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PROJECT

ENG

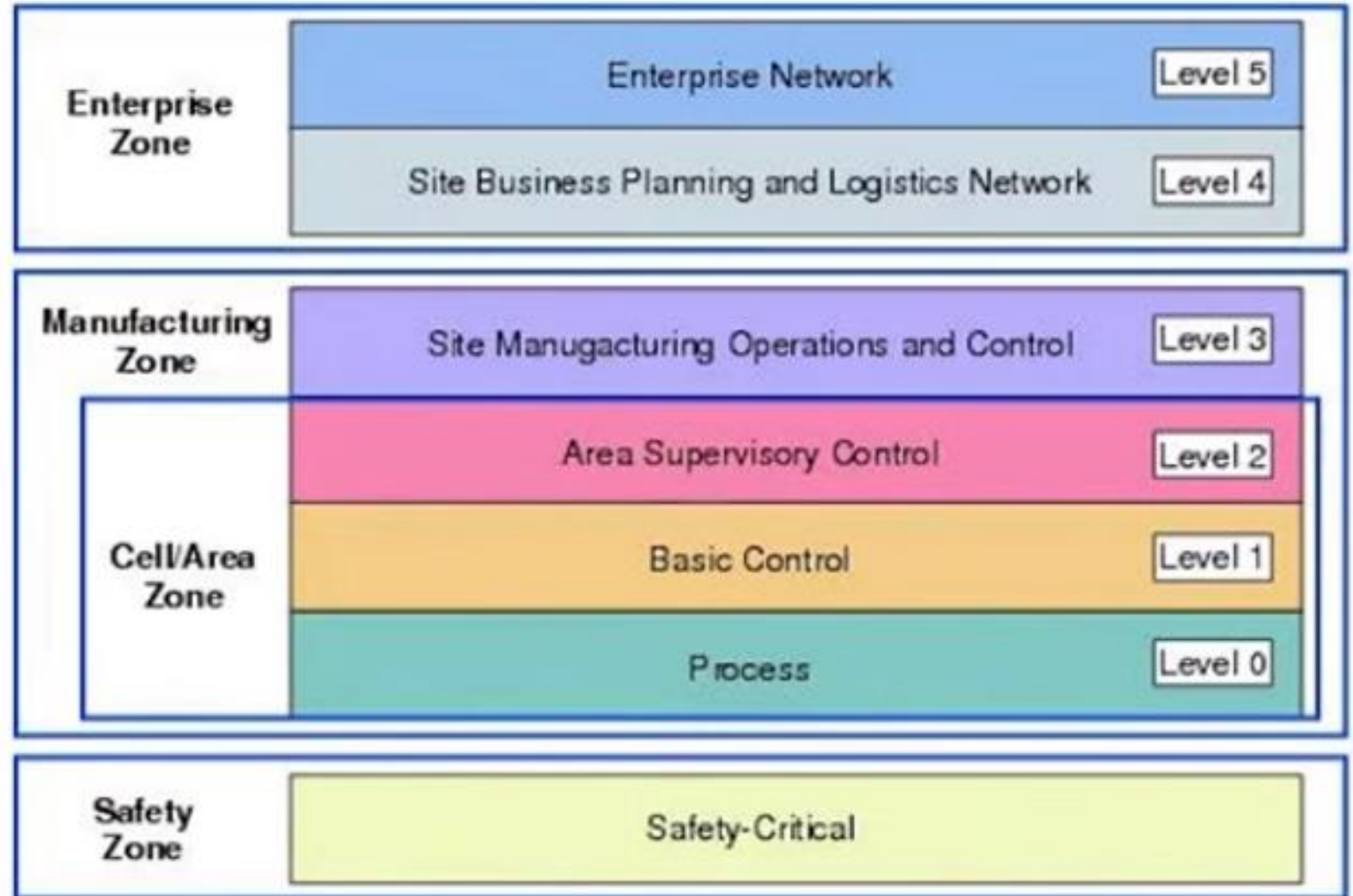
PRO

CYBER SECURITY FOR