



# Spare parts pricing: Emerging threats and opportunities

Industrial manufacturing

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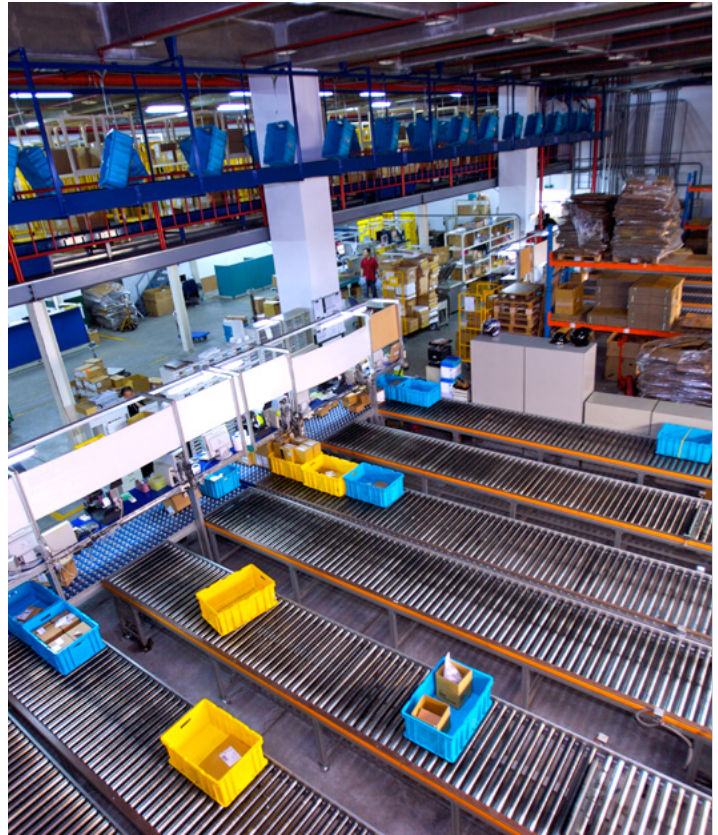
# Executive summary

Parts sales are often the profit engine for industrial capital equipment manufacturers: despite generating less than 10–20 percent of revenue, they drive more than 40 percent of profits. However, recent technological changes—such as ubiquitous Internet connectivity, the proliferation of the Internet of Things (IOT), and the rise of big data—have increased pricing transparency, changing the risk calculus on which customers base their parts purchases. This increased transparency, coupled with aggressive procurement strategies by customers, is rapidly eroding original equipment manufacturer (OEM) pricing power.

To understand the true impact of these trends on OEMs, KPMG LLP (KPMG) surveyed 250 parts purchasers across the United States. Our key findings include:

- Pricing pressure in the aftermarket will likely continue to accelerate.
- Customers compare multiple vendors for more than 80 percent of their parts purchases.
- More than 70 percent of customers regularly conduct price negotiations.
- OEMs capture only 60 percent of parts sales for the equipment they manufacture, and even less for low-complexity parts.

As even a modest drop in parts revenue can disproportionately impact profitability, OEMs must take proactive steps to minimize these losses and strengthen financial performance. The most effective solution requires a unified **commercial strategy** (for equipment, parts, and services) that engages customers and increases loyalty across the life cycle. Such an approach requires:



1. An **effective way of tracking parts sales performance** and potential.
2. A **deeper understanding of customer decision processes**.
3. An **organized way of pricing across the parts portfolio** and other value streams.
4. **Supporting policies and capabilities** that align the parts business strategy with the rest of the organization.

# The world is changing

Technology continues to impact every service and industry, including the parts business, at a rapid pace.

Historically, OEMs benefited from a **lack of information transparency**, as their customers deemed it too risky or difficult to look for alternative parts suppliers. OEMs leveraged this fear in their business model, discounting equipment prices to gain the initial sale, while recovering their investment through higher pricing on the parts revenue “tail” that followed. As a result, parts became a major profit driver for OEMs, often contributing more than 40 percent of profits from just 10–20 percent of revenue. Despite this distinction, OEMs treated their parts business units as a strategic afterthought, characterized by the following:

- Treated as “cash cows”—without investment in innovation and strategy.
- Operated separately from the core business, disconnected from finance, marketing, and sales strategies.
- Overstretched, with small teams managing and pricing thousands of parts.
- Unable to track key metrics, such as customer lifetime value (CLV) or total cost of ownership (TCO).

Our survey of 250 parts purchasers reveals:

- 80 percent considered more than one vendor for parts purchases.
- 70–90 percent regularly negotiate price.
- OEMs are capturing only an estimated 60 percent of total parts sales.

