BazisBuild™

Construction Equipment Customer Journey

Machine Lifecycle: From Selection, to Ownership, to Search for the Next Machine

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In the world of construction, equipment is one of the most important company assets. For people who chose construction as their career, heavy equipment, such as excavators, dozers, and wheel loaders, is the source of pride and passion. Behind every machine on the job site is a decision making journey that starts from research, continues to acquisition, machine productivity and performance adjustment, parts sourcing and maintenance and, finally, resale or utilization.

Understanding this life cycle is critical for Equipment Manufacturers (often abbreviated as OEMs), their dealers and distributors, and service providers. In many ways, construction industry has been the same for the past 100 years. It is also true that it is constantly evolving. CONEXPO – the leading industry trade show that runs in Las Vegas every three years – is a testament to the rapid developments and innovations in the construction equipment capabilities. **Understanding the needs and aspirations of the customers** is the key to developing reliable and innovative machines. It enables OEMs to stay in sync with the evolving demands of the industry, where timelines are tight, margins are narrow, performance expectations are high, and safety is a baseline requirement. When manufacturers and dealers recognize and anticipate customer pain points at each stage — whether it's selecting the right machine, minimizing downtime, or planning for the next purchase — they become more than just suppliers, they become trusted partners.

In this report, we will walk you through considerations that customers typically review at different stages of machine acquisition and ownership path.

We will also discuss differences and similarities between companies with small fleets (fewer than 10 construction machines) and those with medium or large fleets. Medium-sized companies typically operate 20 to 30 machines, while large fleet owners may manage hundreds of units across multiple job sites.

Recognizing the Need

The journey begins with recognizing the need for a next machine. This is a step that defines direction of the entire decision-making process. Need triggers are common across companies of different sizes.

▶ Key considerations include

There are two typical scenarios for that spark the new machine search. First, an existing machine that fits the job starts to require more and more repairs, and is getting high on operating hours (for example, a typical **replacement** decision comes around 7,000 to 10,000 hours for a primary medium excavator in the US). The second scenario is when a new machine needs to be **added** to the fleet, driven by a new project or fleet expansion to cover new business segment.

1. Primary (production) machine, working most of the shifts, performing the core job (like truck loading).

2. Secondary (support) machine, working lower hours, performing secondary operations (for example, a motor grader servicing a road within a quarry)

Recognizing the need for a new machine is accompanied with worktool (attachment) considerations. Many versatile machines – such as excavators – may have five to ten attachments that allow to tackle variety of jobsite tasks. This could be hydraulic hammers for demolition, grapples for handling debris or sorting materials, heavy-duty buckets for trenching or earthmoving, augers for drilling, and compactors for soil stabilization. The decision to replace a machine often includes evaluating compatibility and performance of existing attachments with the new model.

Machine undercarriage (think of tracks on an excavator) or tires (on off-highway trucks, motor graders, or wheel loaders) decisions are typically driven be the site – soil – condition. These are important components of a machine. A Caterpillar 777 haul truck tire has a radius of about 53 inches - that's nearly the height of a Toyota Corolla or roughly twice the diameter of a standard car tire. And the cost is a considerale factor!

Brand Selection

Once the need for a new machine is recognized, the immediate next step is a brand consideration set. Multiple factors plays a role in this decision based on the size of the company.