INDUSTRIAL CONTROL SYSTEMS

By Project **ENG PRO**

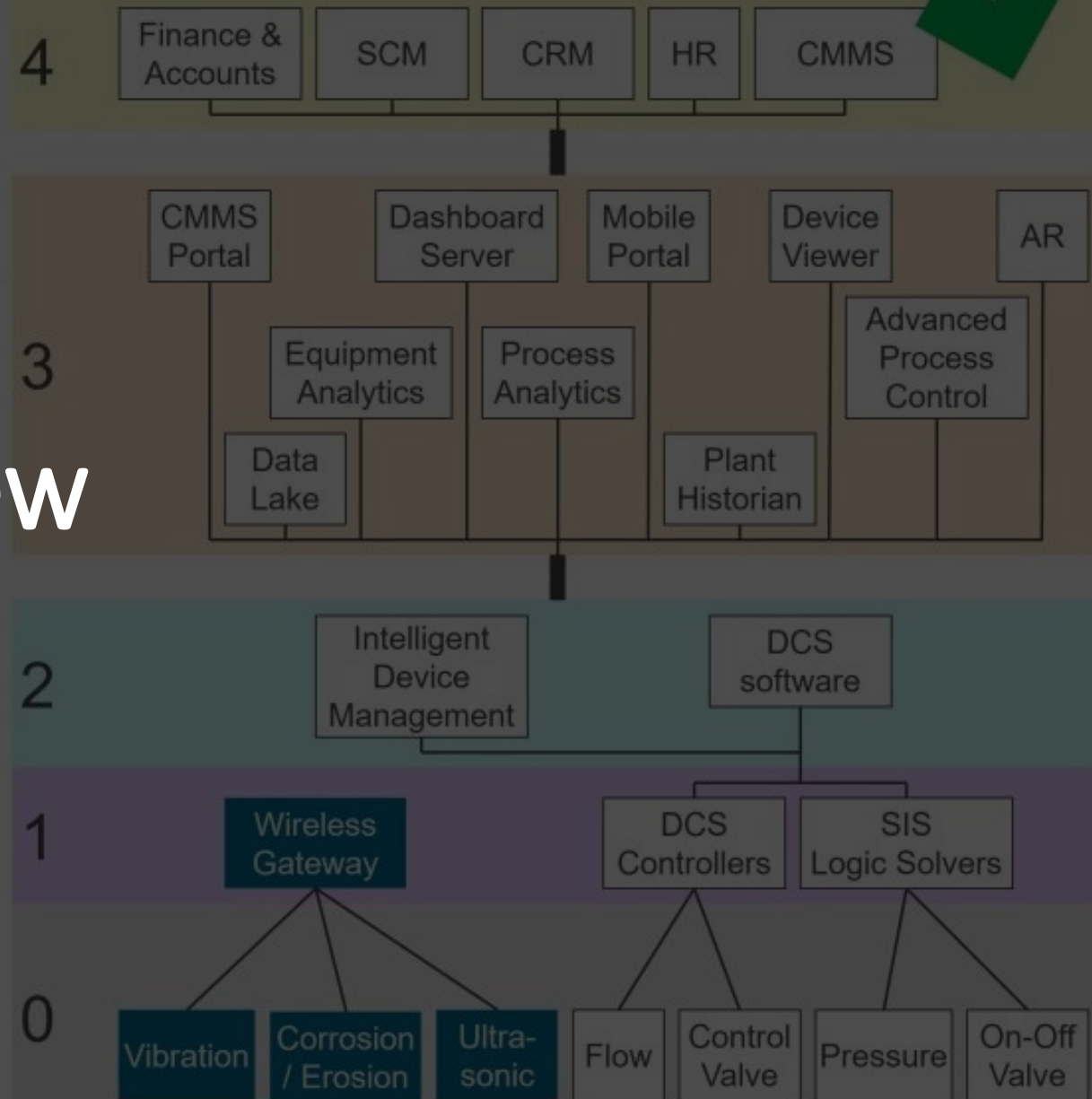
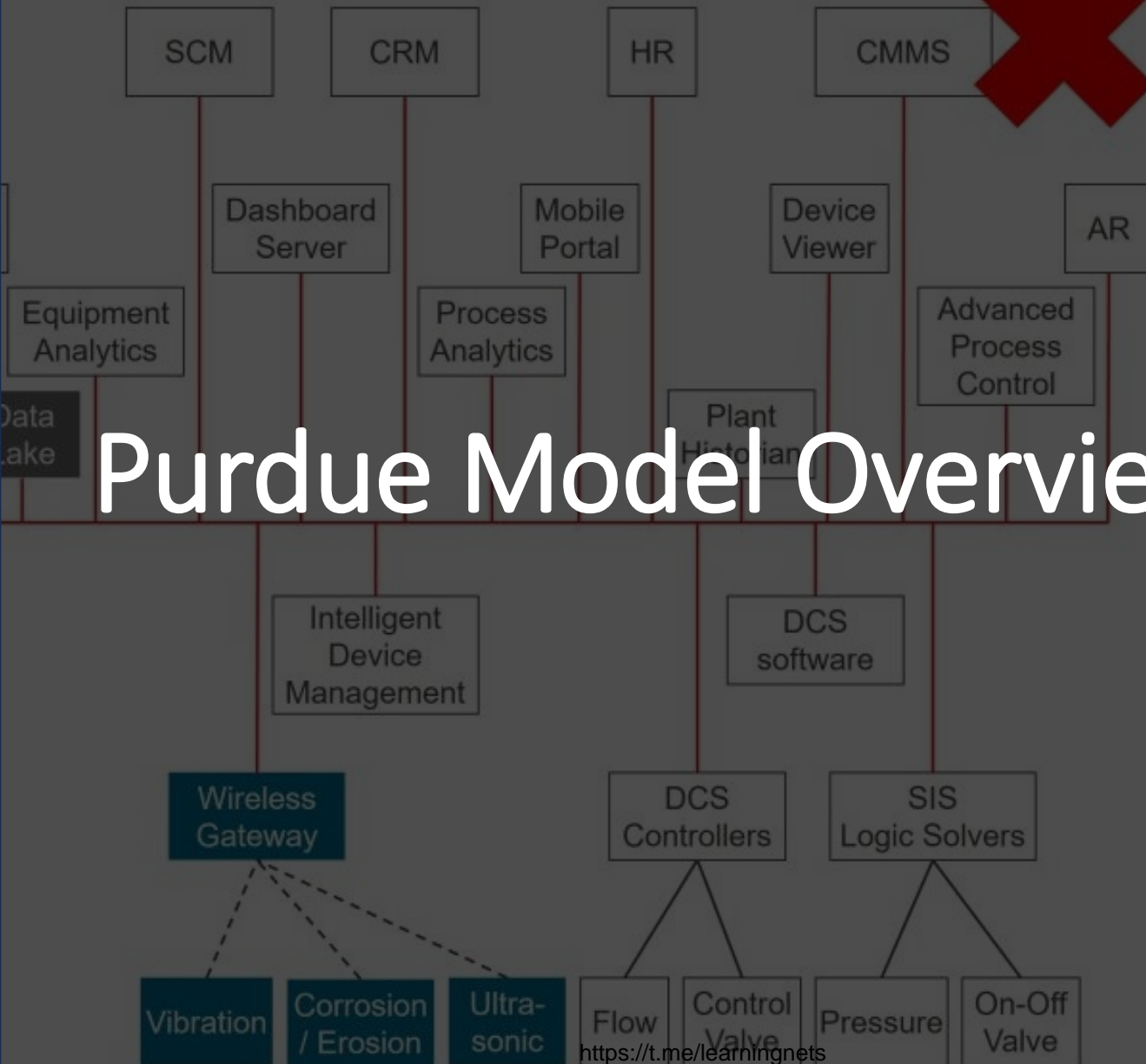