With the emergence of new technologies, information transparency is increasing, thereby posing critical **threats** to the traditional OEM business model. Several factors are in play here, including:

- Increasingly sophisticated design and manufacturing processes have enabled competitors to rapidly duplicate complex components. Coupled with fast and easy comparisons of parts prices and specifications over the Internet (either manually or through specialized procurement systems), the range of available sources has dramatically increased for many customers.
- Increased customer cost consciousness is driving scrutiny of ever-smaller purchases (intensified by economic uncertainty).

- Better parts performance data is enabling customers to reduce spend by switching from schedule-based to usage-based preventive maintenance—reinforcing their “transactional” approach to parts purchases.

Each of these factors are threatening OEM sales, with both short and long-term implications. “Once customers switch to purchasing non-original parts, they rarely go back to purchasing from the OEM,” said a plant manager with 25 years of experience. “This might happen if the alternative supplier’s product quality is too low—but that’s the exception, not the rule.” Additionally, if customers perceive that the OEM has priced its parts unfairly, it will further erode their loyalty. Responding to these factors by lowering prices only slows the loss of sales volume while failing to address the root problem.

Despite these tangible threats, new **opportunities** are emerging for OEMs, including:

- Better data and analytics capabilities enable OEMs to conduct fact-based discussions with customers, (e.g., modeling cost and performance trade-offs across purchasing scenarios).
- Easier measurement of TCO allows OEMs to develop innovative offerings (e.g., service plans, “power by the hour”).
- Data from IoT-enabled machines creates new, stand-alone revenue streams (e.g., through advisory, benchmarking) for the OEM.

A sustainable solution requires a unified **commercial strategy** (for equipment, parts, and services, etc.) that engages customers and increases loyalty across the life cycle. Such an approach requires:

- An **effective way of tracking parts sales performance** and potential.
- A **deep understanding of customer decision processes**.
- An **organized way of pricing across the parts portfolio** and other value streams (while protecting margins).
- **Supporting policies and capabilities** that align the parts business strategy with the rest of the organization.

Recognizing the disproportionate profit margins that parts sales represent to OEMs, it is critical to adopt these best practices as part of a revised commercial strategy to help ensure maximum customer retention and revenue.

# Tracking parts performance and potential

The first step in developing a new commercial strategy for parts is to fully understand the parts portfolio along with its current sales performance and potential.

## **Lesson learned: “Know thyself”**

Tracking and understanding the parts portfolio’s performance can be a daunting yet crucial task, as an HVAC industrial manufacturer learned the hard way.

Historically, the manufacturer had believed that parts management was “a lot of effort for relatively small results,” given that parts generated just 10 percent of revenue. Their assumptions included:

- Parts were essentially a “customer satisfaction investment,” not a part of the commercial proposition, thus deserving less attention and rigor in sales preparation, execution, and tracking.
- Performance expectations were lower, in line with the pricing disparity between an HVAC unit and its parts (\$1,000/unit versus \$10–50/part).
- The sheer volume and complexity of its parts portfolio (25,000 parts) made it intrinsically unmanageable.

As a result, the business failed to notice declining parts sales for several years. Once it noticed the decline, it took several months to understand the source of underperformance, and a year to implement updated pricing on the impacted parts.

One notable example of the parts and pricing problem faced by this company occurred in 2006 when the price of copper more than tripled. The manufacturer sold copper tubing to its distributors as an ancillary part of the installation process for its equipment. Because it did not pay close attention to its parts pricing, its copper tubing price was far lower than the value of the copper material. Some of the manufacturer’s customers took advantage of the difference by purchasing large quantities of excess copper tubing. Only then did the manufacturer realize the problem and raise its prices!



How to track parts performance and potential

Parts sales are a function of equipment sales; therefore, it is critical to understand the **installed base** of machines in the market, which equals the total number of past sales minus decommissioned machines. The more accurately this database is reconstructed (for example by machine model number, year, and customer), the more precise the parts projections will be.

Each of these machines will require a **parts tail** of purchases, or a string of parts purchases over time that reflects normal wear and tear, as well as an expectation-weighted average of extraordinary repairs. Maintenance schedules are a good place to start when developing this database, as they list the recommended frequency of changes for wear-and-tear parts, which can be converted to an expected parts tail per year, over the lifetime of the machine. Allocate resources for unplanned repairs, estimated based on likelihood of breakdown (e.g., 20 percent chance of breakdown in any given year = one purchase for every five machines in the installed base). This breakdown rate increases as machines age.

Multiply the parts tail by the installed base to generate the total **sales potential**—the total revenue that would be theoretically achievable if all parts were purchased on schedule from the OEM. Detailed installed base data will support calculations of the sales potential by customer and machine type.

Comparing the parts tail to the current sales by customer yields the **attachment rate**, which is a proxy for customer loyalty.

The difference between the sales potential and the attachment rate is the **attachment gap**. This gap could be money spent with competitors or money not spent if customers are not replacing parts according to recommended maintenance schedules. Closing the attachment gap requires a relative improvement in the offer versus competitors. This improvement can be achieved by better understanding the customer’s needs to adjust the offer to such that the price better corresponds to customer value.