▶ Key factors influencing the brand decision

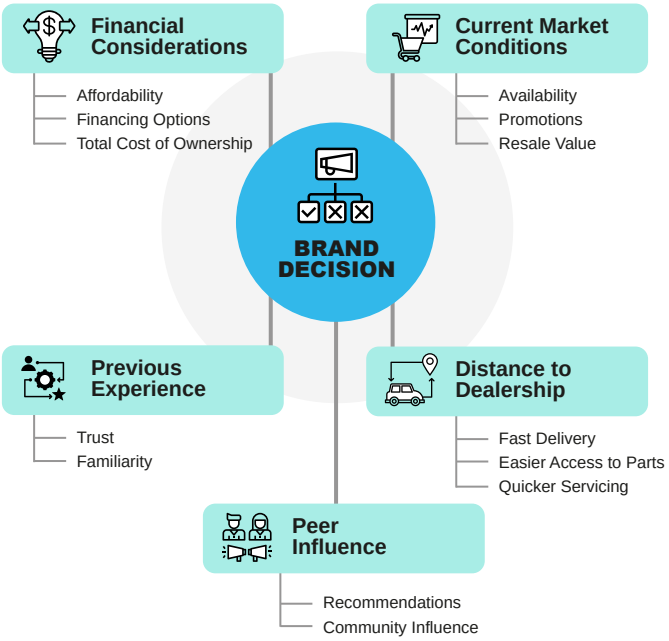
For small and medium-sized companies, several factors influence equipment purchasing decisions. These include **prior experience** with their current machines and brand familiarity. **Financing** plays a key role — when budgets allow, they often consider premium brands like Caterpillar, Komatsu, or Hitachi. However, when budget constraints exist, they may opt for more affordable options like Bobcat, Kubota, JCB, Doosan which better align with their financial capacity.

In recent years, **Chinese equipment brands have significantly increased their penetration in the market**, especially among cost-conscious buyers. Brands like Sany, XCMG, LiuGong, Shantui, and Zoomlion are gaining traction by offering competitive pricing, improving product quality, and expanding local dealer networks.

Proximity to the dealership is an important factor, as nearby locations help reduce delivery costs and provide faster access to parts and service. **Peer influence** — such as what neighboring businesses or friends are using — can also impact decision-making.

Additionally, **equipment and parts availability** has become increasingly critical, especially in the post-COVID era, where supply chain disruptions have highlighted this as a major challenge. This is particularly important for smaller machines like skid steers and mini excavators, where purchase decisions are often driven by immediate operational needs.

Factors Inluencing Brand Decision for Smaller Construction Companies

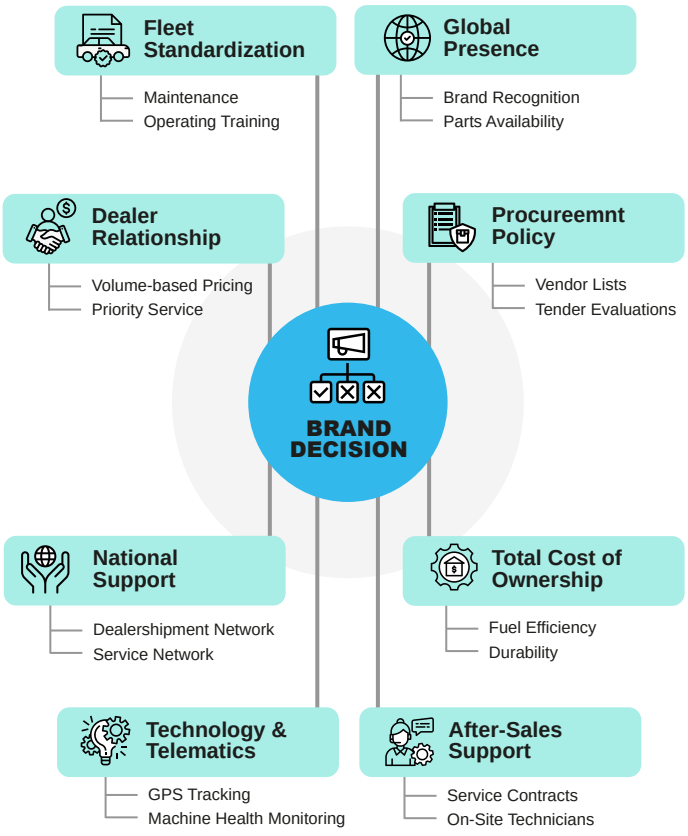


For larger companies, several key factors influence equipment purchasing decisions. One of the most important is their **existing fleet composition**, as maintaining consistency makes it easier to manage maintenance, training, and dealer relationships. This is where leading brands like Caterpillar, Komatsu, Volvo, and John Deere excel — they are well-known, have strong dealer networks, and are often preferred by these companies.

