Future Tech & Trends By Tom Kreuzer

PCs and Devices over the past 50 years have evolved from the desktop to now almost everywhere in everything. Where is it headed and what should we do? It has been a wild ride and the ride shows no sign of stopping.

Today we have many choices when it comes to what device to use. Picking the right one is like picking a motor vehicle, what works for one person or purpose does not work for everyone to do everything. Define what your needs are and you can find the right device to use for every task.

Trends – PCC Member Survey

Phone - 61% in 2014 to 100% today. Data plans and device costs are dropping every day. We now have very powerful computers with us 7x24. My T-Mobile plan is $15 for unlimited talk, text, and 3.5 GB data. Samsung A14 phone was $199.

Tablet - 60% in 2014 to 83% today. This number should be 100% with prices starting at less than $30. I use my tablet more than my PC at home. I am not ready to get rid of the PC, but a tablet can do most things. I use my tablet in my kitchen, garage, bathroom, bedroom, deck outside, and everywhere. Last month I bought a new iPad 9th gen for $229.

Percent of time on Tablet, Smartphone, and Desktop/Laptop. The Computer number keeps going down from 81% in 2014 to 55% today. Above is the cumulative percent of all members of where time is spent on which device. Tablets and Smartphones both are being used more and more.

Device Pros & Cons

Pros for a Phone	Cons for a Phone
● Phone	● Cost per month data plan and limits
● Small	● Small display (3"-6")
● Portable (pocket or purse)	● Limited storage – can use cloud storage
● Low upfront cost (Cell phone plan subsidy)	● Models change yearly
● Music/Video/Camera	● Content creation is hard. No keyboard, no mouse, small display.
● Millions of Apps	● Easy to lose or break

Pros for a Tablet	Cons for a Tablet
● Content consumption - Browse Web, e-mail, watch movies, play music, and play games	● Content creation is hard. No keyboard, no mouse, small display.
● Bigger display than Phone (7"-10")	● Monthly cost data plan or require WiFi connection
● Portable/lightweight	● Smaller display than laptop or desktop
● Easier to use than phone	● Limited storage – can use cloud storage
● Millions of Apps	● Limited camera, more like a webcam

Pros for a Chromebook Laptop	Cons for a Chromebook Laptop
● Low cost – start at $150, basic $300-$600	● Limited software – Runs browser & limited apps
● Low hardware requirement (CPU, memory)	● Cloud/Internet/web connection (mostly) required
● Fast startup (6-10 seconds)	● Limited storage – can use cloud storage
● Long lasting battery life	● End of Life date for older were 5-8 years
● New End of Life of 10 years	● Limited hardware ports – like a phone/tablet

Pros for a Laptop	Cons for a Laptop
● Content creation	● Cost more when you buy or to upgrade than desktop
● Portable - Can be used from room to room, outside, take to work, classes, library, travel, etc.	● Slower CPUs (to extend battery life)
● Bigger display than Tablet (12"-17")	● Limited resolution
● Full size keyboard	● Smaller and slower hard drives
● Require less space to setup and use	● Memory costs more
● Built in webcam and mike	● Limited internal expandability (drives, memory, graphics, etc.)
● Outsell desktops 4 to 1	● More costly to repair
● Can add a docking station	● Easy to lose or steal
	● Less comfortable to use (keyboard, mouse, drives, etc.)

Pros for a Desktop	Cons for a Desktop
● Performance ● Cost (Best value) ● Bigger display than laptop (17"+) or multiple ● User Interface (full keyboard, mouse) ● More hardware ports and expansion ● Faster drives (Hard and DVD)	● Not portable ● Take up more physical space ● More noise, heat, weight

Future

- Windows
  - Windows 10 (Jul 2015 - Oct 2025) – Replace old laptops & desktops not able to run Windows 11.
  - Windows 11 (Oct 2021- Oct 2031?)
  - Windows 12 (Jun 2024?)
- CPUs - Smaller, faster, and cheaper. Example: Apple M3 Pro - 92 billion transistors.
- Display – Flexible, Apple Vision Pro, Meta Quest, & Google glass. Screens go away - Virtual & Augmented Reality "VR & AR".
- Input - Voice, hand gestures or movement (Leap Motion), devices to device, AI knows what you want, and keyboards go away.
- Small size and cost - Everywhere in everything. Smart Devices, cars, robots, and watches.
- OSs - Not as important and can co-exist. Internet of Things (IoT)
- Battery - Longer life, wireless charge, and smaller.
- Always connected - notifications and info, WiFi/5G - Better coverage and faster.
- Software programs ---> Apps/Internet.
- Local Storage ---> Cloud.
- Artificial Intelligence (AI) and machine learning – Alexa/Google Now, IBM Watson, Dr/Health, help/replace your memory with dates, history, and names. ChatGPT.
- Work from home or anywhere in the world.
- Autonomous vehicles - The 2020s is the decade of cars, trucks, drones, and ships becoming commercially viable.
- Security – cameras, alerts, monitor always, and big brother.
- Home automation – refrigerator, heat/cooling, water lawn, order groceries, monitor leaks/fire, and Alexa do more tasks like schedule meetings, lunch, vacation, investing.
- The Internet of Things (IoT). Smart devices connected to the internet are constantly gathering and transmitting data, further fueling the growth in Big Data and AI.
- Data mining – Combine data into Meta Data with everything available everywhere. Single source of data.
- Education/Schools – What to teach? What jobs? Replaced with self paced online courses.
- Internet - better filters to remove scams and fake info, customized to your needs
- Dr visits remote, testing, rehab
- Satellite, 5G – Faster more stable connections. More connected devices and richer streams of data.
- TV streaming and on demand – Any device, any content, at any time.
- Wearables - Started with fitness trackers to improve human performance and help us live healthier, safer, more efficient lives.
- Blockchains and distributed ledgers. Super-secure methods of storing, authenticating, and protecting data could revolutionize many aspects of business – particularly when it comes to facilitating trusted transactions.
- Robots - More intelligent than ever, learning to respond to their environment and perform tasks without human intervention. The future of work is likely to involve humans working seamlessly with robot colleagues.
- The Future's so bright we all need to wear shades.

Additional Links and Information

Carondelet Tech Help Resources: https://carondeletvillage.org/tech-help-resources/
Questions or comments can be sent to TCKreuzer@gmail.com