Purdue Model Overview



Flat Single-Level Architecture

Structured Network Architecture



Purdue Model Overview

Level 0 – Process: Consists of a wide variety of sensors, actuators and devices involved in the basic manufacturing processes.

Level 1 – Basic Control: Consists of basic controllers that control and manipulate the manufacturing process, the key functions is to interface with the Level 0 devices (I/O, linking devices, bridges, etc.).

Level 2 – Area Control

Level 2 represents the systems and functions associated with the runtime supervision and operation of an area of a production facility.

Level 3 – Site level

Level 3, the site level represents the highest level of industrial automation and control systems. The systems and applications that exist at this level manage site wide industrial automation and control functions.

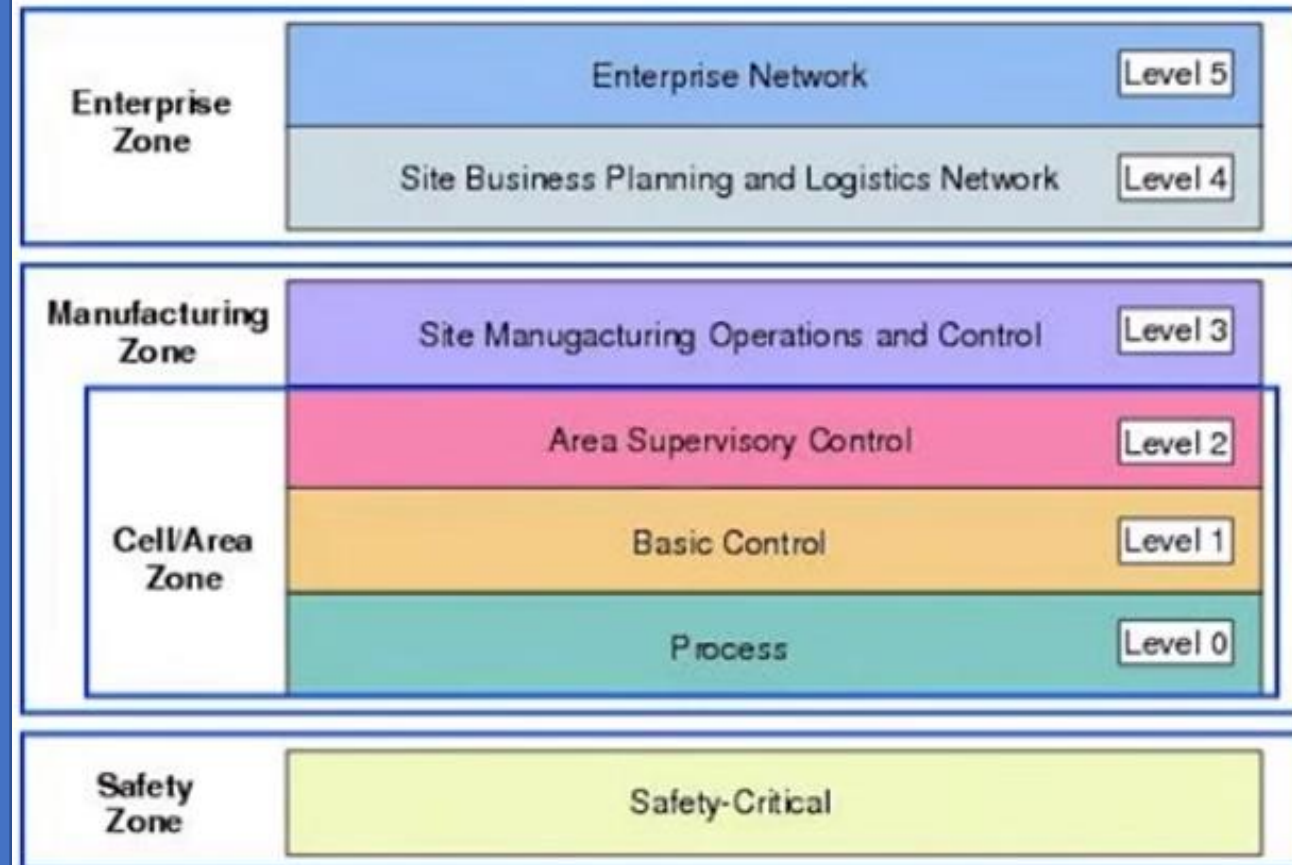
Level 4 – Site Business Planning and Logistics