Key term	Definition
<b>Installed base</b> Times	The number of machines in use in the market (estimated using past sales, minus a decay rate)
<b>Parts tail</b> Equals	The parts each machine is expected to require over the course of its lifetime
<b>Sales potential</b> Minus	The total revenue from selling the entire parts tail to every machine in the installed base
<b>Attachment rate</b> Equals	The share of parts actually sold versus the ideal parts tail (varies by part and machine)
<b>Attachment gap</b>	The difference between current parts revenue and sales potential

Figure 1 showcases the results of our research. Attachment rates are highest for highly complex parts on newer machines. Mid- and lower-complexity parts have lower attachment rates for newer and middle-aged machines, but once the machine reaches its end of life, attachment rates decline for all part types as more customers switch to using non-OEM alternatives. There may be a slight uptick in the use of original parts for very old machines, for which alternative sourcing options may be less available and/or less convenient.

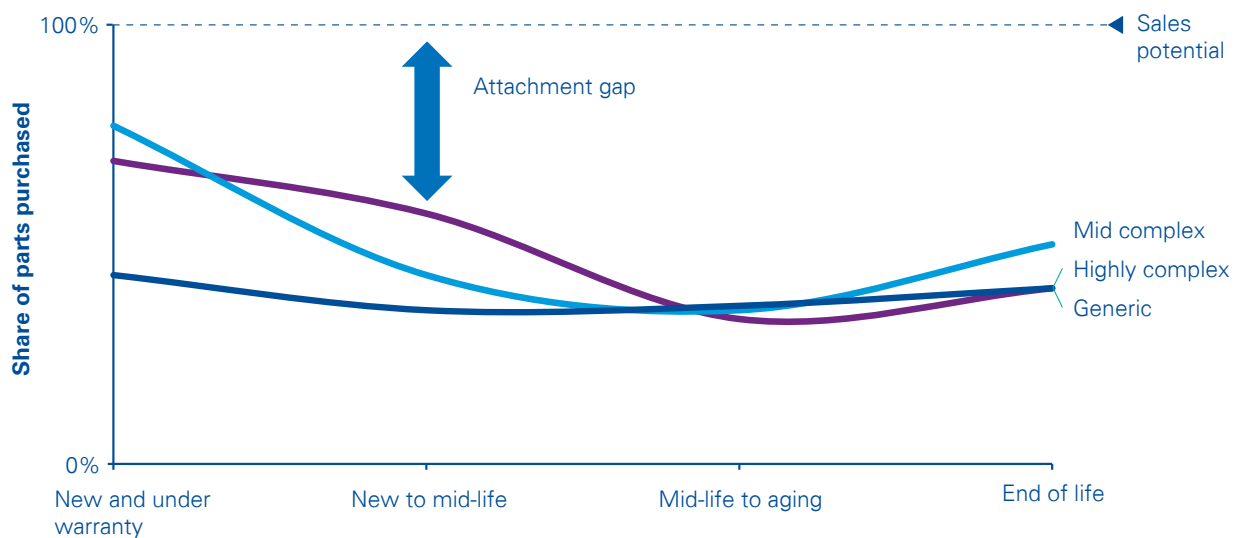


**Top tip:** Tracking these metrics for the parts portfolio will enable some tactical quick fixes, such as:

- Reprioritizing sales force efforts to low-attach-rate customers.
- Checking on machines with lower-than-expected sales of critical parts.
- Improving inventory planning and expected parts turnover and stocking requirements.
- Retraining customers of machines with higher-than-expected parts sales (suggesting failures due to misuse).

Furthermore, using these metrics to group parts into segments allows more efficient performance tracking and reviewing.

**Figure 1**





# Understanding the customer's approach to parts purchasing

In developing a new parts pricing strategy, it is imperative to understand how customers assess parts purchasing decisions.

Our research has uncovered two segments, **price seekers** and **service seekers**, that approach price and other criteria quite differently during the purchasing process.

Individuals may alternate between segments depending on the context, including the machine, part, and organizational factors:

- **Machine factors:** Criticality of machine to business, age/condition of the machine, ratio of part to machine cost, etc.
- **Part factors:** Downside risk and cost, urgency of need, ease of finding alternatives/backups, etc.
- **Organizational factors:** Organization financial situation, IT systems and contract structure, team objectives and incentives, etc.

As OEM parts are typically more expensive than their alternatives (and OEMs tend to offer better service wrappers), the share of parts purchased from an OEM is higher for service seekers than for price seekers across all part types (see Figure 2).

