



DESKTOPS, LAPTOPS, THIN CLIENTS
WHICH ICT SOLUTION IS RIGHT FOR YOU?

Inveneo Hardware Solution Guide

When to use desktops, laptops, and thin clients in rural ICT installations

Inveneo offers a range of solutions for low-resource environments and we have developed a ranking matrix to help you understand the benefits of each solution and decide which one best meets your needs.

We have listed the three major types of computer configurations and graded each on four key benefits. Use this matrix to rank the benefits you value the most and find the solution that's right for you. More detailed explanations are shown on the next page.



Desktop



Thin Client



Laptop

	Desktop	Thin Client	Laptop
Cost Effectiveness per User	★★	★★★★	★
Durability	★★★★	★★	★
Mobility	★★	★	★★★★
Performance	★★★★	★	★★★★

★★★★ = Best

★★★ = Better

★ = Good

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Benefits

Cost Effectiveness per User

Thin clients use a single CPU to serve multiple screens. Therefore, the hardware cost per user can be dramatically lower than if a separate computer is purchased for each user. Almost all laptops are more expensive at most performance levels compared to typical desktops.

Durability

Low-power consumption desktops with hardened hardware and software are the most durable computers in hot, dusty environments. Individual components, such as keyboards or mice can be easily and inexpensively replaced if there is a problem, whereas laptops are more expensive to repair or replace.

Mobility

Laptops are the smallest and lightest computers, designed for use on any flat surface, including your lap, while thin clients must be located closer to each other to operate and the server PC is not easy to move. Desktops can be moved, but are not truly portable.

Performance

Desktops and Laptops can be equally powerful, because each has its own CPU. With a Thin Client system the power of the single CPU must be shared among all the users, so graphics performance, in particular, is the lowest of the three types.



Desktop

Most suitable for difficult environments is the very low-power-consumption Inveneo High-Performance Computing Station, intended for regular use at a single location. This system offers very low 5-year Total Cost of Ownership (TCO) while giving very good performance.



Thin Client

A set of simple CPU-less workstations (clients), such as the Inveneo Multiplier solution, that employ a central server PC to provide computing power to all users. Each user has his own LCD monitor, keyboard and mouse, but receives all data and graphics from the central CPU via a USB cable.



Laptop

A portable computer, such as the Inveneo Classmate Computer, that is small, and light and contains an integrated screen and keyboard. Laptops are designed for maximum portability and use wherever needed. Laptops can be fragile, and are always more expensive to maintain than desktops.



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