

# Buying Versus Leasing

A Decision-Making Guide for Medical Equipment



While procurement of basic, less complex medical devices is often more standardized, ensuring their consistent operation can be challenging in many low- and middle-income country (LMIC) contexts due to maintenance and system constraints. However, the acquisition of high-value, complex medical equipment poses significantly greater strategic and operational challenges. These stem not only from the significant upfront investment required but also from the infrastructure, human resources, and ongoing operational costs necessary to ensure sustained and effective use. This includes the availability of trained health providers, biomedical engineers, and dependable supply chains for spare parts and consumables.

When these support systems are weak or underdeveloped, equipment downtime—regardless of device cost or complexity—can become a significant barrier to health service delivery. Studies estimate that on average, 38 percent of medical equipment in LMICs' health facilities is nonfunctional,<sup>1</sup> with World Health Organization estimates reaching as high as 80 percent.<sup>2</sup> In Ethiopia, 26 percent of surveyed hospital equipment was found to be out of service, with implications for patient safety and quality of care.<sup>3</sup> The leading causes of nonfunctional equipment include insufficient maintenance and a shortage of trained biomedical engineers. In many LMICs, these issues are exacerbated by harsh environmental conditions, improper use, and donations of equipment that do not align with local needs or technical capacity.

Given these constraints, alternative ownership models, such as leasing, can help ensure essential medical equipment remains functional, maintained, and available over its lifecycle. By shifting some or all responsibilities of equipment ownership and management to the private sector, leasing can alleviate the burden on ministries of health (MOHs), introduce predictable financing mechanisms, and potentially improve equipment uptime. One example is Kenya's Managed Equipment Service (MES) program, which has demonstrated both the potential benefits and the implementation challenges of leasing arrangements.

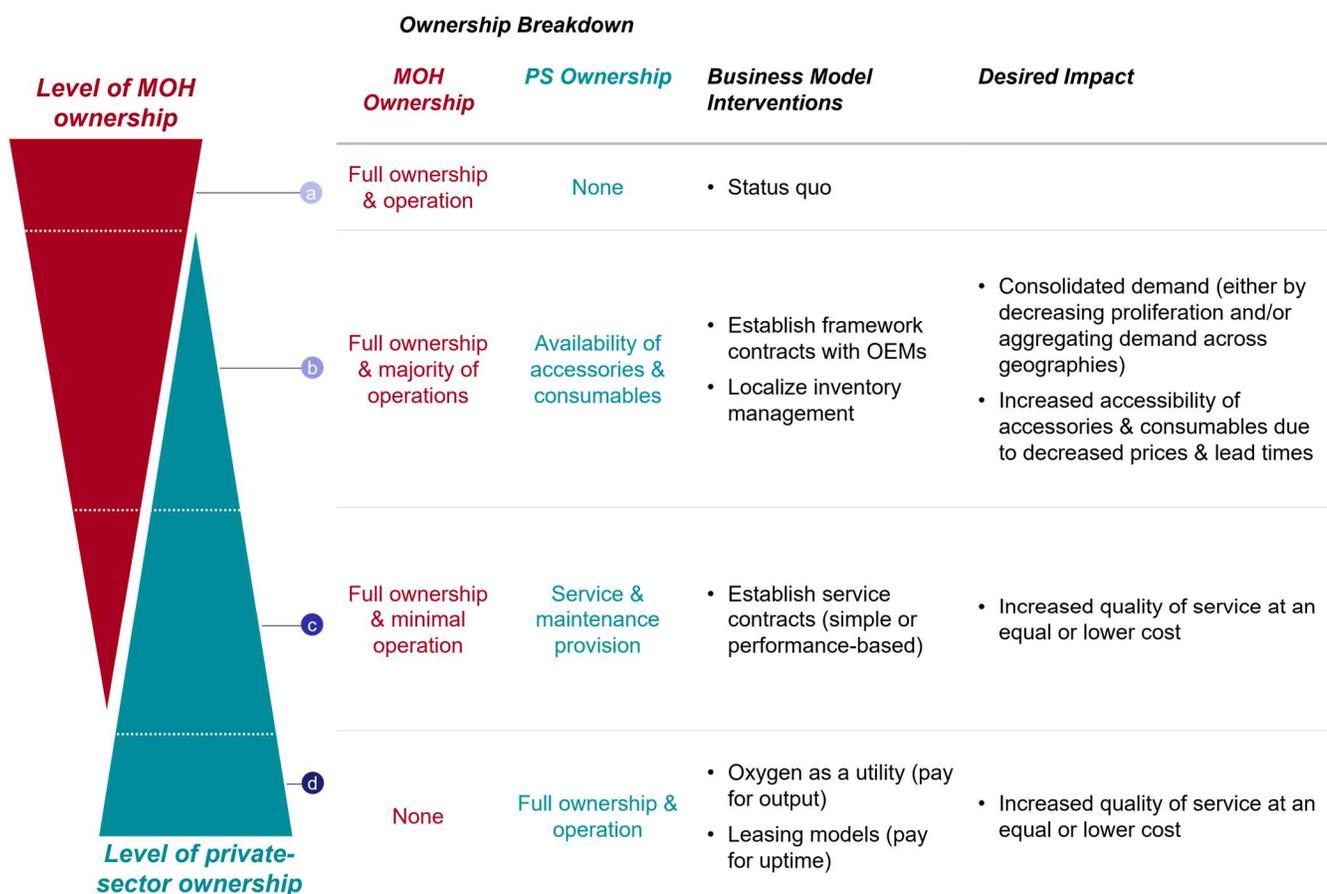
Despite these potential advantages, there remains limited practical guidance, especially for MOHs and public hospitals, on which types of equipment are best suited for leasing, what conditions must be in place for leasing to succeed, and how to compare leasing with ownership in a systematic way. This guide provides a structured framework to support decision-making on when and where leasing may offer advantages over direct purchase and ownership.