Level 4 is where the functions and systems that need standard access to services provided by the enterprise network reside.

Level 5 – Enterprise

Level 5 is where the centralized IT systems and functions exist. Enterprise resource management, business-to-business, and business-to-customer services typically reside at this level.

The Purdue model for Control Hierarchy is a common and well-understood model in Manufacturing industry that segments devices and equipment into hierarchical functions.



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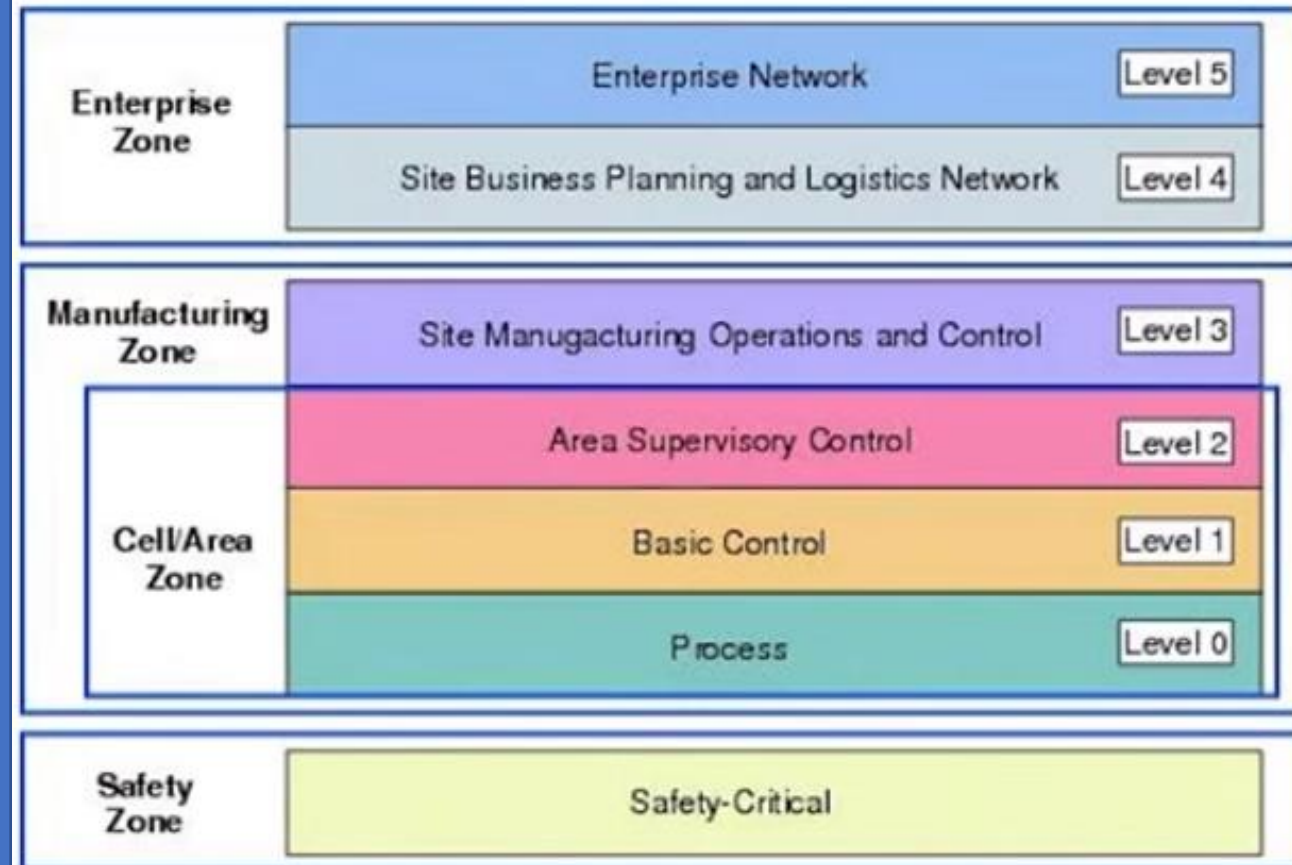
