

Organization Concepts for Unified Communications UniComm Consulting White Paper

The following concepts represent organizational practices seen throughout our client base and also as described to us by other firms and industry resources. These concepts are provided as inputs to enterprise organizational planning during a transition to Unified Communications (UC).

Of course, these can be tuned as appropriate to the specific UC implementation plans of each enterprise, which will vary as to scope and timing. These recommendations also apply for the transition to IP Telephony as a subset of Unified Communications, even if plans do not call for proceeding to the full range of UC applications.

The primary concepts are:

1. Organization Based on Functional Layers: Selection, deployment and management of technology is recommended to be organized into three layers plus two external review roles (concepts 2 and 3 below). The functional layers generally map to the layered technology OSI model.
 - a. User Experience layer, including the interfaces, portals, application clients/web pages, and devices that are provided to the users, according to their roles and the business processes which they users support. This includes PCs, PC software images, Telephones (IP and other), Mobile Devices (in-building, wireless, cellular, etc. whether voice and/or data), Application clients/portals on these products (including softphones, e-mail clients, application clients, web pages/portals, etc.). Responsibility would include the selection, deployment and management of the physical devices, though operational management could be shared or delegated to the Tier 1 support team (see below). The organization and staffing in this layer may be specialized, where the use cases are quite distinct, such as managing medical monitoring devices (a user interface) in health care clinical environments or managing driver information/communication devices in a transportation firm.
 - b. Application and Services layer, including the application software and other information and software services provided to the support the user interfaces and business processes. This includes all server-based applications and the supporting hardware both in-house and hosted (Software as a Service). In Unified Communications, this layer includes the server or services-layer software that provides the functions of PBX/IP-PBX, voice mail/unified messaging, e-mail, IM, presence, audio/video/web conferencing, directories, mobility services, user portals, etc. In some situations, it may be appropriate to have distinct teams for sets of these applications (e.g. often there is an e-mail/unified messaging team or an IP PBX/Conferencing team). In some organizations, the hardware support and operation, including the OS image and security management, may be



differentiated from the application software teams.

In some cases, there may be a justification for organizing this team into a functional group and an administrative group. For example in health care, the clinical environment is almost entirely managed through the Hospital Information System software, increasingly including embedded communications functions, while the administrative environment is usually managed by traditional business applications such as some combination of Microsoft Office, IBM Lotus, Blackberry, and PBX/IP PBX systems. Similar distinctions exist in other vertical industries. This distinction would be made in this layer, rather than in the entire organization.

- c. Network operations layer, including all the physical connectivity of the network within the enterprise and as provided by external services (such as inter-location networking) where utilized. This layer will include all interfacing to the public network services (PSTN, other network carriers, Internet, etc.). This layer may also have specialization, such as a specialized team for network hardware management, interfacing to the network software administration.
2. Architectural/CTO Role: A process with an independent oversight role for review of any proposed structural or architectural change to user experiences, applications and services, and/or network infrastructure should be reinforced (if existing) or established (if not existing).
 3. Security Standards and Audit: A process with an independent oversight role for establishment, review and audit of information and access security should be reinforced or established.
 4. Support Teams Match Layered Organization: The support team organization for the UC solutions is aligned with the layers of technology, from user inwards towards the network. The traditional Tier 1 Support accepts (User Experience) calls from users and interfaces to Tier 2/3 support teams for issues involving Applications/Servers or Network operation.
 - a. The support teams for the User Experience Layer may be organized to match the use cases and applications as deployed for the enterprise business processes and user roles.
 5. Merged Voice and Data Team at Each Layer: Previously separate voice-oriented and data-oriented operational and support structures should be merged at each of the technology layers, to form a combined team with cross-training as early in the convergence process as possible.
 6. Project Management Centralization: Project Management may be incorporated into the various organizational teams, as described above, or may be organized as a centralized resource, for purposes of load balancing and consistency of program management. However, if centralized, the program managers should have a joint accountability



(including performance appraisal) to the organizational team they are supporting in their current project assignment(s).

