

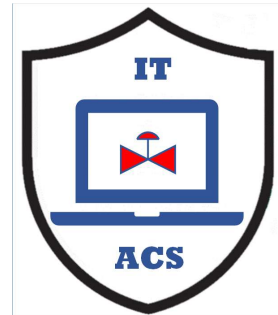


MLM Content and Format

Micro Learning Module

MLM-024-C

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



Turn on your audio and
click start to begin video

START

This module describes the recommended content and format for Micro Learning Modules.

The intended audience is anyone who wishes to write or edit an MLM.

Click the START button when you are ready to advance to the next slide.

Format of MLMs



Open MLM-000-A PowerPoint template:

- It is located under the PERA Docs/MLMs menu on the website.
- Use of this “Master Template” assures benefits of the latest version

Immediately save a copy to your local drive with:

- A filename that includes the MLM number and title
- A date at the end of the file name, for example
MLM-024-C MLM Content and Format 2026-12-31.pptx

Create draft MLM by adding text bullets & images to template slides

- Later, copy slide text to Notes area and expand to full sentences for book format and audio generation. Note: paste as “A” (Alpha) text to retain Notes fonts and sizes.



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- The latest MLM PowerPoint template (numbered MLM-000-A) may be found on the PERA website under “PERA Docs / Micro Learning Modules”.
- Use of this “Master Template” assures the benefits of the latest version
- Be sure to send us any improvements or corrections (using the “comments link” at the end of this MLM).

Begin by opening the template and immediately save a copy in your working folder with:

- A file name including the assigned MLM name and number.
- A date at the end of the file name.

Create draft MLM by adding text bullets & images to template slides

- Later, copy slide text to Notes area and expand to full sentences for book format and audio generation.
- Note: paste as “A” (Alpha) text only to retain Notes fonts and sizes).

Format of MLMs



The MLM-000-A.pptx template contains:

- A “Slide Master” with several slide formats for text bullets, diagrams, title slides, etc.
- Example slides for MLM title, Author Profile, Key Messages, and More Reading.
- Versions of these slides with and without Creative Commons copyright and PERA pie graphic.
- One “Notes Master” with slide image at top and Notes text below.

The rest of this MLM explains **how to use each slide in the standard template.**



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MLM templates are provided to save the author time and to ensure a consistent look and feel across all MLMs.

The MLM-000-A.pptx template contains:

- A “Slide Master” set with several slide formats for text bullets, diagrams, title slides, etc.
- Example slides for MLM title, Author Profile, Key Messages, and More Reading.
- Versions of these slides with and without Creative Commons copyright and PERA pie graphic
- One “Notes Master” with slide image at top and Notes text below. The default format is Arial 12 point, but 11 or even 10 point may be substituted.

The rest of this MLM shows standard Template slides with yellow comments explaining how each should be used.



MLM Content and Format

1. Insert the actual MLM title here.

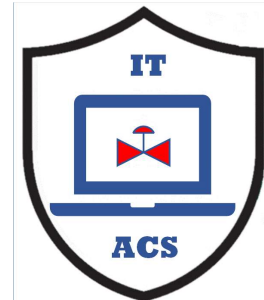
Micro Learning Module

MLM-024-C

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

2. Insert the MLM number.

2. Insert the MLM classification data



Turn on your audio and click start to begin video

START

This title slide indicates:

1. Where to insert the MLM title.
2. Where to place the MLM number and version.
3. Where to put MLM classification data, for example:
Industry - Oil Pipelines,
Principal Role - Owner,
Professional Role - Control Engineer, and
Enterprise Phase - Operations

What is _____?

1. start with a question or other way to engage the reader



The following are definitions of key terms used in this MLM:

- Instructional designer (ID) – Specialist supporting MLM authors
- Subject matter expert (SME) – Specialist with expertise in subject MLM

3. Avoid acronyms unless they are a part of what the learner should know.


2. Define terms that the reader will need. Repeat them in Quizzes and / or key Message slide.

4. Page number. Do not edit.



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1. The title on this first “content” slide, might ask a question beginning with “what is,” or “how can we,” or “who should.” The intent is to engage the individual’s interest and to identify the main subject of the MLM.
2. If appropriate, define a few key terms or acronyms that the individual will need to understand the MLM. You may also repeat these terms or acronyms (without the full definition) in the Key Messages slide at the end.
3. Although it is better to minimize use of acronyms, sometimes these are part of what the individual must learn. In this case, define the acronym here, and then reinforce learning by using it two or three times later with its definition.
4. Each slide has an automatic number in the lower right corner. Do not edit this.