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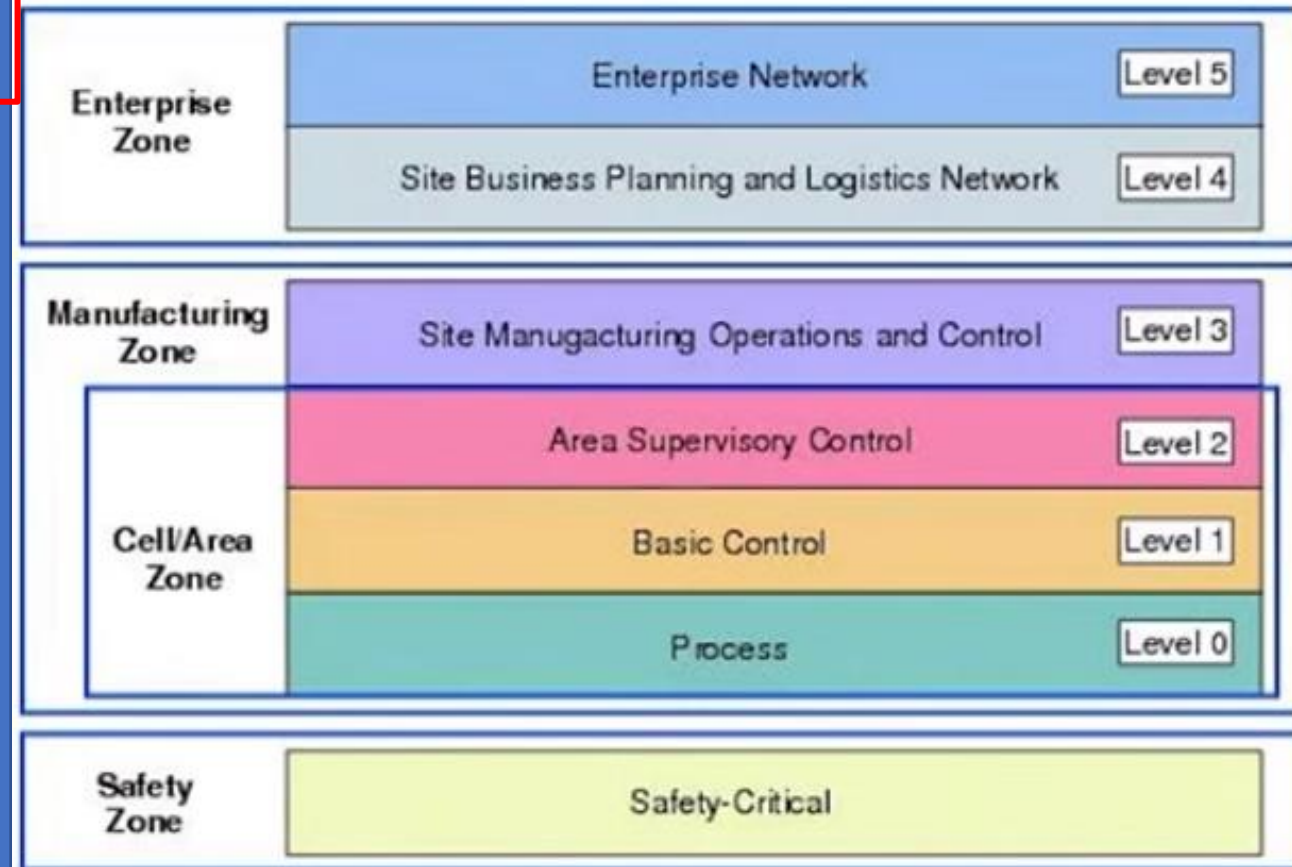
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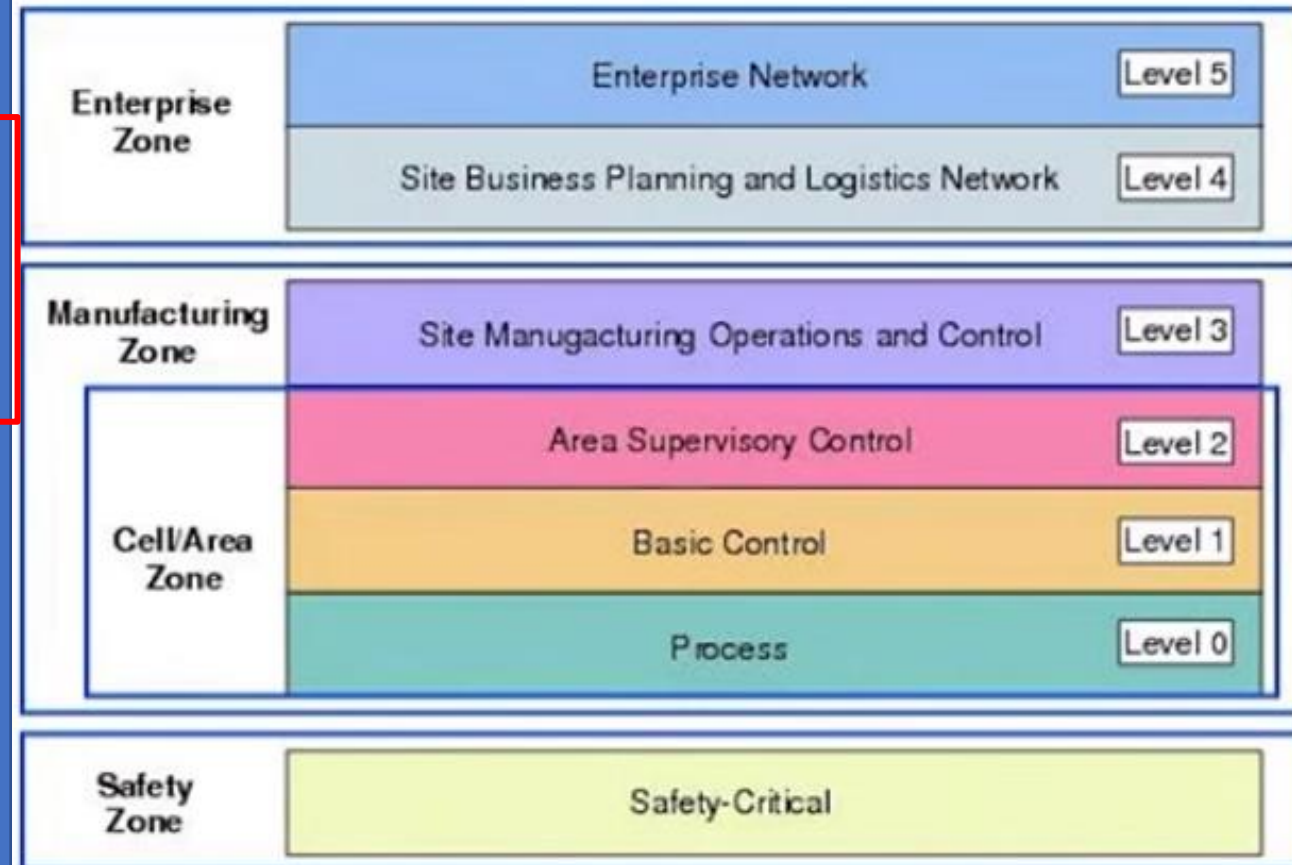
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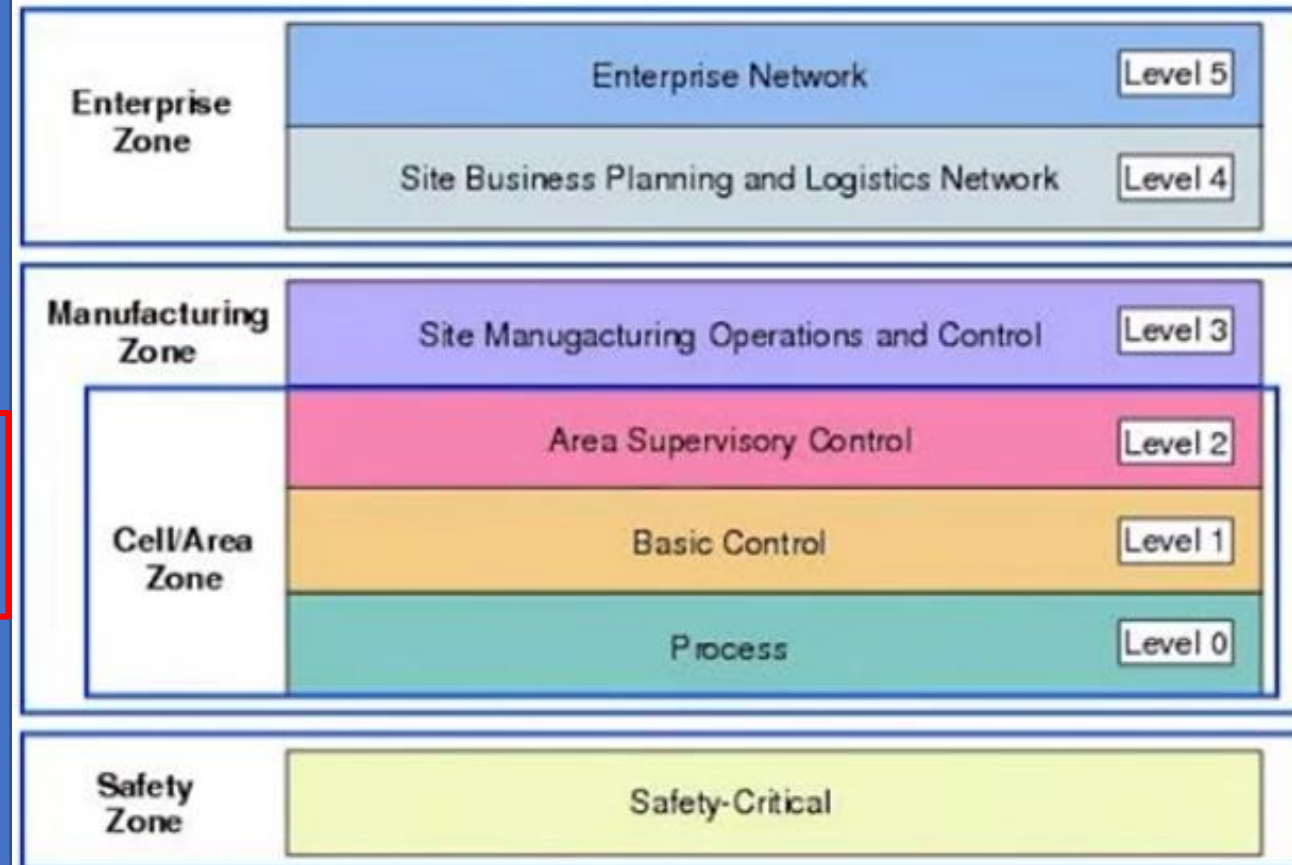