7. Vendor Management: Optionally, a vendor management position or function may be established to assure consistent interfacing and management of vendor practices, performance, service level agreements, contractual terms, etc. This role may be assumed in the purchasing team, so long as it is persistent, not just associated with procurement events.
8. Establish Service Level Agreements (or other forms of measurable accountability): Service Level Agreements (SLAs) should be established at each interface (e.g. between users and IT, especially for Tier 1 support; between the functional layer teams as defined in 1.a through 1.c. above; and between each support Tier (as below)).

Using these principles, the organization recommendations that follow from these principles are easy to understand and implement.

However, the support organization structures related to these principles often warrant further discussion, as follows:

- A. User Support Help Desk and Tier 1 Support: The help desk(s) that existed when there were separate applications and networks are converged into a single user help desk. Since all devices (including the telephones, audio/video conferencing, PCs, and most BlackBerry/wireless mobile devices) appear as Internet Protocol (IP) end point devices, and since each application type (telephony, enterprise software, and other tools) can appear on almost all types of devices, the help desk will be focused on the users' specific experiences at those end points. While it may seem appropriate to sub-divide into PC vs. Blackberry vs. IP Phone vs. AV Appliance, there is an economy and efficiency for both the users and the Support Staff in providing a single point of contact with triage and routing of requests only when appropriate. This method will also provide incentive for cross-training, allowing more staffing flexibility while also reducing the stress on individual staff members, as well as providing richer career development opportunities.

In specialized environments, users may be directed to a specific set of Help Desk team members (direct number, specific portal, etc.); for example, specialized help desk access points might be warranted for nurses and physicians in health care, for professors/instructors in education, for field agents in government, for development engineers in technology firms, for investment bankers in finance, for sales teams in manufacturing, or for flight crews/drivers in airlines/transportation firms. However, for the reasons stated above, it is recommended that the support teams who service these specialized access points are all members of an integrated Tier 1 support organization.



- B. Servers and Services Layer – Tier 2/3 Support: This is one of the two supporting layers for the Tier 1 support team. This team cares for the applications and the servers/appliances to support those applications, such as the ERP (SAP, Siebel, Oracle, McKesson, etc.); e-mail/voice mail/unified messaging; IBM Sametime or Microsoft Office Communicator support servers; collaboration and document storage servers; Blackberry Enterprise Servers; IP PBX Servers; A/V Conferencing Servers; Web Servers; etc. Some specialization may be appropriate on the specific applications or for specific operating systems, but the methods should be as standardized as possible across those servers and services, including monitoring, alarming, administration, etc. These servers have many factors in common, including: OS levels, maintenance, patching, security, etc.; interoperation methods, standards, connections, and testing; change management and pilot testing methods; hardware configurations and diagnostics; and possible use of server virtualization to consolidate server hardware and conserve space and energy.
- C. Network Management Layer – Tier 2/3 Support: This is usually a separate team from the Servers and Services layer team, and is concerned with network reliability, connectivity, performance, monitoring, administration, security, interfaces to the carriers and other networks, and reporting. Again, this team will have many consistent activities that are differentiated from the other two teams.
- D. Physical Device Provisioning and Maintenance: This team, which can be in either IT or Facilities, is responsible for the provisioning and support of the physical devices on desks, in conference rooms, and (usually) for mobile use. Standard procedures are established in this group for the base-line configurations (standard images, test protocols, etc.) and confirm these functions when installing or servicing a device for a user or location. Since this team is mobile within the physical plant, they may also perform some network-related functions, such as patch panel connections or cross-connections in wiring distribution frames. The team may also, as appropriate in teamwork with the other support teams, install software and perform other installation or maintenance procedures on the devices and for the assigned users.

If reporting in IT, the Physical Device Provisioning and Maintenance team may report to the same senior manager/director as does the Tier 1 team, since these two organizations share the responsibility as the front line for the users' satisfaction.

Diagrams of these organizational concepts are shown below.

UniComm Consulting is available to discuss the application of these organizational concepts and also offers services for organizational design and change management support. Please feel free to contact us at any time by visiting our web site at www.UniCommConsulting.com.



**Optional Converged Organization
For Enterprises With
Converged Communications (UC &/or IP PBX), Converged Networks
or Communications-enabled Business Processes (a version of UC)**

The following organization may apply where there is a significant distinction between the applications and communications in functional areas (see comments in section 1.b. above).