Financing plays a significant role, especially for high-cost equipment such as excavators, motor graders, and wheel loaders, which involve multi-layered decision-making and approvals.

Dealer support is critical, especially for companies managing large fleets. They require ongoing, reliable after-sales service, and many prefer leasing options that include lease-to-own flexibility. Brands that offer 24/7 dealer support and prioritize key accounts are more likely to build lasting relationships — this is especially true for global companies with structured procurement policies.

Factors Inluencing Brand Decision for Construction Companies



Parts availability is another vital consideration. Downtime caused by delays in sourcing parts can lead to significant project setbacks and increased costs. Larger companies often favor brands with robust parts inventory and regional distribution centers to ensure quick turnaround and reduced machine idle time.

Lastly, compliance with government and procurement policies is essential.

These include:

- Emission regulations
- Transportation and road use rules
- Local taxes and duties
- Import/export restrictions
- Safety and operational standards

Purchasing decisions typically go through a structured bidding process, with the best-value proposal — offering strong brand reputation, financing options, parts and service support — ultimately winning the bid.

Dealer Search

Once the equipment requirement is well-defined and the preferred brand is identified, the next critical step is to identify and connect with the right dealer. While some manufacturers engage directly with customers, particularly in the case of large or international organizations, most rely on a network of local dealers for day-to-day interactions.

Direct engagement with the manufacturer typically occurs in scenarios where:

- The brand is foreign and lacks a local dealer network, or
- The purchasing company is large and has established policies or volumes that warrant direct contracts.

However, in most cases, especially with mid-sized and smaller companies, the local dealer serves as the primary point of contact for equipment purchase, service, and spare parts. Dealers play a pivotal role in not only closing the sale but also providing ongoing support.

For significantly larger organizations, both the manufacturer and local dealer often work in tandem to manage the account, offering customized support, service contracts, and strategic partnerships that align with long-term operational goals.

Past purchase contacts, Referrals, Contacts at the dealer place, Online search, Dealer representatives, Dealer and Manufacturer Advertisements, Expos and Trade shows are the key search sources used to connect with the dealers.

Financing

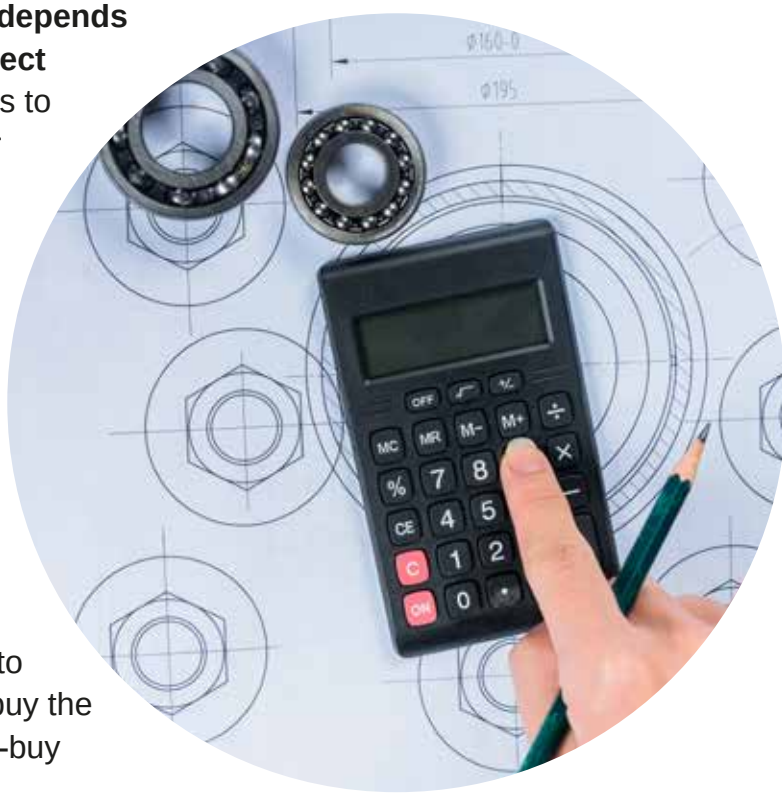
Financing is a critical factor that influences every all phases of the equipment purchase journey. It is carefully considered both **before the decision is made,** to evaluate budget constraints, financing options, and ROI, and **after the purchase**, in terms of managing payment schedules, operational costs, and long-term financial planning. For any organization, large or small, **financing options remain the foundation of decision-making**, directly impacting equipment selection, brand choice, and even the timing of purchase. Access to flexible financing, favorable interest rates, and lease or rental options can often be the deciding factor between moving forward with the purchase decision or delay the process.