**Figure 2**

Our survey results show:

	Highly complex parts	Mid complex parts	Low complex parts
Service seekers	85%	74%	60%
Price seekers	60%	47%	28%

*OEM's share of parts purchases in segment*

Source: KPMG research

### "How do we buy parts?"

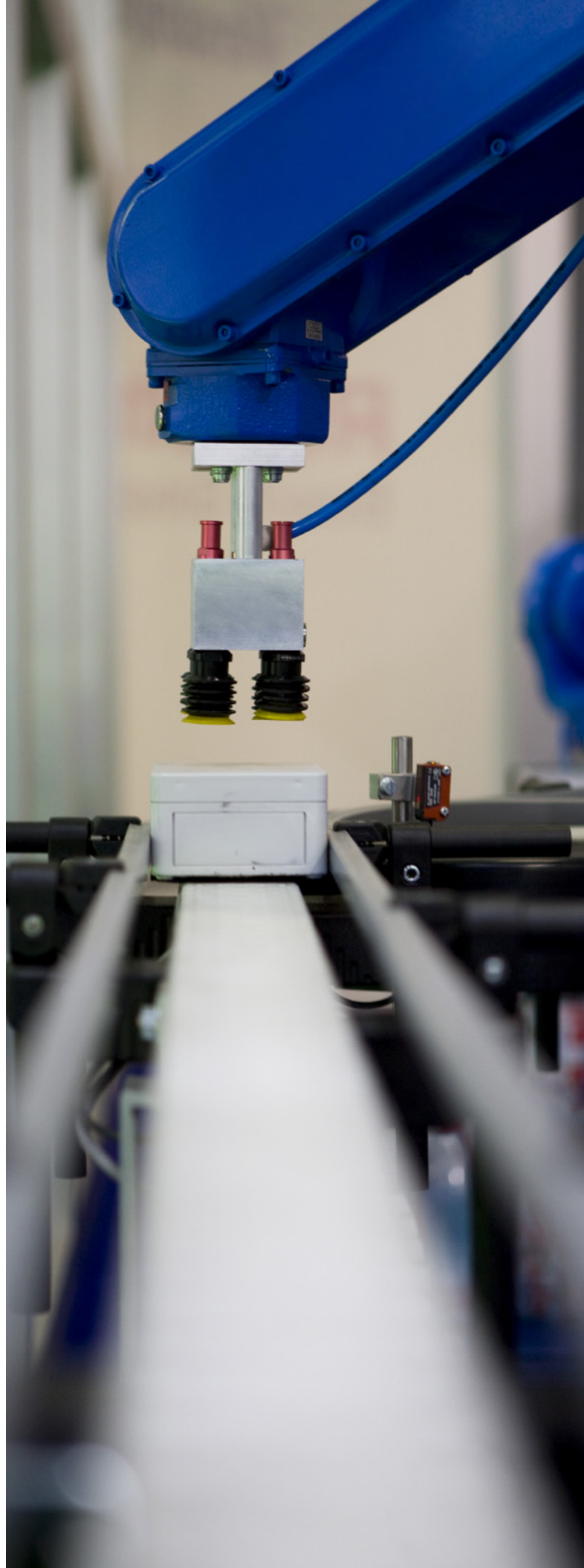
- If it's a **highly sophisticated** or critical part, we'll go with the **OEM** or follow the engineer's recommendation.
- If it's a **mid-level part**, it depends on the price difference as well as the age of the machine—how long does the part really need to last? **Is it worth spending the extra money?**
- If it's a **generic part**, we'll go with the **aftermarket generic supplier**, unless we need to protect the OEM relationship."

Source: Supply Chain VP

Our research reveals that customers approach their purchase after conducting a careful risk assessment. The higher the perceived risk of using a non-OEM part, the more likely they will be willing to pay for the original part; conversely, when risk diminishes, the customer is likely to review alternative parts suppliers.

Risk includes the direct cost of a machine malfunction as well as indirect costs, such as the delay in receiving the part, or less quantifiable risks such as damage to their relationship with the OEM.

In the past, OEMs have attempted to increase loyalty by inciting fear with misleading statements that implied a risk of equipment damage if employing non-OEM parts. Today, with the Internet providing comprehensive pricing and specification information and customer reviews available to the public, the OEM's approach to the price-risk equation should be grounded in "value" rather than "fear."