## Buying versus leasing—what’s the difference?

### Ownership distribution

The ownership spectrum ranges from full MOH ownership and management to full ownership and management by the private sector. Leasing medical equipment transfers ownership and associated responsibilities to private partners, reducing the operational burden on MOHs. In between are hybrid models, where responsibilities for training, consumables, maintenance, or spare parts are gradually shifted to vendors. These models allow for scalability and flexibility based on institutional capacity. The figure below illustrates a spectrum of ownership models that delineate the distribution of responsibilities between MOHs and private-sector partners.

Figure: Distribution of responsibilities associated with level of ownership.



Abbreviations: MOH, ministry of health; OEM, original equipment manufacturer; PS, private-sector.

## Key considerations for buying versus leasing

The table below highlights the major differences between buying and leasing.

	Buying	Leasing
<b>Innate characteristics of buying versus leasing models</b>		
<b>Ownership</b>	MOH has full ownership of device.	Vendor owns device.
<b>End-of-term options</b>	Equipment remains an asset; can be sold or repurposed.	Terms vary by lease agreement; options may include purchase, renewal, or return.
<b>Device-dependent considerations</b>		
<b>Clinical criticality to &amp; risk of inadequate maintenance</b>	For life support and other highly critical equipment, the MOH retains full control over maintenance and operations. However, this also places full responsibility on the MOH to ensure consistent functionality through ongoing device operation, routine preventative maintenance, and timely emergency maintenance. Where maintenance capacity is limited, the consequences of gaps can be severe for patient care.	Leasing agreements often include maintenance services, which can help ensure consistent functionality for critical equipment. While the MOH has less direct control, these agreements may reduce the risk of downtime in settings where gaps in MOH maintenance capacity, staff turnover, or supply chain disruptions could otherwise compromise equipment performance and patient care.
<b>Technology life cycle</b>	Limited flexibility, as upgrading requires decommissioning or resale. Best suited for equipment with long lifespans and low obsolescence risk (e.g., autoclaves/sterilizers, refrigerators for medical and vaccine storage, exam tables). Owner bears full responsibility for outdated technology.	Particularly suitable for equipment categories that undergo frequent technological advancements or require updates (e.g., imaging devices or diagnostic platforms). Allows easier access to updated models without burden of disposal. Vendor absorbs most obsolescence risk; newer models may be available at lease renewal.
<b>Market characteristics</b>		
<b>Availability of local leasing providers</b>	Not dependent on the availability of local leasing providers; procurement, operations, and maintenance can proceed through standard channels.	Only feasible where qualified vendors offer leasing models; limited or underdeveloped vendor markets constrain or preclude this option.
<b>MOH/health system capacities</b>		
<b>Maintenance responsibility</b>	MOH is responsible for all maintenance and repairs; ongoing operational expenditure must be budgeted for. Required human resources (i.e., operations staff and biomedical engineers) must be trained, available, and appropriately dispatched, and needed spare parts must be procured and available.	Maintenance is often included. Vendor handles repairs and servicing.