T**he size of the company plays a significant role in financial decision-making**, with approaches varying greatly between small businesses and large enterprises.

1. Larger companies often have access to structured financing, in-house financial teams, long-term budget planning, external financial organizations.

2. Smaller companies may rely more on immediate Cash flow, Loans from personal banks, or Dealer finance.

Choosing to lease or rent equipment usually depends on the company's financial situation and project needs. If a company has a **tight budget** or wants to avoid spending a lot of money upfront, leasing or renting is a smart option. It helps them save money and still get the equipment they need to keep the work going.



In **short-term or one-time projects**, renting is useful because the company only pays for the equipment when it's needed. This is great for seasonal work or special jobs where buying a machine doesn't make sense.

Leasing works well when a company wants to use the machine for a longer time but still wants to **spread out the cost**. It also gives the option to buy the machine later if they choose to with the Lease-to-buy option.

Sometimes, choosing a machine can be tricky. In some cases, **the brand is more important**, even if it costs more. In other cases, **cost and finance options** matter more. For **smaller companies**, with tighter budget they usually look for **affordable options** and **good financing plans**. Bigger companies usually have **set rules** to follow and often pick **well-known brands** that offer good deals, support, and long-term value. But in both scenario Financing plays a key role.

Machine Ownership and Maintenance

Once the right choice is made and the terms are agreed upon and the machine is delivered to the job site, it officially becomes an asset to the company. The company, big or small, will be fully responsible for its operation and maintenance. When renting the machine the rental company is responsible for all the maintenances, whereas when the machine is leased or owned by the company owns the machine they are solely responsible for servicing the machine in a timely intervals (typically every 250 hours to 500 hours).

Whether it's an American brand, a Korean manufacturer, or a Chinese brand, every piece of construction equipment comes with manufacturer-recommended maintenance guidelines. **Regular maintenance is crucial to ensure safe operation, optimal performance, less downtime, increased productivit, and extended machine life.**

Regular maintenance matters. It prevents frequent breakdowns, helps catch issues early before they turn into expensive repairs, improves performance, improves fuel efficiency, extends machine life, makes for a safer work environment. All these factors contribute directly to an increased productivity and profitability for the company.

Recommended maintenance Includes

Preventive maintenance	Recommended time in hours
Oil, filters, and fluids change	**250-500**
Hydraulic systems	**100-250**
Tire/ Tracks inspection	Weekly or every 50 hours
Cleaning and lubrication	Daily or weekly based on usage
Software/ Telematics updated	As scheduled by the manufacturer

Maintenance Approaches in Construction Companies

Construction companies manage equipment maintenance through various approaches based on their size and resources:

- **Construction company maintains machines internally, by employing company mechanics**
  Smaller companies typically handle regular maintenance and minor repairs themselves or rely on trusted local mechanics. Larger companies with extensive fleets often have dedicated in-house mechanics or trained operators to manage minor issues.

