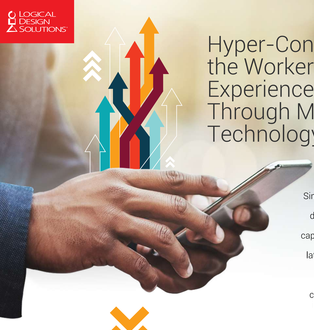
LOGICAL DESIGN SOLUTIONS

Hyper-Connecting the Worker Experience Through Mobile Technology



Since the first generation of mobile networks began to emerge four decades ago, digital technologies have revolutionized user capabilities through ever expanding coverage, rates of data transfer, latency, connectivity on a massive scale and improved wireless imaging and sensing. The next decade will see exponential change, as the worker experience is unified across physical, digital and biological worlds.

6G
Internet of AI

1TB/Sec

- Less than millisecond response time
- AI will drive billions of IoT devices
- Fully ambient interfaces
- Quantum computing becomes common

100x faster than 5G. Facilitates 'thinking' machines communicating directly with other machines, instantaneous downloads of big data.

2030

Shorter Wavelengths will mean centimeter level accuracy
(e.g., workers will be able to locate and examine any object on the planet at data transfer rates up to 100x faster than 5G).

Digital Twins will facilitate remote training and maintenance
(e.g., virtually replicating physical entities such as people, devices, systems, and even places)

Intelligent Machines will interface with other intelligent machines
(e.g., machine vision will far surpass human capabilities, resulting in faster diagnosis and remediation of complex problems)

Fully Immersive XR will become commonplace
(e.g., ambient interfaces for maintenance and guidance in areas such as healthcare, education and manufacturing).

5G
Massive IoT

1-10GB/Sec

- Frequency of 30–300 GHZ means huge data downloads
- All devices connected to one network (IoT)
- Transportation, healthcare logistics & retail are connected
- Human-Machine work is co-mingled

Videoconferencing, immersive learning via virtual and augmented reality, massive expansive of the Industrial Internet of Things facilitates the future of work.

2020

Enhanced collaboration for remote teams
(e.g., real-time 3D holograms on a digital whiteboard)

Automated inventory control
(e.g., shelf sensors use the high speed network to immediately trigger online reorders when stock is low)

Streaming virtual and augmented reality apps for training
(e.g., real time guided instructions on machine repairs)

Exponential increase in connected devices
(e.g., 125 billion IoT devices capable of communicating real-time data)

Amplified videoconferencing capabilities
(e.g., meetings may include 3D Holographic images, avatars and advanced AR/VR technologies)

Expanded recruitment areas
(e.g., highly qualified global labor pool with enhanced remote working capabilities)

Enhanced Machine Learning and Robotic Capabilities
(e.g., self-driving cars utilizing the 5G network for real time updates on traffic conditions)

4G
Internet of Apps

12 to 450 mbps

Remote working became viable with far higher speeds and greater bandwidth

2010

- Up to 10 times faster than 3G
- Mobile web access
- IP Telephony and Gaming Services
- High-Definition Mobile TV
- Data rates as high as 1 gigabit per second

3G
Mobile Internet

0.3 to 42 mbps

Business adoption escalated with the creation of the Blackberry. **Now workers could be contacted 24/7** on multimedia channels.

2000

- Mobile exceeds land line users
- Apple iPhone changes the UX
- Web browsing and video calls
- Multiple users on one frequency
- To this day, remains the largest global mobile network

2G
Cellular/ SMS

64KB/Sec

The advent of digital phones and more widespread coverage meant that **sound quality improved and business adoption flourished.**

1991

- Digital
- Send & Receive SMS 1996
- Global System for Mobile (GSM)
- Camera Phone/ Emojis 2000
- Cheaper, lighter, smaller

1G
Voice Calling

2.4KB/Sec

First adopters used analog phones with **poor audio quality and very limited coverage.**

1979

- Analog
- Limited Signal
- Poor Sound
- Expensive ($4,000)
- Heavy (6 lbs.)

The Future of Work is Our Domain. Logical Design Solutions (LDS) is a digital strategy and design consultancy to global enterprises. We create experiences that transform business and help people succeed in the new digital organization. By placing the worker experience at the epicenter of exponential change, we help market leaders operationalize digital transformation for every employee. Contact us to see examples of how LDS has dramatically improved the way that some of the world's largest corporations do business.

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