

Synchronization Matrix

The Challenge

Research and experience tell emergency managers that coordinated preparedness planning leads to successful emergency response. Yet, many emergency plans treat responding agency and jurisdiction actions as independent acts. Perhaps you have seen instances where jurisdictions or agencies did their planning in isolation. They have no idea what other response agencies or responding jurisdictions are doing, and vice versa. They could not tell how theirs' or others' actions affected each other. Then, in an emergency when they had to work together, one of two things happened: either the response broke down or, if they were lucky, it worked.

This is the challenge faced by emergency planners. How do they produce emergency plans that are “just right?” How do they identify all of the problems that might be faced and provide solutions to those problems? How do they provide enough detail to make the response work, but not so much detail that the plan is not flexible or ever read? How do they go about coordinating the plan so everyone knows what to expect and no one is overwhelmed?

The Sync Matrix Solution

To address the challenge, Argonne National Laboratory developed a *systems-based* and *problem-solving* approach to emergency planning called the Synchronization Matrix Planning Process. Using the process means you do not have to count on luck to have a successful response. You can plan how the actions of all the response agencies and jurisdictions relate to each other and to what the hazard is doing ahead of time. Planning becomes even easier when using Sync Matrix software, because it lets you visualize those relationships.

The Synchronization Matrix Planning Process increases plan effectiveness by taking a broad view of a response that accounts for all of its aspects. This planning process emphasizes *relationships* between the actions of responders at all levels, while including all responding organizations and jurisdictions.

A “Sync Matrix” plan provides responders the framework from which they adapt a response, not a script to be followed to the letter.

Supporting Software

The *Sync Matrix* tool is a key component in Argonne’s Synchronization Matrix Planning Process. This specially designed software provides emergency management professionals with an interactive planning tool that presents a picture of the many interactions that occur as a response unfolds over time. It helps emergency planners better organize, visualize, and analyze the flow of activities within and across response jurisdictions, be they “geo-political” areas (states, counties, and municipalities), corporate entities (national, regional, district, and individual stores), or departments and agencies of a larger organization structure. The software serves as a collaborative workspace, allowing the planning team to work individually or as a team, as appropriate. It also provides a record of planning processes for later use in orienting new staff, informing elected leaders, guiding a response, or completing after-action analyses. Designed for ease of use, Sync Matrix uses a frame structure similar to other software products that users may already be familiar with.

To provide greater flexibility for planners, Argonne has also developed a “Reader” version of the Sync Matrix tool. Reader allows a planning team to share Sync Matrix products with outside organizations or other entities where restricting access is desirable. “Reader” users can view jurisdiction structures, activity lists, the graphic work area, and reports, as well as print outputs; however, they cannot make changes to Sync Matrix files. Using Sync Matrix Reader allows a community to provide a plan to mutual assistance organizations before they deploy, so they can see ahead of time the roles they will play in a given response scenario.

Sync Matrix Capabilities and Features

Relationship-Driven Planning

Users establish predecessor and successor relationships among hazard actions, decisions, and response actions. The Activity Chart shows relationships between jurisdictions.

Centralized Repository

Users can define jurisdictions, departments, and positions one time and then have them available for future emergency response plans.

Thread Builder

Common sequences of activities and their relationships are available for reuse.

“Master” Matrix

The “Master” matrix shows actions from multiple jurisdictions in a single, combined Activity Chart that provides operational vision for the entire response.

Work Off-Line or with a Client Server

Users are able to work on- or off-line. When a server connection is established, the software automatically updates data files with the off-line work.

Intuitive User Interface

Work areas have the look and feel of software that users already know.

Visual Data Manipulation

Users can make data changes directly in the Activity Chart by dragging activity cards or using drop menus accessed by “right-clicking” the mouse.

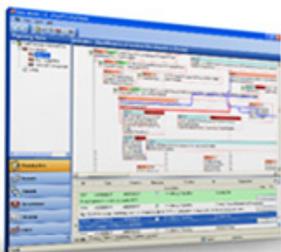
Role-Based Security

Users control data security by setting administrator, author, or reviewer permissions.

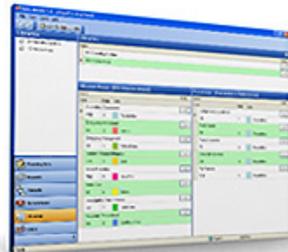
“Knowledge-at-a-Glance” Activity Graphics

Activity cards tell users which jurisdiction, department, or response position is responsible for task completion.

Sync Matrix



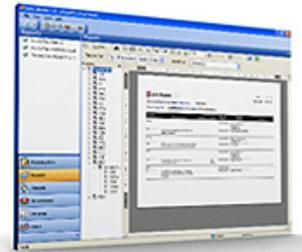
Activity Chart



Jurisdiction & Department Builder



Mission Area & Function Library Builder



Report Viewer

Learn more about SYNC MATRIX at:

<http://www.dis.anl.gov/ciep/programs/emtools/index.html>

For more information, contact:

Paul Hewett (PLHewett@anl.gov) -or- Jacques Mitrani (JacquesM@anl.gov)

DIS Center for Integrated Emergency Preparedness

Argonne National Laboratory

9700 S. Cass Avenue, Bldg. 900

Argonne, IL 60439, USA



UChicago ▶
Argonne_{LLC}

A. U.S. Department of Energy laboratory
managed by UChicago Argonne, LLC