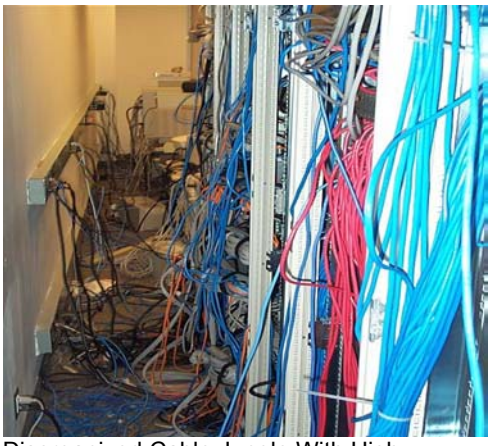
IT Services

Our IT Services Group is uniquely skilled in providing expert consulting and engineering services for the intelligent selection and design of sophisticated IT communications systems and the integration and implementation of these technologies into modern workplace environments.

Building Infrastructure

Modern IT infrastructures are based on pervasive communications which provide “always on”, “anytime, anywhere” access to information with ubiquitous high bandwidth and wireless mobile connectivity. This evolution of business process has an affect on how we design current and future workplaces and the IT and building infrastructure necessary to support it. As business processes have evolved, the dependency on IT has increased and become total. IT has become the enabler of the business process which can no longer function without IT. Consequently, current and future IT and building infrastructures must factor this into their design to ensure high availability, anytime anywhere system access. Our team can provide a broad range of services for the design and engineering of modern, technology friendly buildings.

Before:



Disorganized Cable Jungle With High Exposure For Failure

After:

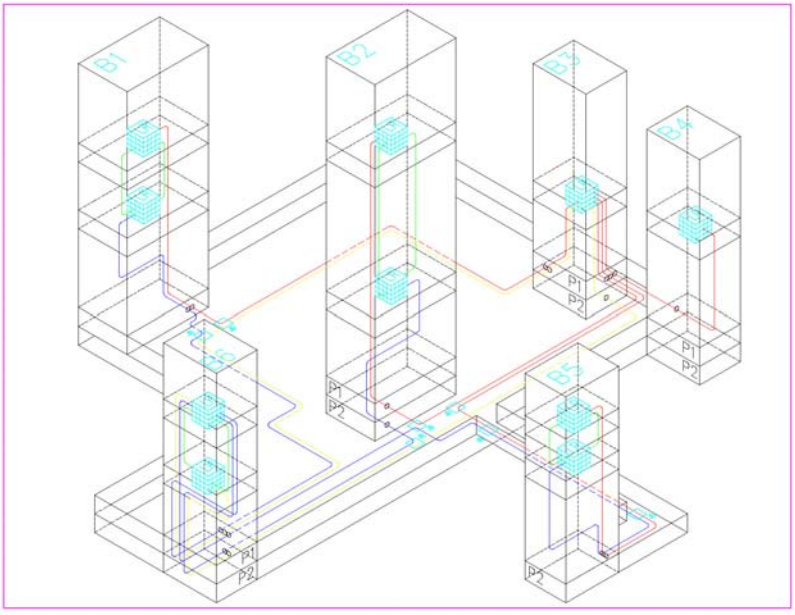
Engineered for High availability and fault tolerance

We believe that the first phase of the project must include a thorough survey of the existing technologies and IT infrastructure being planned and/or upgraded. The IT infrastructure involving LAN, WAN, wireless systems, cabling systems, building entrance rooms, main computer rooms, Telecommunications rooms and cable distribution pathways must be reviewed and analyzed with respect to its ability to accommodate both existing and future requirements.

Specifically the following services associated with a building concept/construction project can be provided:

- Physical infrastructure design and planning of communications rooms;
- Cabling pathway design and planning of conduits, cable trays and sleeves;
- Conceptual design & development of communication cabling systems
- Analysis of cable connectivity approaches including media analysis, cable distribution methodologies and device interface requirements;
- Design of a flexible diverse multi-vendor entrance facility to permit procurement of communications services from multiple carriers from multiple physical routes to provide both physical route diversity as well logical circuit diversity.

