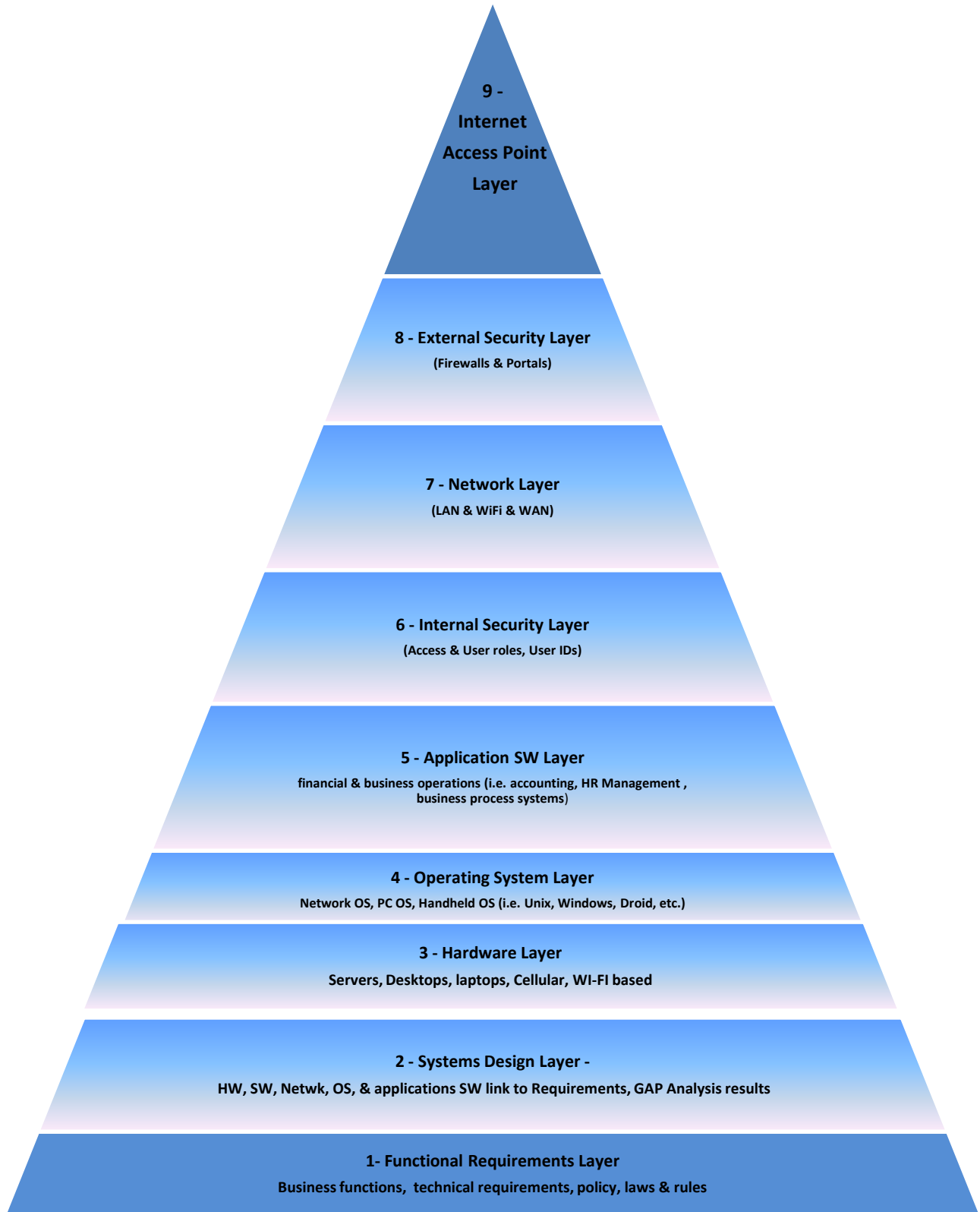


Information Technology Infrastructure Layers©



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<b>ERP Information System Layers Deliverables©</b>			
<b>Layer</b>	<b>Overview</b>	<b>Deliverables</b>	<b>Responsible Group</b>
<b>1- Functional Requirements Layer</b>	Business functions, technical requirements, policy, laws & rules	Requirements Documentation, Preliminary Test Plans	Requirements Analysts, SME, System Testers
<b>2 - Systems Design Layer</b>	HW, SW, Network, OS, & applications SW link to Requirements, GAP Analysis results	Design Documents	Systems Engineers & SME's
<b>3 - Hardware Layer</b>	Servers, Desktops, laptops, Cellular, WI-FI based	HW Material layout & list	HW Engineers
<b>4 - Operating System Layer</b>	Network OS, PC OS, Handheld OS (i.e. Unix, Windows, Droid, etc.)	OS Documentation	SW Engineers
<b>5 - Application SW Layer</b>	financial & business operations (i.e. accounting, HR Management , business process systems)	Application user, configuration, data conversion, test & operation manuals & procedures	SW Engineers & Application SME's
<b>6 - Internal Security Layer</b>	Access & User roles, User IDs	Security manual & procedures	Network Engineer
<b>7 - Network Layer</b>	LAN & WiFi & WAN	Network Map & description	Network Engineer
<b>8 - External Security Layer</b>	Firewalls & Portals	Security manual & procedures	Network Security Engineers
<b>9 - Internet</b>	Access Point Layer	ISP sizing document, data transmission document, inside and outside plant descriptions	Network Engineer

## **Internal Cloud Services**

The application layer can be composed of commercial of the shelf (COTS) products and commercially available business software packages that can be hosted on the user company's in-house server. The in-house server can be referred to as an in-house cloud system. Only users from the one user company can access the applications layer on the internal cloud system. The hardware and OS requirements of the applications layer are provided by the user company in their own facility.

## **External Cloud Services**

The applications layer may also include applications hosted by a "SW as a Service" (SAAS) vendor. These SAAS applications are hosted on the SAAS vendor's cloud system. Users from many companies may access their data, which is hosted on the application SAAS vendor's cloud systems. User companies rely on the security services of the SAAS company for access and data security. The hardware and OS requirements of the application are operated and maintained by the SAAS vendor. Note: the uses of SAAS system may reduce the cost of a company's HW and OS layers, but will rarely eliminate those layers. Most mid-sized to large companies that utilize SAAS also maintain internal cloud applications.

## **Applications Layer**

Most organizations require the use of multiple ERP systems, some internal and some external. Examples of external ERP systems include:

- ✚ Payroll services systems
- ✚ Time reporting systems
- ✚ Property management systems

Examples of Internal ERP systems included:

- ✚ Financial and accounting systems
- ✚ Database management systems and application
- ✚ Process management systems
- ✚

## **Business case for Upgrading IT Infrastructure**

- ❖ Why did your IT upgrade go wrong?
- ❖ Why are you over budget in IT upgrades?
- ❖ Why is the IT master Plan "out of whack"?
- ❖ Do you recognize and understand the cross dependencies of different projects?
- ❖ After spending large sums of money, why is the enterprise wide software application:
  - ✚ Not fully functional?
  - ✚ Costing more than it is worth?
  - ✚ Underutilized by your staff?
  - ✚ Not installed or set up correctly for use by your employees?
  - ✚ Causes you network to slow down?
  - ✚ Not generating cost savings or generating the revenue projected?
  - ✚

In all cases, user organizations or companies must address all 9 layer of enterprise systems to be successful.

**Possible Article names**

- ✓ IT Infrastructure Model for businesses
- ✓ IT Architecture