# Developing an integrated commercial strategy for parts and other revenue streams

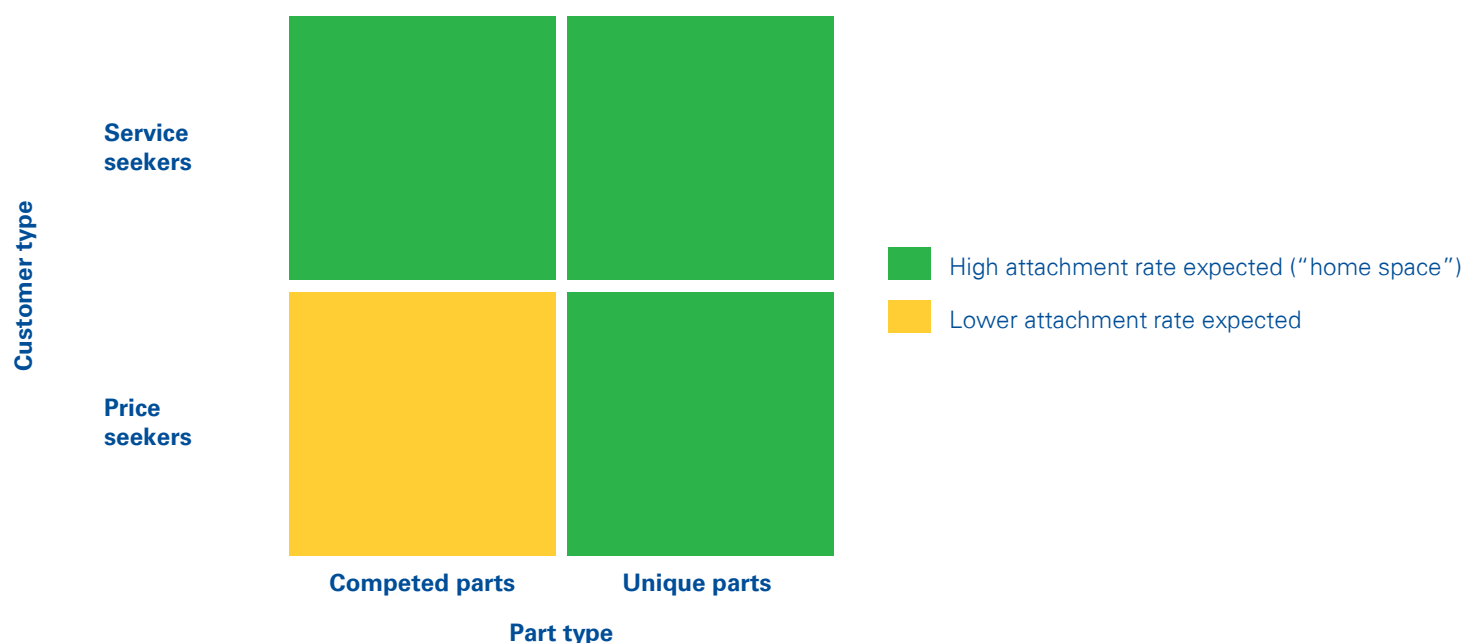
Parts and customers form the backbone of the **integrated commercial strategy**. Both play an integral role in parts sales.

This simple grid (Figure 3) segments all parts transactions by two dimensions:

- **Customer segment**, reflecting the price or service-seeking mind-set of the customer making the purchase.
- **Part competitiveness**, reflecting the customer's perception of whether alternative products of equally acceptable quality are readily available.

These two dimensions are the minimum requirements for a segmented parts pricing strategy. However, leading organizations employ sophisticated analytics that overlays additional dimensions (machine, part, customer factors) onto this matrix to develop highly targeted pricing strategies. Pricing scenarios can then be run to identify the profit-optimizing prices and offers, based on expected customer response.

**Figure 3**





On the customer axis of Figure 3, **price seekers** are identified as customers who value price more highly in their purchasing process and as a result adopt a more short-term, transactional attitude to their purchase. They typically find that the machine or its parts are less critical to their operations, and therefore are willing to accept product or service trade-offs in exchange for lower pricing. For these customers, the perceived risk of buying a nonoriginal part from a third party is lower than the expected cost savings—hence their willingness to shop around. Hold the line on pricing for these customers, accepting that not all sales can be won.

The remaining customers are classified as **service seekers** who value service and other attributes more highly in their purchasing process. They tend to have a longer-term, relationship-driven approach to purchases. They consider the machine or part in question critical to operations. As a result, they are less willing to accept risk.

Distinguishing price seekers from service seekers may be difficult, especially as customers flit between the two based on part, machine, and organizational factors. However, providing customers with **trade-offs** during a purchase negotiation—lower value for a lower price, and vice versa—will quickly identify those who are service oriented.

Reduce the services provided to price seekers (e.g., expedited shipping, after-hours order processing, etc.) to recover profitability at the lower price points.

Service seekers can be enticed to buy at full price for that better service wrapper (the set of added-value services that “wrap” around an OEM product purchase), but locking them into “service seeker mode” through longer-term **bundles** is an even more advantageous move. The specific bundles (drivers of service-seeker value) that can be profitably offered will differ for every business; below are examples of how some other companies have addressed them:

### How to create a parts pricing grid

To create a customized parts pricing grid, first identify **highly unique** parts—those protected by a patent, that are highly complex and specialized, or that are not easily available from alternative sources.