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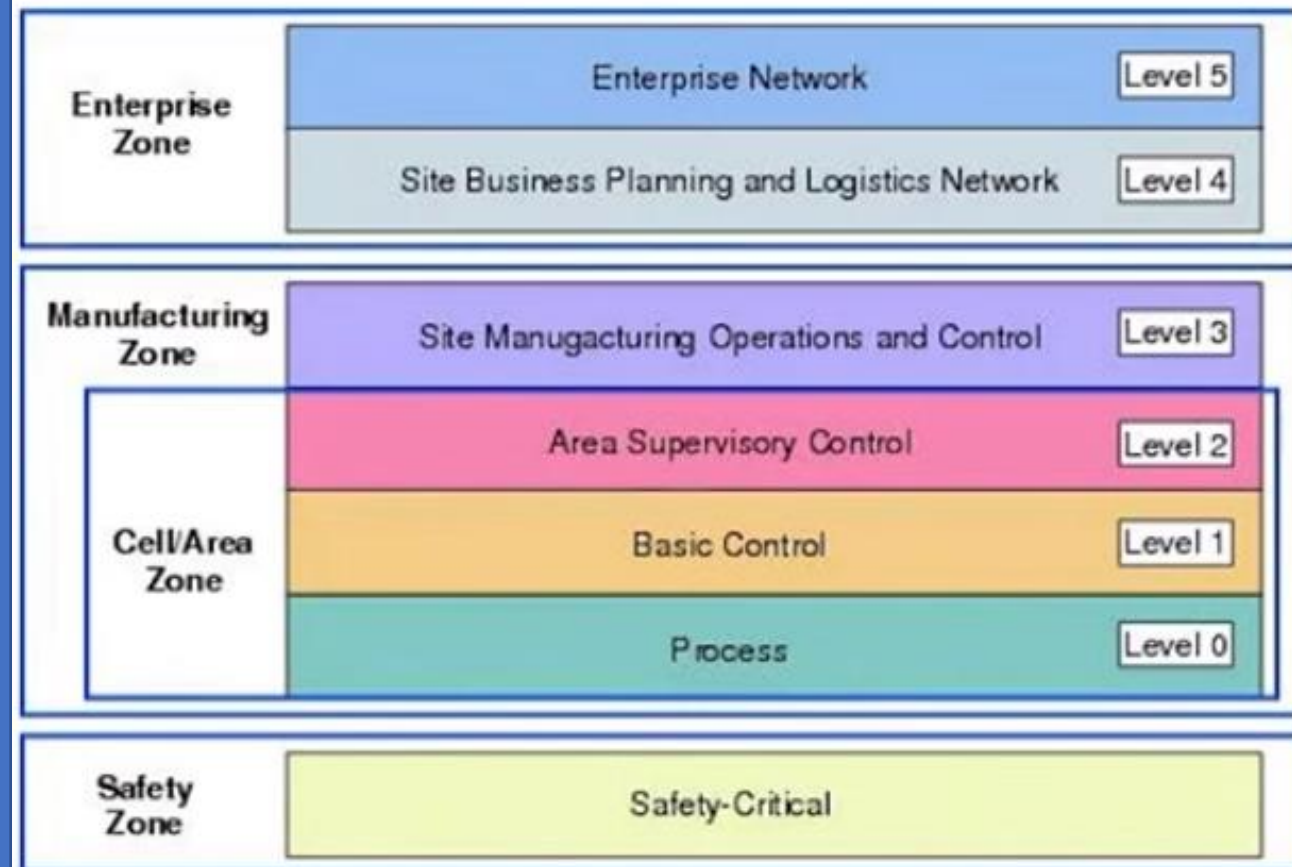
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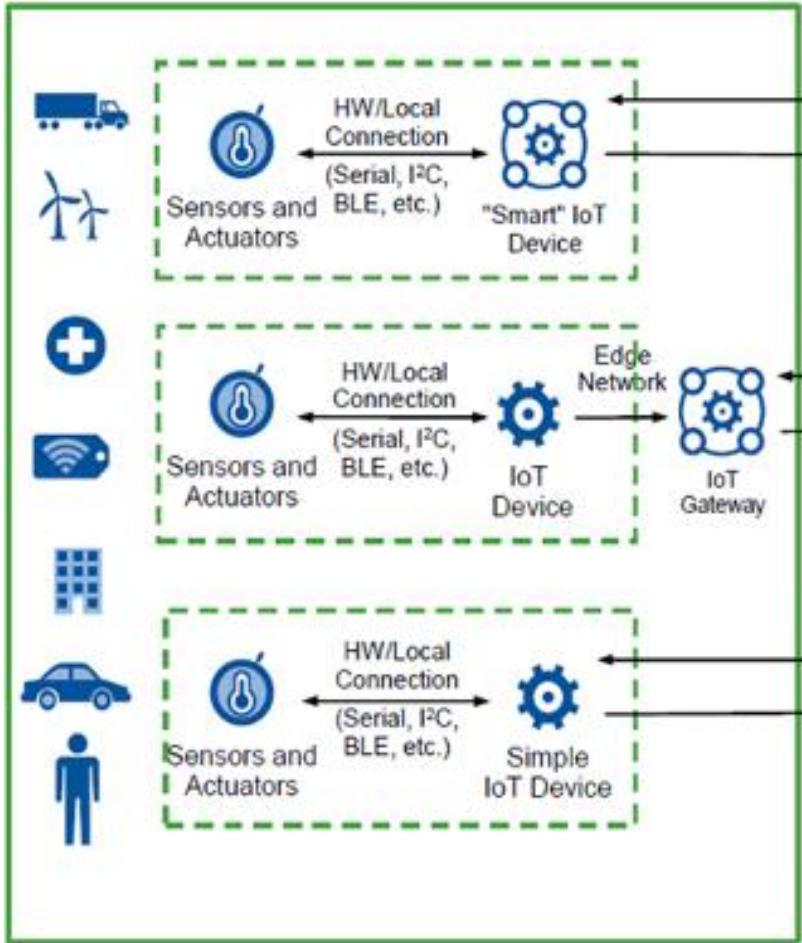
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Edge