Single-Column Slide

Topic A

- Item 1
- Item 2 – text to be **emphasized**

Topic B


- <1> List item
- <2> Another list item
 - Subitem
 - Next subitem

1. Slide title
Arial 28 pt.
bold

2. Use standard Arial font.
 • Topic 24 pt. **bold**
 • Item 24 pt.
 • Subitem 20 pt.

3. Use bold for emphasis rather than underline or italics.

4. To display list items progressively, number them <like this>.


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1. The title text box defaults to 28-point Arial font. Note: This title box should be retained and edited (rather than deleted and replaced). Each slide should have a unique title because this title will be used in the presentation outline.
2. Topic headings default to Arial 24 bold font, and subitems default to Arial 20 font.
3. Use bold font rather than underlines or italics for emphasis to avoid confusion with web links or document titles.
4. To display list items progressively as the narrator speaks, precede each item with a number in angle brackets: <1>, <2>, etc. You can also use the Animations tab in PowerPoint to set the progressive animation yourself. Key sequence: “Animation Pane → Add Animation → Appear → Effect Options → By Paragraph”.

Two-Column Slide

1. Use standard Arial font


- Slide title 28 pt. bold
- Topic 24 pt. bold
- Item 24 pt.
- Subitem 20 pt.


Topic 1

- This is the first item
 - Next subitem
 - Next subitem
- This is the second item
 - Next subitem
- This is the third item
 - Next subitem

Topic 2

- This is the first item
 - Next subitem
 - Next subitem
- This is the second item
 - Next subitem
- This is the third item
 - Next subitem

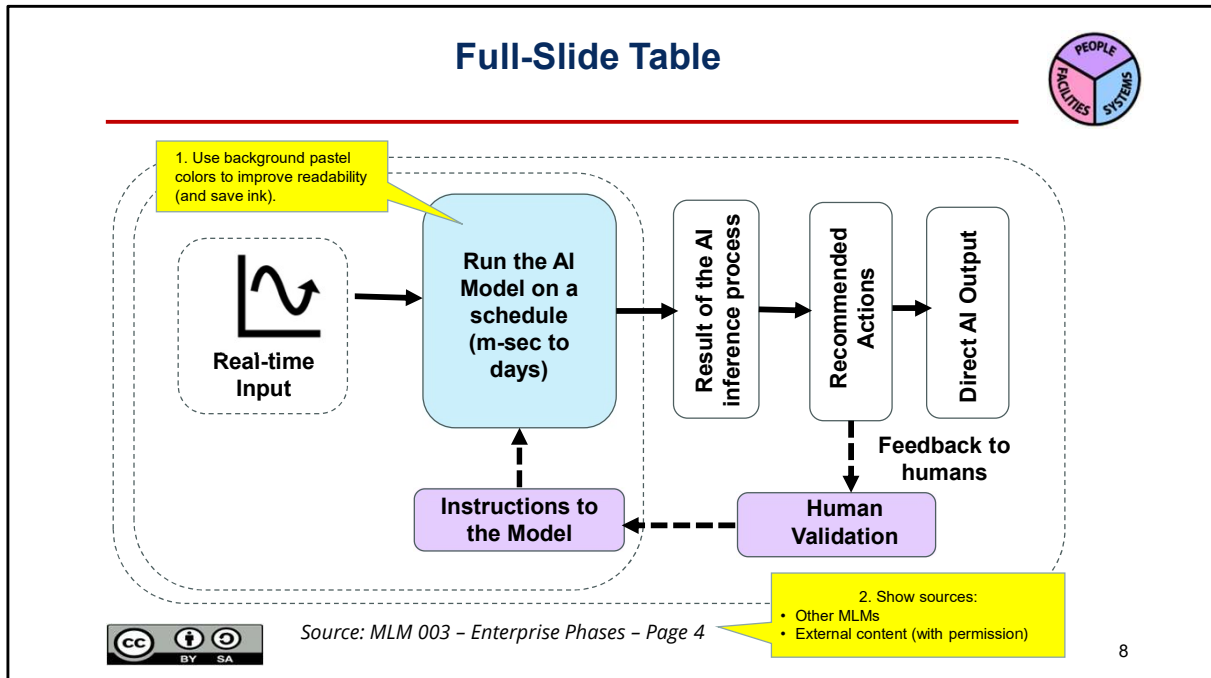




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This is a two-column template slide with bullets.

1. Use the same font sizes on all slides for topics, subtopics, etc. This standardization also extends to Notes pages that are formatted to print on standard 8.5 x 11 inch paper.
2. If you import slides, be sure to paste them into existing slide layouts using the “Use Destination Theme” paste option. The imported slides will then fit into the MLM template with minimum editing.



