, many fields need to be filled in by the exercise planner. Blueprint simplifies this process by recognizing data field types and presenting, when applicable, a set of acceptable values to the user. For example, if an inject has a "to" field, a list of organization names will be offered to the user.

Events on the MSEL can also be assigned a color. These colors allow exercise planners to visually group events together by organization, approval status, or another metric.
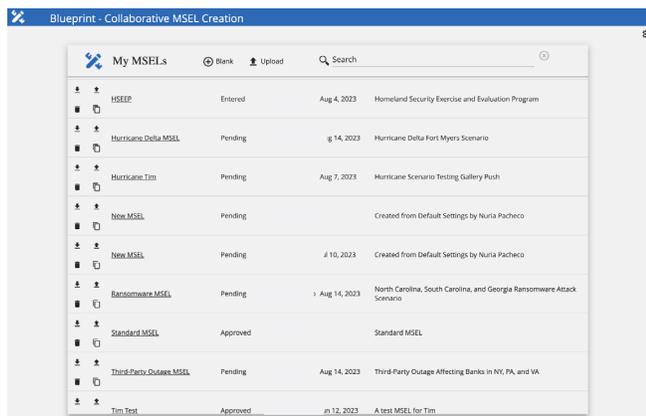

Figure 2: **Edit a MSEL**

Sort & Filter Information

Information added from the MSEL can be sorted and filtered for an easier way to find the desired information. For this, Blueprint provides two options. By default, Blueprint enables the user to filter by Organizations, Moves, Injects, or Exercise View. Users can also search for keywords in the "Search" field to filter through the MSEL. This enables users to easily filter and search the MSEL to find any specific needed item.
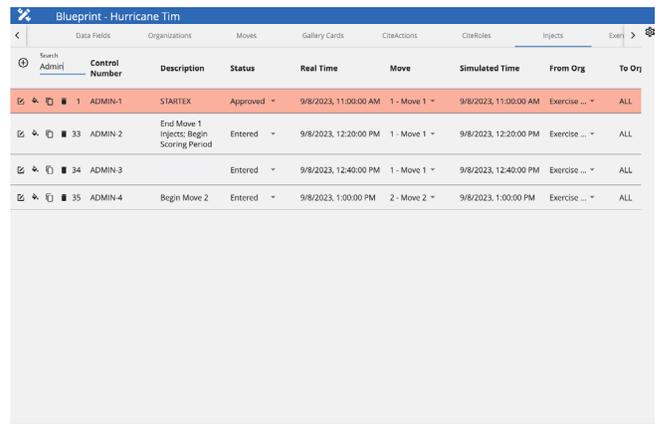
Figure 3: **Filter MSEL Information**

Exercise View

During an exercise, participants can be given access to a special read-only MSEL page. On this page, you can configure which fields are exposed to users, so that only the information participants should know is visible. For example, you may limit participants to see an event's title but not its details.

Figure 4: **MSEL Exercise View**

The Future of Exercise Design is Here

Blueprint will revolutionize the way we plan, build, and assess exercises. By enabling collaboration, providing templates for MSELs and other scenario data, and integrating with Crucible components, much time will be saved in exercise management. Contact us today at **info@sei.cmu.edu** to find out how you can use Blueprint to streamline your exercise planning process.