- **Maintenance is performed by equipment dealer**
  Some large companies who do have in-house maintenance team or want to use dealer expertise preferable for all repair and maintenances outsource all maintenance — both minor and major — to authorized dealers, ensuring machines are handled by experts and minimizing the risk of internal errors.

- **Hybrid model**
  Many firms use a combination of both in-house teams and dealer services. This hybrid model offers flexibility, cost control, and access to specialized support when needed.

- **Agreements to support equipment at the dealer**

Equipment under warranty or service contracts is usually maintained by the dealer, as per the agreement. Terms vary based on machine size, value, and contract specifics. These agreements help ensure proper upkeep and reduce downtime.

Service approach	Pros	Cons
In-House maintenance	Cost-effective, faster for minor issues	Limited expertise for complex repairs
Dealer-supported	OEM expertise, ensures compliance	More expensive, less control
Hybrid model	Flexible, best of both worlds	Requires coordination, clarity in roles
Warranty / Agreements	Predictable cost, reduced downtime	Terms may vary; sometimes limited flexibility

Machine Breakdowns

This is the last stage of a machine's life. Every machine has a limit to how long it can work, and that depends on how often it's used, how well it's maintained, and how much wear and tear it goes through. If the machine is treated well, perform all the preventive maintenance periodically the life can extend up to **10,000 to 12,000** hours, as recommended by the manufacturer.

Signs that the machine is getting old and need to be replaced like:

- Frequent breakdown
- Increased downtime
- Rising maintenance cost
- Lower flue efficiency
- Unscheduled repairs
- Lesser productivity
- Safety concerns

These are the signs which indicated the end of the life of the machine and at this stage the owner has to decide whether to rebuild or replace the machine. In majority of the cases the machine is replaced by the time it reaches this stage. Smaller companies generally create a emotional bonding with these machines as they are managed by single owners and most of the repairs are handled by the owner operators who usually have hands on knowledge about these and can handle most of the repairs of themselves. Whereas larger companies usually have a pattern of disposing the machines as soon as they reach certain hours to get value for the machine.

Machine replacement

When a machine reaches its **saturation point,** usually after a certain number of working hours, it starts showing clear signs of aging. At this stage, it either needs to be **rebuilt** or **disposed of**. Continuing to use it may lead to frequent breakdowns, higher costs, and safety risks.

Common Methods of Disposals: trade-ins to dealers, auctions, scrap or recycling, keeping machine for parts, selling to foreign countries.