Our dedicated group of professionals is experienced with leading edge information technology infrastructures including experience with high availability, high bandwidth local area network infrastructures involving multiple 1Gbps Ethernet Backbones, OC12 and OC48 ATM backbones, evolving premises based DWDM and 10Gbps Ethernet technologies. Our experience includes common network transport systems which utilize VLANs for secure network connectivity amongst multiple companies and transport, data, voice (VOIP) and security (Video-over-IP) over scalable, high bandwidth, IP based common network backbone systems. Our team can provide a broad range of services for the design and engineering of backbone technologies.



Consulting Engineers 44 Mobile Drive, Toronto, Ontario M4A 2P2 Telephone 416 751-2520 Fax 416 751-1430

Network Services

The following services are available for technology platform procurement:

- Design of network infrastructure
- Design of wireless LAN infrastructure
- Development of common IP based network transport platforms
- Design and preparation of RFP for the acquisition and implementation of LAN and Wireless LAN systems.
- Design and preparation of RFP for the acquisition of voice systems such as VOIP based system or legacy PBX or Key systems.

Recent Engineered Network Operation Centre (NOC)

Wireless Technologies

Our modern IT infrastructure projects also include, pervasive wireless communications capability permitting mobile, roaming access to company information systems. We have designed wireless LANs based on 802.11b technologies and are currently involved with projects where 802.11a will be implemented. We also have familiarity with other wireless applications such as RF tagging. Our team can provide a broad range of services for the design and engineering of wireless technologies into modern building infrastructures.

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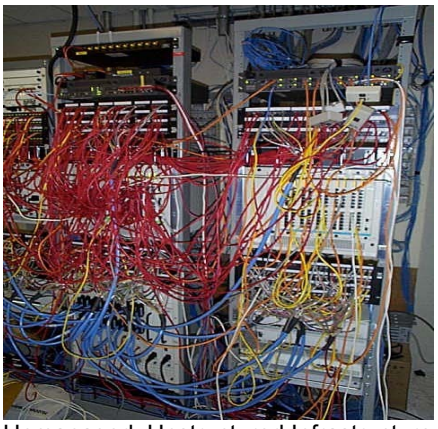
Cable Technologies

We endeavour to provide customers with a standards based, universal, vendor neutral communications facility with both high service availability and bandwidth. The system must be both flexible for additions and changes, and technically current and modern so as to accommodate both current and future IT systems. We endeavour to design, engineer and integrate sophisticated, flexible cable infrastructures consisting of leading edge copper and fibre technologies appropriate to the facility being engineered. Our team can provide a broad range of services for the design and engineering of flexible, cable infrastructure.

BEFORE:



Unmanaged, Unstructured Infrastructure

AFTER:

Infrastructure Engineered For Management & Performance

Physical Transport Technologies

The following services can be provided for IT cabling system design and procurement:

- requirements assessment and site surveys.
- preparation of connectivity technology reports.
- preparation of request for proposals, request for quotation and complete tender packages.
- vendor prequalification packages.
- conceptual design and development of communications/IT cabling systems.
- physical infrastructure design and planning of communications rooms, LAN rooms, computer rooms and data centres.
- cable plant design and implementation.
- cable management software implementation and training.
- Detailed design and specification of the Communications Cabling System and preparation of a tender package for competitive procurement.