When tables are inserted, the following are suggested:

1. Use pastel colors for table backgrounds to improve readability and to save ink when MLMs are printed.
2. Show sources of tables, graphs, or data. This enables the learner to validate the information.

Indicate the source for all external content, and, as necessary, include documentation that permission has been granted to use the image/graph/data, including further reproduction according to Creative Commons.

In this case, the table is copied from MLM-003-A.

Partial-Slide Graphic

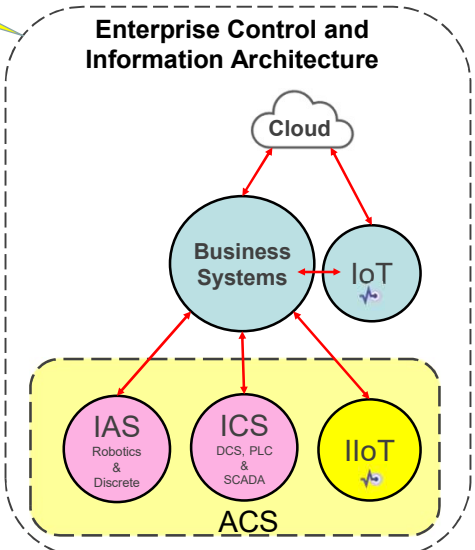
Topic A

- Item 1
- Item 2 text



Topic B

- <1> List item
- <2> Another list item
 - Subitem
 - Next subitem

1. Sample graphic from PERA



The diagram, titled "Enterprise Control and Information Architecture", is enclosed in a dashed rounded rectangle. At the top is a cloud icon labeled "Cloud". Below it are two circles: "Business Systems" (light blue) and "IoT" (light blue with a purple lightning bolt). Red arrows point from the "Cloud" to both "Business Systems" and "IoT", and a double-headed red arrow connects them. Below these is a yellow rounded rectangle labeled "ACS" at the bottom. Inside the "ACS" box are three circles: "IAS" (pink, labeled "Robotics & Discrete"), "ICS" (pink, labeled "DCS, PLC & SCADA"), and "IIoT" (yellow, labeled with a purple lightning bolt). Red arrows point from each of these three circles up to the "Business Systems" circle.

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This is an example of a two-column slide with text on one side and a graphic on the other.

1. Where practical, reuse existing graphics for consistency and for ease of copyright administration.
2. This is a PERA diagram, so it is covered under Creative Commons copyright.

Key Messages



The following are key messages to take away from this MLM:

- **Definitions**

- Term 1
- Term 2

1. Repeat any important terms or acronyms, but with short or no definitions.

- **Topic A**

2. Summarize a few key topics for reinforcement.

- **Topic B**



This slide repeats the key messages that the individual should take away from this MLM. These may be:

1. Important terms, listed with minimal or no definitions.
2. Topics to be reinforced.

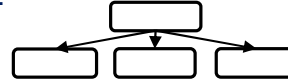
More Reading



Related MLMs:

- [MLM-090-B](#) AI Applications in Process Industry.
- [MLM-091-A](#) Plant AI and Human Interfaces.

1. Show related MLMs with a list or a Learning Map



3. Include full URL links to related MLMs.

References

- [ISA 18](#) Management of Alarms Standard
- Fared Khan offers an extensive library describing the development of [AI applications](#) on the Medium.com publishing platform.

2. Include links to Requirements in Standards

5. This link requests feedback from reader.

4. Include web links to third party reference material

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



<https://creativecommons.org/licenses/by-sa/4.0/>

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Related MLMs may be provided as a list or as a Learning Map. Related MLMs are often organized into sets, with the first MLM serving as an introduction (identified by an A, as in MLM-999-A).

It is suggested that links to some, or all, of the following be provided for “More Reading”.

1. Related MLMs or Learning Maps
2. Links to requirements from standards documents such as IEC/ISA 62443
3. Use full URLs (like <https://www.pera.net/MLMs/MLM-091-A.pdf>) so copied MLMs work anywhere.
4. Third-party reference material on the web, or in PERA website
5. This link gathers feedback from the reader.

Author Profile



***Bridget
Rathwell***

Bridget is a Chemical Engineer with international and US experience in design of petroleum refineries and pipelines.

She also holds a bachelor's degree in Chemical Engineering, a Master's Degree in Science Instruction, and a Master's degree in Instructional Design.

Bridget currently manages a STEM tutorial program at a Chicago community college, and continues to provide technical support, programming, and Instructional Design services for the PERA website.