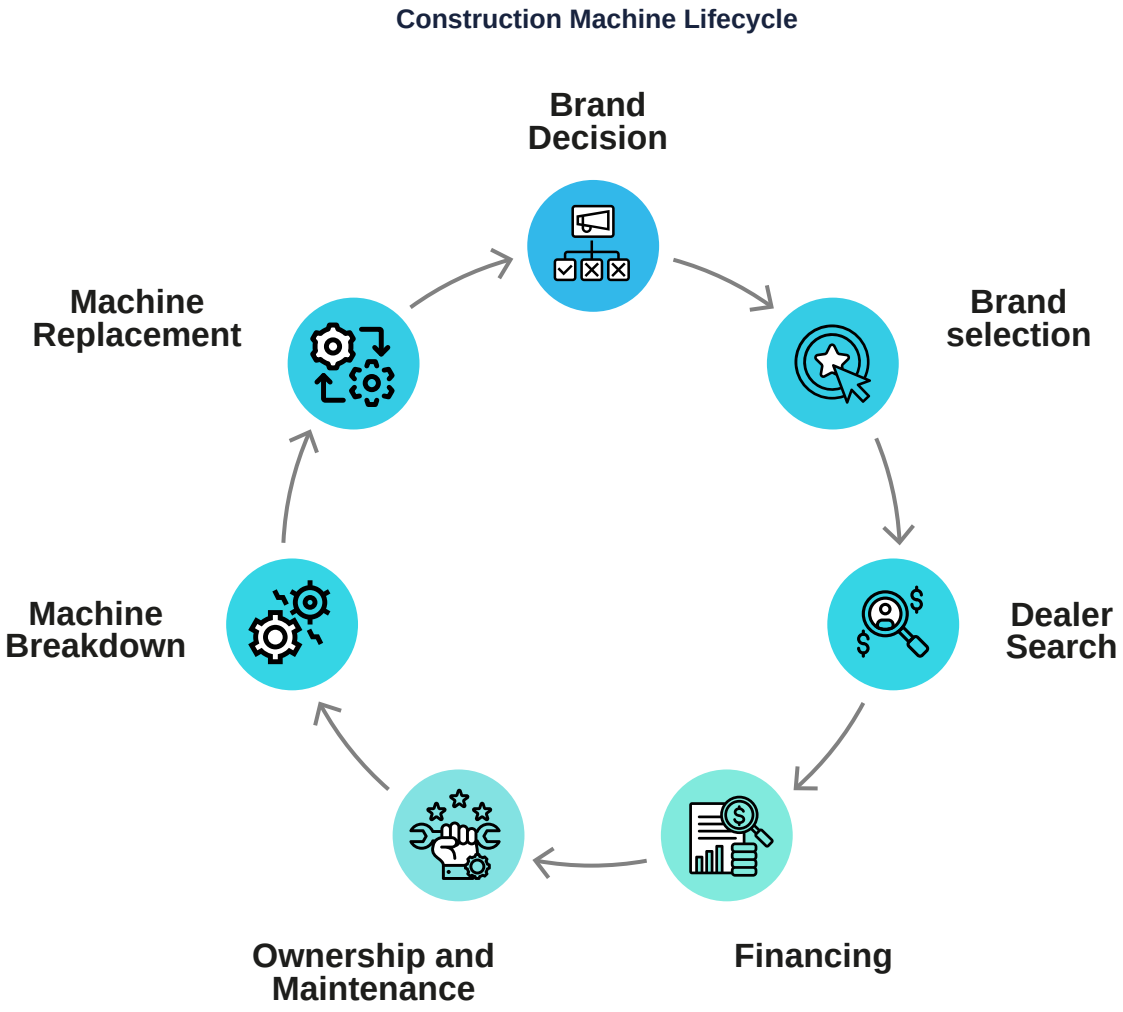
Disposal methodology depends of the size of the machine and the company. Smaller companies or Individual owners trade in the older machines for the new machines or retain the old machines as the secondary machine if in usable condition.

Larger organization usually dispose the machine well with the certain hours to get a good trade in value. If it’s a project-based contract, companies usually prefer to lease equipment instead of buying it. This allows companies to avoid long-term commitments, and return the machine once the project is completed or they can go in for lease to buy option as well.

Conclusion

Just like a human life has stage, from childhood to adulthood to retirement, a construction machine goes through a complete **lifecycle**. It begins with the **need** and **selection**, moves through **ownership, maintenance, and performance**, and eventually reaches the stage where **a decision must be made**: to **rebuild, replace, or retire**.

Construction fleet **is often the heart and soul of a construction business**, regardless of the company's size, machine type and size. When it is **handled with care, maintained regularly, and operated properly**, it can deliver **great performance, higher productivity, and long-term value**. On the other hand, **if neglected**, it can lead to **frequent breakdowns, costly delays, and loss of efficiency** — ultimately affecting the entire project and business profitability.



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About Bazis

Bazis is a team of highly qualified specialists. We have extensive experience in market research, and we are committed to exploring new methods, learning, and collaborating with international clients and researchers across various sectors.

Our business mission is to provide companies and individuals with valuable insights into how we think, feel, and behave, with the aim of offering genuine benefits to our clients.

The Bazis team is a trusted partner to renowned manufacturers and global research firms, providing timely, reliable, and accurate data.

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