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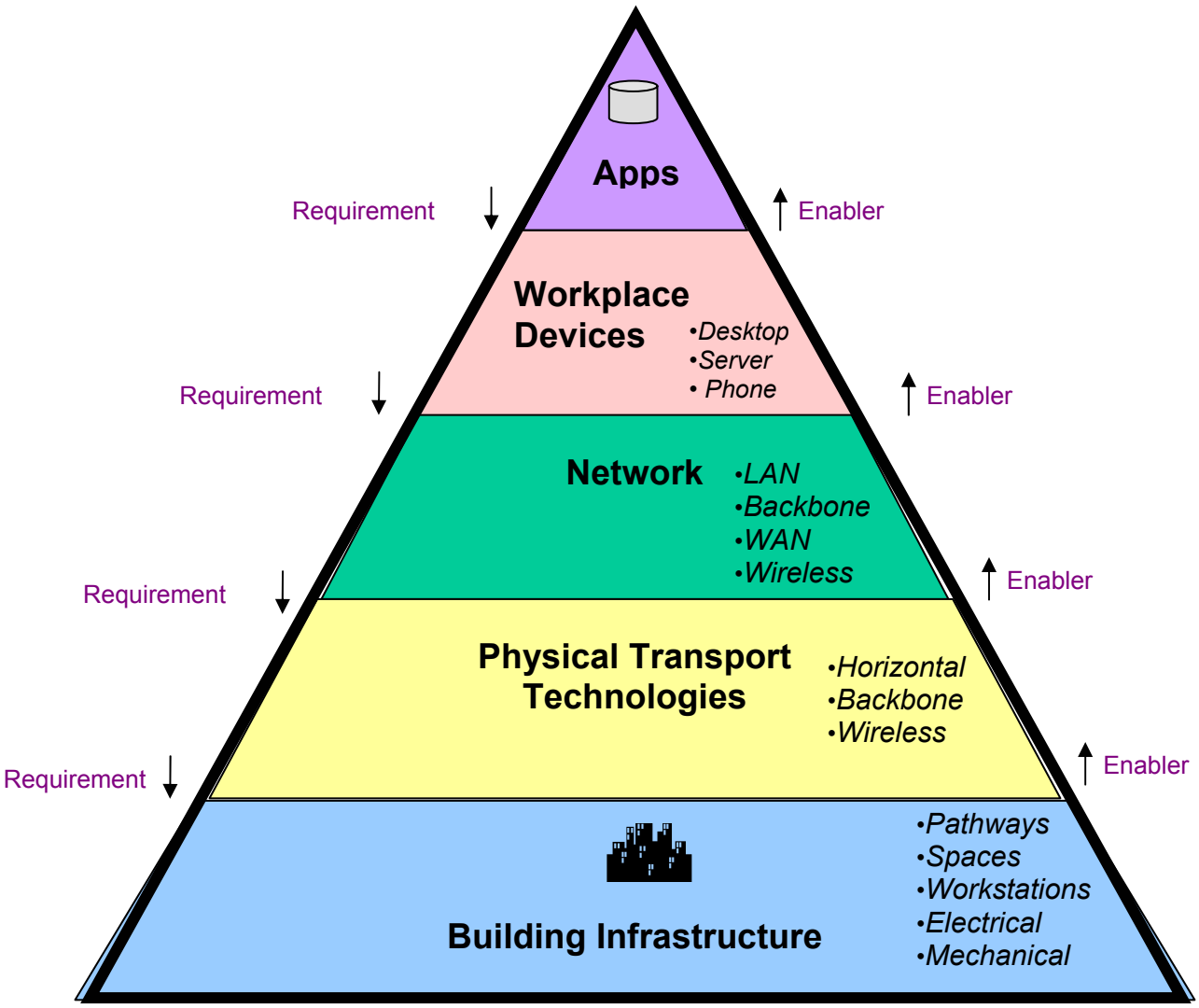
IT Technology Pyramid

The following IT Technology pyramid stratifies IT functionality into five key component areas and key functions within each. In the pyramid, an upper layer presents requirements to the layer immediately below it, which in turn is the "enabler" of the requirement to the upper layer.

For a stable technology pyramid, which is resistant to obsolescence yet flexible to change, a lower layer must always provide a sound foundation upon which an upper layer can be built.



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For more information about Mulvey+Banani's IT Services, and specific project experience, please contact us at:

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