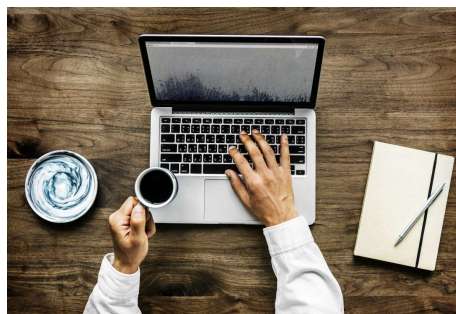


What are Micro-Learning Modules?



MLM-024-A

Industry	– All
Principal Role	– All
Professional Role	– All
Enterprise Phase	– All



Turn on your audio and
click start to begin video

START

This Micro-Learning Module describes what MLMs are and how they are used.

It is intended for anyone interested in exploring new ways to share information on cybersecurity.

Click the START or NEXT button to advance to the next page.

What is an MLM ?



Micro Learning Modules (MLMs) are:

1. Short instructional modules that focus on a single topic or concept
2. Viewable on many devices, including computers, tablets, and smartphones
3. Linked to other PERA Learning Materials
4. Accessible within PERA and from the Internet using browsers or chatbots.



Micro Learning Modules (MLM) are:

1. Short instructional videos of 3 to 15 minutes in length that are focused on a single topic or concept.
2. They are viewable on various devices, including tablets, computers, and smartphones, and are designed to be easily searchable on the internet.
3. Linked to other PERA Learning Materials
4. Accessible within PERA and from the Internet using browsers or chatbots.

Let's consider each of the above in more detail.

1. Short and Focused on a Single Topic



- Micro Learning Modules of 3 to 5 minutes and Mini Learning Modules of 5 to 15 minutes fit into busy schedules.
- Short periods of intensive learning can be more effective than long hours of study.
- Single concepts are more easily absorbed and remembered
- Learning is Self-paced with “soak time” between topics
- Supports quick lookups using browser search functions



MLMs present information in 3 to 5, or 5 to 15-minute MLMs because many individuals are too busy to follow traditional courses. However, with only a few minutes per day over a few weeks, a significant amount can be accomplished.

There are also benefits from the MLM learning format. For example:

- Studies have also shown that many people learn best in short bursts of 5 to 15 minutes.
- Since MLMs focus on a single topic, information is more easily absorbed and remembered.
- Because MLMs are self-paced, there can be “soak time” between topics to transform short-term memory into long-term learning.
- Finally, because each MLM contains a single topic, a simple browser or Chatbot search can deliver quick lookups by topic.

2. Viewable on Many Different Devices in Different Formats



MP4 Videos

PDF Book format

PPTX PowerPoint

SCORM courses

HTML courses



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MLMs can be displayed on personal tablets, PCs, and smartphones. Any device that supports standard browsing and viewing tools can be used.

MLMs are available in 4 formats:

- 1) MP4 videos
- 2) PDFs of the slides with the printed narrative below each
- 3) PPTX (Microsoft PowerPoint) files include slides with narrative in the “Notes” field of each slide
- 4) SCORM course modules, including quizzes and tests. These require an LMS such as Moodle
- 5) HTML5 course modules. These are identical to SCORM versions, but do not require an LMS.

MPEG videos may be displayed with standard viewers, such as Microsoft Media Player and VLC. These are especially useful for those who learn best through “the spoken word”. They also allow viewers to pause, rewind, fast-forward, or slow down the video.

PDF versions can be viewed and commented on using standard browsers, such as Chrome, Firefox, or Edge, as well as various PDF viewing and annotating tools like Adobe Acrobat. These are best for intensive review by those who learn best from “the printed word” and static images.

PPTX slides are useful for commenting on draft versions of MLMs using Microsoft PowerPoint’s commenting and change control features or when or when extensive

editing is required. PPTX files are also useful for producing “derivative works” such as custom presentations or articles.

SCORM course modules run on our Moodle Learning Management System (LMS).