Although customers typically have few options and will most likely purchase these parts from the OEM, pay special attention to the following considerations while setting prices:

- Overcharging may negatively impact equipment sales in the long term, as customers will compare the TCO with that of different machines and perhaps opt for a lower-cost alternative.

- Creating an overly attractive profit pool may encourage competition that offers lower prices, thus diminishing marketplace leverage.



**Top tip:** For unique parts that are key components of the equipment, engineer parts prices to align with a TCO that makes the equipment sale attractive to customers.

Classify the remaining (non-unique) parts as **competed** parts, for which an acceptable alternative—even if not an exact match—is readily available. Review both mainstream competitors as well as alternative suppliers. Search recognized search engines, e-commerce, and auction sites on the Internet to quickly locate mainstream competitors as well as alternative suppliers, particularly for less specialized parts.

Keep track of competitors’ offer, strategically staking a competitive position (at par, or at a fixed or percent premium, for example), and work to maintain that position over time. In our experience, a 10 to 20 percent price premium to mainstream competitors is typically justifiable to the customer as it includes inherently better service and cost recovery (e.g., of R&D expense). Buyers also perceive a modest price premium as correlating with better quality.

Note the emphasis on tracking the competitor’s **offer**—not just **price**—to understand differences in value, which include positive differentiators (e.g., customer and technical support, documentation, training, etc.) as well as negatives (e.g., better distribution or service network coverage, etc.). This may change over time, which will require a periodic exercise in data gathering and analysis to help ensure the proposition remains competitive.

Merely undercutting the competitors’ offer and pricing may not completely close the attachment gap, as some customers choose to use alternative suppliers out of convenience (i.e., when the part is available closer, or faster) or because they have committed to minimum order quantities from other vendors that stock parts across multiple machines.

Finally, understand that all parts sales should be profitable. Since the degree of competitive intensity can vary by part, the same competitive strategy may yield different minimum margins. Apply guardrail policies to help ensure correct minimum margins are achieved, which should include cost of goods and cost to serve (which in parts can frequently exceed the COGS due to incentives, rebates, warehousing, transportation, and shipping costs, to name a few). Consider alternative sourcing or fulfillment agreements on certain parts to lower costs.

## Image parts

A subsection of each OEM's parts product portfolio can be defined as "image parts." These parts typically have a **high purchase frequency** and therefore **high visibility** to the owner. These tend to be competed parts. Customers use these products as a proxy for the broader portfolio, assuming the same brand, price, and quality attributes of the image product hold across the portfolio.

Consumer goods retailers are highly sophisticated at pricing these products ("key value items" in consumer parlance), and they deliberately lower prices or offer attractive promotions to attract traffic and drive purchases of their products, recovering margin on complementary products (e.g., milk in grocery stores, diapers at mass merchandisers, and paper and ink at office supply stores). The same principle also applies on a smaller scale: offering low prices on turkeys to sell higher-margin fixings; discounting mobile phones to sell higher-margin cases and protection plans;

promoting laptops to sell higher-margin peripherals, software, and warranties, etc.

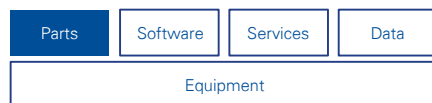
In automotive, image parts include: wiper blades, filters, and brake pads. In industrials, these include: electronic components, pumps, and motors, although they vary by manufacturer depending on the equipment served.

Competitively pricing image parts is therefore especially important, both for the direct sales (by definition, these are high-volume parts), as well as for the significant pull-through sales. If an OEM's image part is competitive, a customer is more likely to also purchase the OEM's other parts with less price scrutiny.

Furthermore, image parts can impact equipment buyers' perceptions of the TCO. (In automotive, this metric is published and image parts' pricing plays a significant role.) If these parts are priced correctly, they can have a disproportionate impact on a potential customer's equipment purchasing decision.

## Examples of OEM's Parts Product Portfolios

### Parts kit



- Industrial food equipment manufacturer offers parts kits for "ease of purchasing" purposes—for example, bundling multiple weeks' worth of replacement wear-and-tear parts in convenient packaging, or creating retrofit and upgrade kits.
- Customers find that these kits drive time and efficiency savings in parts purchasing and installation.

### Parts + Services



- Elevator manufacturer struggling with high costs—and low customer satisfaction—of equipment breakdowns developed a service plan that included biannual equipment checkups and real-time diagnostics of parts for a single fee.
- 75 percent of customers currently opt into the plan, which generates a majority of profits for the manufacturer. The plan has reduced costs by allowing for more efficient routing of service visits.

### Parts + Services + Software



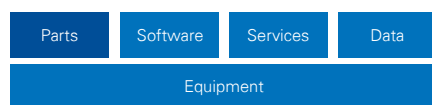
- Medical devices manufacturer struggling with sales as competitors reverse-engineered parts retained customers by offering parts, servicing, software upgrades, and end-user training while voiding warranty and denying software upgrade access to non-OEM parts purchasers.
- The new offer resulted in improved financial performance as well as increased customer and end-user satisfaction.