<b>Training and operational readiness</b>	MOH is responsible for properly training equipment users and technical personnel (e.g., biomedical engineers and technicians); it may include specialized or vendor-certified training, which is resource- and time-intensive for MOH, especially when the frequency and technical demand of trainings is high.	Leasing agreements often include training for both users and technical staff from the vendor or manufacturer, which may be particularly beneficial for complex devices that require regular skill refreshers or highly specialized knowledge.
<b>Financial characteristics</b>		
<b>Up-front costs</b>	High initial investment; it may require financing.	Lower initial costs; it may require a small down payment (first month's payment, refundable security deposit, acquisition fee, etc.).
<b>Long-term costs</b>	May include loan payments (if financed), plus the following costs: <ul style="list-style-type: none"> <li>• Ongoing operations, including labor costs (for operators), training, and utilities (electricity).</li> <li>• Maintenance (labor costs for biomedical engineers and spare parts).</li> <li>• Infrastructure improvements (as needed).</li> <li>• End-of-life disposal.</li> </ul>	Long-term costs primarily consist of lease payments over the anticipated equipment life cycle. These are contract-dependent and may include maintenance and service; however, MOH may still bear certain operations costs, such as utilities, consumables, or staffing in some cases. While leasing can result in higher total costs, it may still be preferred due to improved reliability, consistency, and reduced administrative burden.
<b>Cash flow and budget impact</b>	Often large up-front expenditure with significant immediate impact on cash flow. Requires reliable ongoing funding for operations and maintenance; gaps in cash flow can lead to service interruptions and potential equipment degradation.	Preserves cash flow by converting upfront costs into predictable recurring payments and freeing capital for other priorities. Still requires steady future cash flow for lease payments; nonpayment risks, service disruption, and loss of equipment access.
<b>Procurement regulations and donor funding conditions</b>	Donor requirements and/or public financial management regulations mandate or strongly favor capital purchases, reducing flexibility to pursue alternative procurement approaches such as leasing.	Evolving procurement models, such as public-private partnerships and service-based contracting, may enable leasing within existing regulatory systems, offering MOHs greater flexibility.

There is no one-size-fits-all approach to deciding between buying and leasing medical equipment. The optimal model depends on a range of contextual factors, including MOH priorities, technical and managerial capacity, availability of qualified leasing providers in the local market, and risk tolerance.

### Types of leasing models

Leasing arrangements vary along two key dimensions: (1) the allocation of ownership and risk between the MOH and vendor, and (2) how services, such as maintenance and operation, are structured within the contract. Understanding both dimensions is essential, as they can be combined in different ways depending on context.

## Lease structure (financial/ownership dimension)

**Operating lease** This is a short- to medium-term arrangement in which the vendor retains ownership and most risks. MOH pays for use of the equipment, typically with maintenance and support services included, and returns the asset at the end of the term, making it a practical option for equipment with fast-changing technology or for use in temporary or pilot programs. This model has been used for screening tools, such as portable digital chest x-ray systems, deployed for active tuberculosis (TB) case identification. Operating leases are also commonly used for HIV viral load and TB molecular diagnostic platforms, in which equipment is placed at facilities at little to no upfront cost and vendor costs are recovered through per-test fees.

**Finance lease** This is a long-term agreement that transfers most risks and responsibilities to the MOH and often results in ownership transferring to the MOH at the end of the lease period. It functions similarly to an installment purchase, with the asset and associated liability treated as owned by the lessee, and may or may not include maintenance provisions. This model is well-suited for high-utilization equipment with stable, long-term demand. In Kenya, the original Hewatele program used a finance lease model in which oxygen generation equipment was installed in government-owned facilities under a multi-year lease, explicitly structured to transfer ownership to the public sector at the end of the contract.

