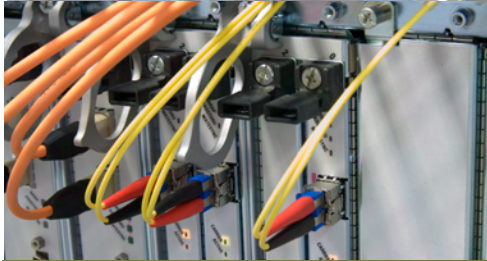# Broadband for All

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EFFECTIVE BUSINESS PARKS

1 DUCT AND FIBER
Duct and fiber throughout the park to every building.

2 REDUNDANCY
More than one telecom cable path to the park and redundant electric feeds.

3 CLASS A OFFICE SPACE READY TO RENT
Class A office space should be in inventory, ready to rent.

4 WIRELESS INTERNET
Free wireless Internet access should be available for business visitors.

5 VOIP AND INTERNET
VoIP telephone service and Internet access should be offered as fee-based business amenities.

6 BACKUP ELECTRIC GENERATORS
Most buildings should have backup electric generators to power servers and networks through power outages.

7 INCUBATOR SPACE
A range of office space, including starter offices and lease agreements that allow adding and changing spaces as businesses grow.

8 TELEPRESENCE
Conference rooms outfitted with HD quality, high performance videoconference equipment.

9 RETAIL SPACE
Retail storefront space for service businesses, including copy centers, packing and shipping, and food service.

Getting our communities connected

Business Parks of the Future–Now

Duct and fiber

Across the country, more and more business and industrial parks are installing telecom duct and fiber to every building in the park. Businesses in every category--manufacturing, distribution, services, finance, and more--require full time, continuous, and affordable telecom services, including Internet access, telephone service, and specialized needs like VPNs (Virtual Private Networks). Parks that invest in basic fiber infrastructure can facilitate tenant access to a wider variety of competitive telecom services at lower cost and with higher performance.

Redundancy

Information-intensive businesses require 24/7365 uninterruptible telecommunications services. This is accomplished by providing redundant fiber and wireless data communications routes, both to individual businesses and to the park itself. Damage to a single fiber cable or wireless tower should not disable essential business telecom services. Business parks need a strategy to provide fiber cable redundancy both within the park itself and to the park.

These same businesses also need reliable electric service to power the network and computer systems that run the business. Many relocating technology-driven businesses are now actively seeking business parks with redundant electric service from two different sub-stations.

Class A office space

A statewide study in Virginia to examine the factors that drove relocation choices for high tech businesses indicated that many relocation decisions, especially for new branch offices, were made in 45 to 60 days. Communities and business parks that want to attract these relocating businesses must have Class A office space in inventory, ready for occupancy. The fast pace of the global economy no longer accommodates the "build to suit" economic development strategy, as many businesses can no longer afford to wait twelve to eighteen months for a typical commercial construction project.

Wireless Internet access

Wireless Internet access should be available at every business park as an amenity provided free to visitors. Mobility access to the Internet is critical to business travelers, and having this service available in business parks provides a valuable service and projects sends a strong message that the park is keeping up with technology and business trends.

VoIP and Internet

Business parks that install telecom duct and fiber should contract with a telecom service provider to offer Internet access and VoIP (Voice over IP) telephone service in the park as a fee-based amenity. No business would be required to use this service, but it is a valuable amenity to offer, as it should reduce the overall telecom costs for businesses that use it because of the aggregated demand and efficiency savings of using park-owned fiber to deliver the services. The park can also derive a modest income from the services
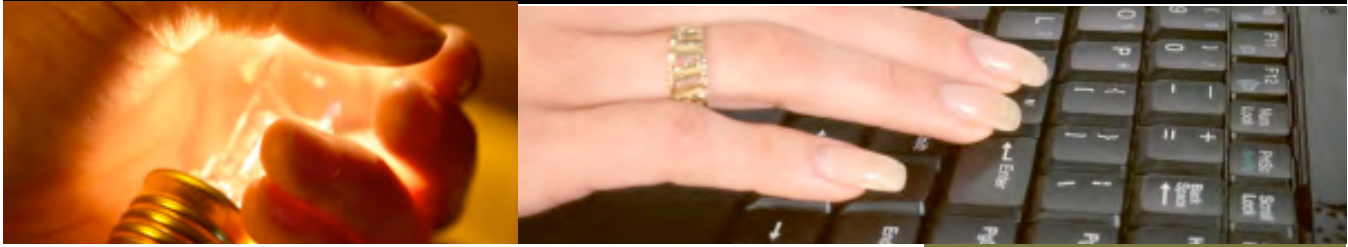
by charging a small revenue share fee to provider of the services.

Backup electric generators

One or more buildings in every business park should an adequately-sized backup electric generator that is designed to switch on automatically if the main electric power to the building is lost. Many businesses incur very high costs if power is lost. One business we interviewed, which operates a substantial Web-based services operation, indicated the loss of electric power or Internet access cost the firm more than $1 million per hour. Companies that deliver retail products and services over the Web usually suffer permanent sales losses due to power or Internet outages because potential customers, if the Web site is down, typically just purchase the item or service from another company. Backup electric power as a building amenity makes the park and individual buildings more attractive, as the relocating firm does not have to incur and support this function by itself. The costs of backup power can be spread across all the tenants of the building, resulting in a lower cost for each individual tenant that requires it.

Incubator space

A traditional strategy for incubators is to locate them on inexpensive land that is not always co-located with existing business locations. Business park office buildings can be designed with "starter" offices and flexible office space designs so that entrepreneurial start-ups can stay in the building and in the park as the business grows, rather than being required to move out of a specialized incubator facility, which can be costly and disruptive to the growing business.

Flexible lease arrangements that allow easy modification as space needs change can also help retain businesses in the park and can encourage start-ups to locate in the park.

Telepresence

As the long term cost of travel continues to trend upward, business quality videoconferencing will continue to grow in importance as a complement to conventional business travel. In particular, larger firms have been investing heavily in HD (High Definition) videoconferencing systems that offer a much higher quality meeting experience (telepresence) than previous generations of business videoconferencing systems. Business parks should provision one or more common space meeting rooms with fully equipped "telepresence" videoconferencing equipment. This shared amenity is particularly valuable to smaller firms that may not be able to justify the cost of such systems for the occasional need for a telepresence meeting.

Retail Space

Business parks should offer a variety of retail and professional business services to enhance the value of the park. These services could include copy centers; shipping services; mailing services; day care centers; food services providing breakfast, lunch, and coffee services. The park should also seek to attract local professional service firms to the park, including accountants, business law firms, IP (Intellectual Property) law firms and related professional services. The type of firms needed may vary by the kind of tenants located in the park.

ACCELERATING BUSINESS PARK GROWTH

- A strong focus on quality for every project.
- Careful attention to the space needs of high tech firms and entrepreneurial start ups.
- A wide choice of competitive broadband services with both fiber and wireless access.
- Reliable electric power to keep Knowledge Economy businesses running
- Amenities that help keep businesses in the park, including telecom services, food service, good coffee, and flexible meeting spaces.

ABOUT DESIGN NINE

Design Nine specializes in designing and implementing next generation fiber and wireless broadband infrastructure, with more than seventy years of staff experience, including decades of hands-on management of broadband systems. The firm offers broadband planning, design, and project management services, including early stage needs assessment, financial analysis, business model development, organizational design, network design and project implementation.

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