### Parts + Equipment + Services



- Airplane engine manufacturer developed a leasing program that bundled parts, equipment, and servicing into a "per-hour of flying time" fee.
- In addition to improving the OEM's profitability, this resulted in improved customer satisfaction and predictability in spend while aligning buyer and seller incentives that ensure machine downtime was kept to a minimum.

### Everything



- The most sophisticated example of value bundling we have seen is offered by a wind turbine manufacturer who charges utility companies a fee as a proportion of the value of the electricity generated. This fee includes the equipment, all required parts and servicing, software, and performance data.
- Together, these inclusions turbocharge the "power by the hour" model into a truly value-based pricing bundle that captures a share of benefits produced throughout the equipment's lifetime.

These case studies all have **data** in common, as this is critical to estimate the bundle's cost structure, pricing, and value proposition that is communicated to the customer.

To begin developing a bundle, identify as many price-driving attributes as possible, then collect data on the cost, value, and usage of these attributes over time to assess profitability. Before going live, perform "stress tests" to evaluate possible risks and costs to the business if the bundles receive high uptake or usage rates.

Finally, ensure that the customers' experience is "seamless" as they interact with various areas of the organization. This may require starting small, so as not to overwhelm the customer service teams, or underwhelm the customer.



**Top tip:** Sharing the 2x2 grid in Figure 3 will help:

- The Parts sales team to prepare for customer conversations, by developing the optimum pricing and negotiation strategies (e.g., starting offers, trade-offs, and walk-away points) appropriate for each transaction type
- Engineering teams to identify which components to favor in designing new products, as these will become future replacement parts
- R&D teams to develop new proprietary or improved alternatives for low-margin, competed parts, to provide new value for customers and recapture lost sales
- Finance departments to more accurately forecast revenue and profitability by transaction type and validate their part- and customer-based models





# Making it stick

## Lesson learned: “Sometimes even the best intentions aren’t enough”

A light industrial equipment manufacturer designed a robust pricing strategy that assigned different markups based on part complexity and price level. The small spare parts team (1.5 full-time employees) historically generated more than half of the company’s profits, but its share had been declining as the team struggled with a large parts portfolio with very low velocities (most parts were purchased less than once a year).

After researching the root causes of the decline, the company made some key discoveries that assisted in recovering performance:

### People

- **Inadequate resources:** The overstretched pricing organization had focused on short-term wins—adjusting prices to secure a sale, for example—versus optimizing long-term performance.
- **Conflicting incentives:** Sales and technical teams were incentivized to favor equipment sales over parts, despite a high difference in profitability.

### Technology and data

- **Poor visibility into key internal data points** such

as installed base, parts tail, and attachment rates obscured potential sales by customer or machine, creating a gap from current sales. As a result, sales efforts did not leverage the most favorable opportunities.

- **No competitor price benchmarking** resulted in prices set at 2 to 20 times those of its competitors.

### Processes

- **Inflexible pricing rules:** In order to match competitors’ prices, the parts sales team would bypass its pricing policy by relabeling the part as belonging to a different segment and subject to a lower cost-plus markup. While the reclassification created the illusion of a highly effective pricing policy and highly compliant execution, the misclassifications actually created a number of problems that rippled across the business.
- **No backstop:** Parts prices were automatically calculated by marking up COGS. This resulted in poor purchasing decisions that generated high-priced parts that were difficult to sell and weighed down the balance sheet.

Support the newly designed pricing strategy with the right policies and capabilities to help ensure its success. This will require answering the following:

### Business strategy

- Is the parts business treated as a “cash cow” or appropriately supported by investments in innovation and strategy?
- Are incentives structured to ensure enterprise-wide success not favoring equipment over parts, or vice versa?

### Processes

- Are the parts business processes aligned with the core equipment business? How do the finance, marketing, and sales processes interlink?
- Are the business processes aligned with customer processes, enabling the *right* conversations to happen with the *right* people at the *right* time?

### Organization

- Are the teams sized appropriately for the job and supported by sufficient resources to manage pricing and sales efforts for the most critical profit stream?
- How is the pricing responsibility shared across the organization? Are the most skilled personnel assigned the best assets and provided with the most insightful data? (This may require a cross-team effort to succeed.)