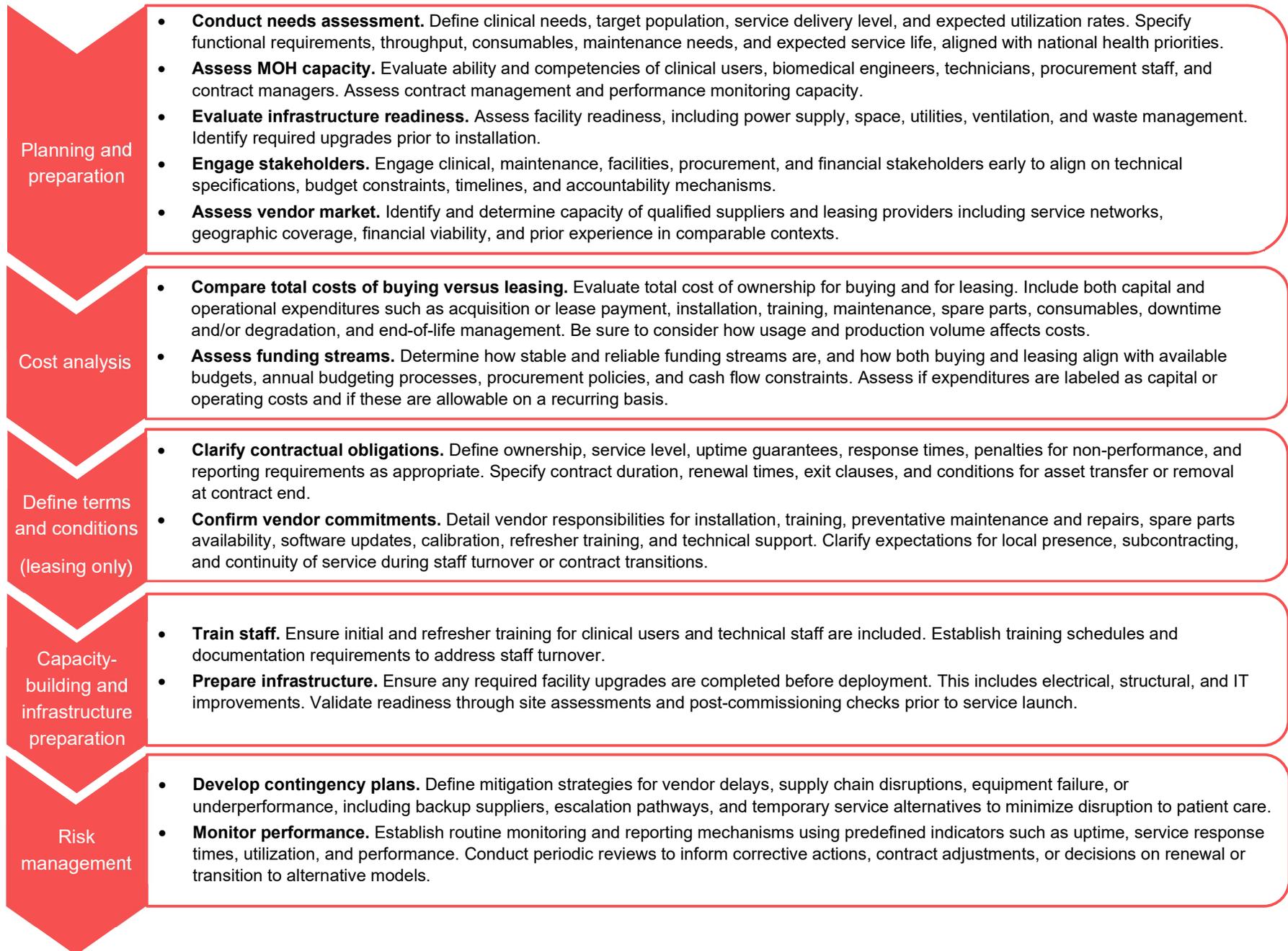
## Service and contracting models (can be layered onto leases or purchases)

**Turnkey model** In this bundled delivery approach, the vendor provides equipment, installation, training, and ongoing maintenance. This model can be applied to both purchased and leased equipment, depending on how the contract is structured, and is ideal in contexts where local infrastructure and technical capacity are limited. Kenya's MES initiative applied a turnkey model to install and maintain medical equipment in 98 hospitals across all 47 counties. Under the seven-year agreement, equipment was provided for dialysis, imaging, renal therapy, laboratories, and operating theaters.<sup>4</sup>

**Pay-for-performance/output-based models** These contracts link vendor payment to service delivery metrics, such as equipment uptime or the number of procedures performed. These models can be combined with either operating or finance leases, foster strong accountability and sustained engagement from the vendor, and are frequently used in services such as diagnostic imaging or oxygen provision under "oxygen-as-a-service" arrangements. In India, private providers are often paid per scan performed for computed tomography (CT), magnetic resonance angiography (MRA), and x-ray services.

## Implementation process

The following steps provide an overview of recommended actions for medical device procurement planning and introduction. Many represent best practices for both buying and leasing equipment.



By implementing these recommendations, health facility administrators and MOHs can optimize equipment procurement processes, ensuring that decisions align with both short-term needs and long-term health care system goals.

## Conclusion

Equipment leasing can be an effective way to ensure lifesaving devices are operational and available to the patients who need them. The decision-making process for buying versus leasing medical equipment is multifaceted, requiring careful consideration of financial, operational, and technical factors. Key recommendations include:

1. Conducting a thorough needs assessment to align equipment procurement with health care delivery objectives.
2. Employing life cycle costing to evaluate the total cost of ownership for both buying and leasing, including hidden costs such as maintenance, training, and infrastructure upgrades.
3. Engaging stakeholders across clinical, technical, and financial domains to ensure alignment and informed decision-making.
4. Leveraging case studies and lessons from programs like Kenya's MES to guide planning and implementation.

By implementing these recommendations, health facility administrators and MOHs can optimize equipment procurement processes, ensuring that decisions align with both short-term needs and long-term health care system goals.

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