

Benchmark 9: What are device hours per capita and how do they help me?

I. 9.1: Device hours per Capita

Edge benchmark 9 speaks to the need for libraries to provide a sufficient number of computers, equipment, and bandwidth to support users' needs.. Indicator 9.1 uses the term **device hours per capita** to express the level of physical access to the library's technology resources. So what is a device hour?

Device hours are a way to take into account the number of hours a library location is open as well as the number of computers (devices) the library provides for public use. After all, a library with 100 computers doesn't do its community any good if it is only open 10 hours a week. If the doors are closed, there is no access, no matter how many computers are sitting in the dark.

The device hours per capita measurement a way to standardize the number of device hours in order to assess a library's capacity against the benchmark. It combines the number of computers, laptops, and other Internet-enabled devices the library makes available to patrons with the number of hours those devices are available. The result is a figure that represents how many hours of computer time each member of the library's community are "entitled" to were everyone in the community to use the library's computers equally. So, a library with a device hours per capita rate of 3.0 would be capable of providing each member of its community with 3 hours of computer time **per year**. Of course, not everyone in the community will use the library's computers (though 25-30% of them will!),¹ -but device hours per capita provides a whole number that represents the level of access for the community.

II. Indicator 9.1 Details

Libraries using the Edge assessment will have their device hours per capita calculated automatically, but doing the calculation requires knowing only the number of devices provided to the public, the number of hours a library is open, and the size of the legal service area population.

Benchmark 9.1 provides guidelines for device hours per capita at three levels. For a library to meet the Level 1 requirements of minimum number of device hours to adequately serve their community, it must have 3-6 device hours per capita. Level 2 requires 6-12 device hours per capita and Level 3 is anything over 12 device hours per capita. The demographics of a population play a large role in determining the community demand for technology access and should be used to guide libraries in determining what level of device hours they should be aiming for. For instance, if a high percentage of the population is unemployed or low-income, there will likely be more public access computer (PAC) usage within the community. Therefore, a library situated in such community may want to aim for Level 2 or 3 to accommodate the higher PAC use.

III. Calculating Ideal Device Hours per Capita—a tool

The University of Washington Information School researchers have developed an online calculator to enable libraries to determine their current number of device hours per capita, as well as the ideal number of device hours a library would need to completely cover their community's access needs. The

¹ [Opp 4 all, Pew studies](#)

calculator allows libraries to test different scenarios with varying numbers of devices and hours to see how it affects the number of device hours per capita.

- How the calculator works – inputs, etc.
- Fixed & variable costs
- Other considerations: peak traffic hours

IV. What should we increase? The balance between devices or hours.

As discussed above, when the library is closed it's not offering access (unless your wireless extends outside the building); and when a library doesn't have enough computers to meet demand when it is open, that's not adequate access. But which needs to increase and by how much to ensure you are providing enough access? Here are a few things to consider:

- Fixed and variable costs: Oftentimes, what a library needs to do most is increase the number of hours the library is open so that users with the greatest need are able to access the library when they're not working. However, the cost of increasing the number of hours a library is open is often perceived as too great... (need to look at peak traffic, needs assessment, etc, to really determine if adding computers will create the increase in use that the library is aiming for.
- Space. Sometimes it's clear that the library needs to add devices: there are frequently waiting lists of people trying to get on the computers; the library has had to lower its time limits to accommodate more users, etc. But for some libraries not increasing the number of computers is a matter of space, not money. One way to overcome this is by lending laptops within the library, which allows patrons to take advantage of reading rooms, nooks, and other areas of the library to do their computing. Many libraries have successfully increased their access in this way.

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You can use the device hours calculator to test the effect on device hours if you increase the number of devices and/or hours open....

One of the anticipated problems with a library realizing the need to increase the number of its devices is the issue of space. How can libraries with little extra space grow their number of device hours?

- Rent out devices
 - For libraries with multiple outlets or branches, how would this work?