3. Linked to Other PERA Learning Materials



PERA MLMs can also be :

- Combined to make **Learning Maps**.
- Linked to **whitepapers, User Guides**, and other PERA learning materials.
- Integrated with standard course materials (SCORM format)



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PERA MLMs can also be:

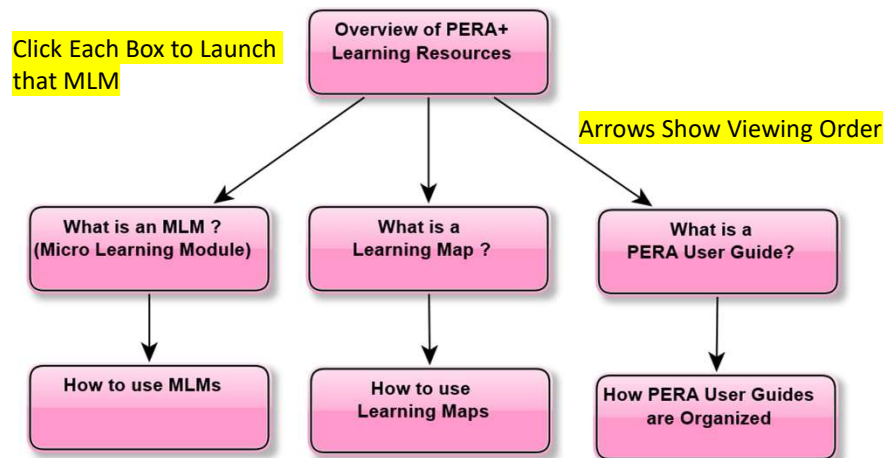
- Combined into Learning Maps for specific audiences such as plant engineers or corporate executives.
- Linked to further PERA Training materials and documentation.
- Integrated with standard course materials (in SCORM format) that add quizzes, animation, quizzes and testing.
- Accessed by PERA AI Librarian, Search Engines, Chatbots, and other Information management tools.

Let's look at Learning Maps in more detail.

Example Learning Map



Click Each Box to Launch
that MLM



Each block in a Learning Map represents a single 3 to 15-minute MLM.

These Learning Maps provide a way to present a set of MLMs tailored for a specific audience or Topic.

For example, this learning map was designed to familiarize users with the MLMs, Learning Maps, and User Guides available on the PERA website.

Each MLM block provides a clickable web link that launches that MLM.

The arrows indicate the order in which MLMs should be viewed.

New learning maps can be quickly assembled using yEd Graphics (free).

MLMs Integrate with Training



MLMs integrate with traditional in-person teaching or remotely moderated e-courses (blended learning).



MLMs integrate with traditional in-person teaching or remotely moderated e-courses.

Self-paced remote learning has become increasingly popular and common.

MLMs can be run as SCORM Courses on the PERA Website or downloaded to Company or University Learning Management Systems (LMS).

4. Accessed by Search Engines and Chatbots



PERA MLMs are designed to be :

- Accessible by Internet Search Engines and Chatbots
- Used by PERA AI Librarian (in-house LLM Chatbot).
- Downloadable by Universities, Companies and the general public.



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Key Messages



- **MLM Terms**
 - Micro-Learning Modules (3 to 5 minutes)
 - Mini-Learning Modules (5 to 15 minutes)
 - Learning Maps: Graphic showing links and viewing order for MLMs
- MLMs enable users to learn at their own pace, anywhere, as time is available.
- PERA Website can be used to access MLMs and Learning Maps.
- MLMs integrate with Learning Maps and other PERA learning resources.
- MLMs convert easily to SCORM and HTML5 course modules.



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The following are some key messages:

Remember key terms and acronyms such as:

Micro-Learning Modules (< 5 minutes), or

Mini-Learning Modules (< 15 minutes)

For convenience, we call these both MLMs.

Learning Maps: A Graphic showing MLMs (with web links) and viewing order.

MLMs allow users to learn at their own pace, in any place, and when time is available.

The PERA Website is designed to personalize access to resources, including MLMs, and to focus on areas that are most relevant to that person.

MLMs integrate with Learning Maps and other PERA learning resources.

MLMs are designed for easy conversion to standard SCORM learning modules used by Learning Management Systems (LMS) in companies and colleges.

Further Information



- **References about Microlearning:**
 - [E-Learning best practices](#)
- **Related MLMs**
 - MLM-024-E *What is a Learning Map*
 - MLM-002-C *What is a PERA User Guide*

Please click [here](#) to provide feedback on this MLM.



We hope you found this MLM interesting and engaging.

Here are some web links to microlearning reference material and related MLMs.

Author



Gary has more than 40 years of experience with enterprise integration and optimization projects, including PERA master planning and project management.

As one of the initial authors of the PERA Handbook of Master Planning, he has used PERA Enterprise Architecture and Master Planning methodologies throughout his career including control and information systems for oil production, pipelines, refining and marine loading, petrochemicals, coal, gas, and oil-fired power plants, polyethylene, ammonia, explosives, paint, pulp and paper, food and beverage, and pharmaceuticals. LNG facilities included world-scale arctic, European, and US Gulf coast complexes.

Infrastructure facilities included Fire, Police, and Emergency Response systems for major US cities, as well as emissions reporting and trading systems for more than 100 US Power Plants.

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