### Data and analytics/technology/systems/etc.

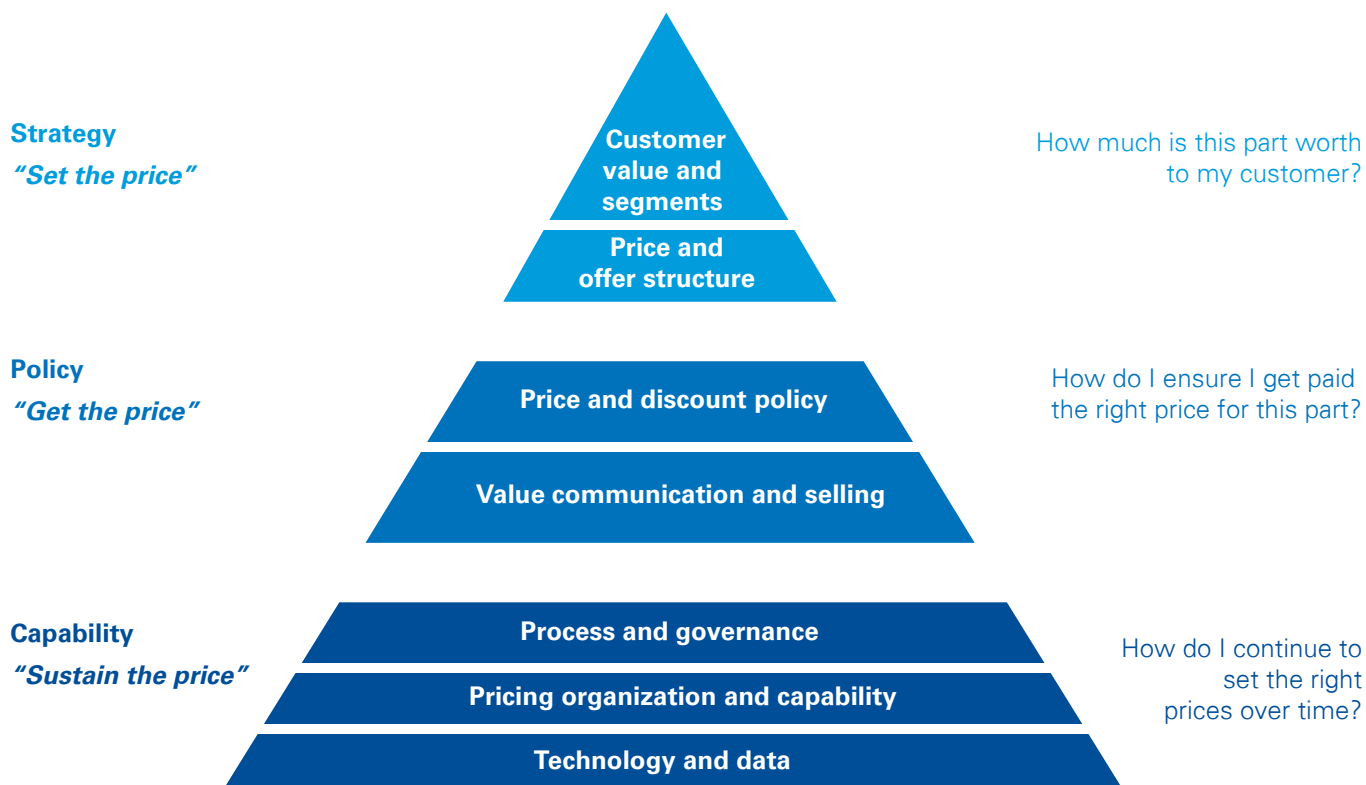
- Is the team capable of tracking key metrics such as CLV or TCO? Are calculations informed by high-quality data?
- Can the current data and analytics capabilities support the development of new offers that straddle parts, services, and equipment?

# In conclusion

As manufacturing continues to migrate toward data-enabled solutions for its products, the successful company will be one that updates its commercial strategy to leverage the inherent strategic advantage of a robust parts program.

## Pricing pyramid

### Getting from strategy to results



### **How KPMG can help:**

Many global organizations recognize the need to reevaluate their pricing strategies and models. KPMG helps clients address pricing-related strategy, policy, and capability questions to properly align with their go-to-market and operational strategies, value propositions, and organizational capabilities. Our approach will attain desired and sustained pricing improvements through established processes, while enabling our clients to better align with their customer targets. We assess the right value with appropriate policies to deliver profits and build capabilities to sustain value over time.

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Mark is a principal in KPMG's Strategy practice focusing on growth, pricing, and profitability solutions. He is the leader of KPMG's Pricing practice and has 26 years of management consulting and industry experience advising clients on revenue growth including innovation, new market entry, pricing and promotions management, and alignment of operations to cost-effectively deliver differentiated offerings to customers in capital-intensive businesses.

#### **Serena Crivellaro**

Serena is a director in the Pricing practice within KPMG Strategy, with experience working in the industrial manufacturing, B2B services, travel and transportation, consumer goods, and retail sectors, in the United States, United Kingdom, and Europe.

Serena is passionate about developing and implementing strategies to drive sustainable top- and bottom-line growth. She has helped clients in the United States and Europe craft and implement successful pricing and go-to-market strategies, with a focus on changing pricing models to adapt to evolving markets.



# Notes

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