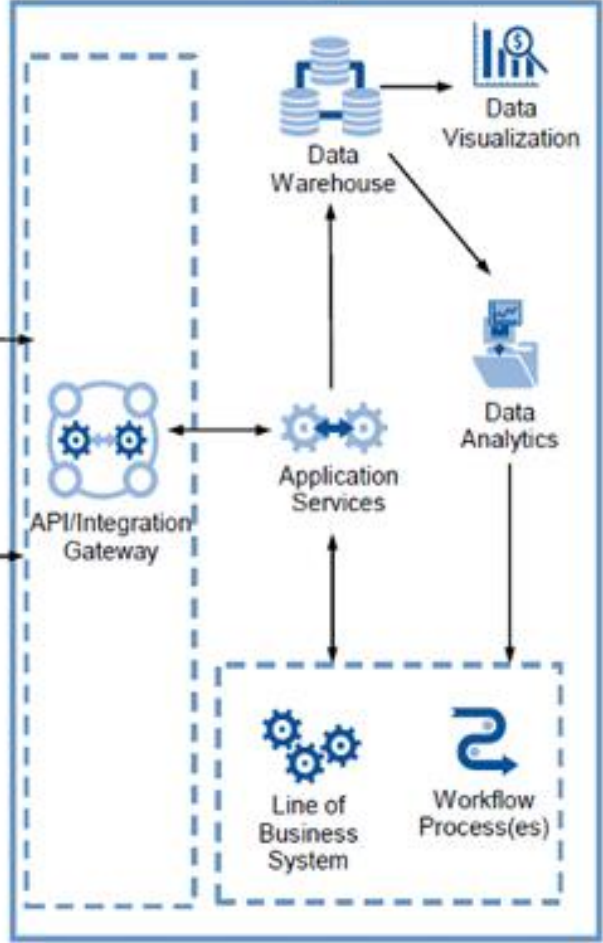


Long-Haul Internet Connectivity (Wi-Fi, Cellular, etc.)

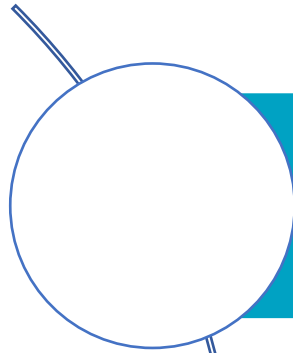
Platform



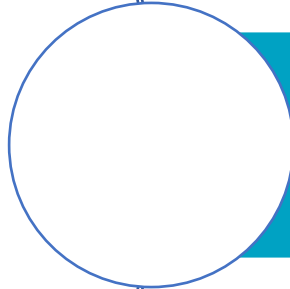
Enterprise



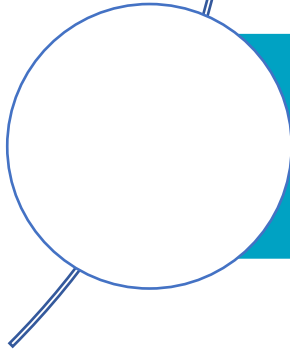
Wrap Up



Purdue Model: Structured approach for organizing devices, systems, and functions in industrial control environments.



Levels: Different levels with corresponding functions.



Importance: Crucial for designing secure and efficient cybersecurity systems.



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