april 2020

discover pricing

an underrated and unexpected solution

accessible pricing for all

Here at Smart Pricer, we take pricing seriously and think understanding how to price is the most important step any business can take to improve its bottom line and attain its corporate goals. Yet modern pricing is inaccessible and often gated behind expensive consultants, so we racked our brains to find a solution...

We came up with th!nkpricing.

We want to reinvent how people talk, think, and use pricing in their day to day business. At the core of this thought revolution is our mission to help all businesses get the tools they need to Understand, Optimize and Measure the performance of their pricing.

We believe pricing can help you maximize your goals and stay ahead of the competition. By focusing on the basics and understanding why pricing and a pricing process can support your strategic success, you will be ready to take your business to the next level.

Helping you start your pricing journey!

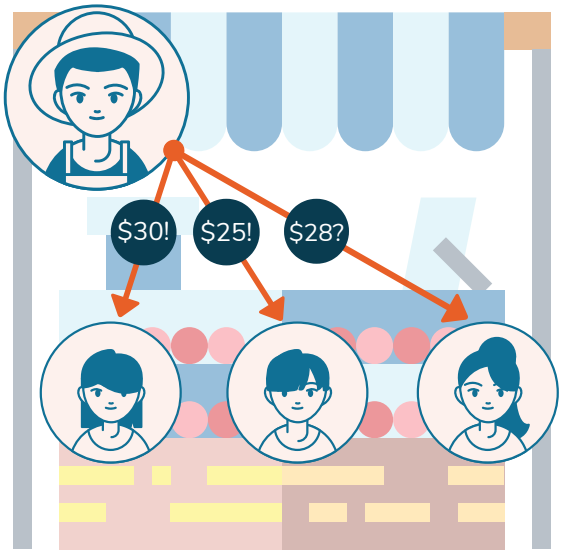
Your th!nkpricing team

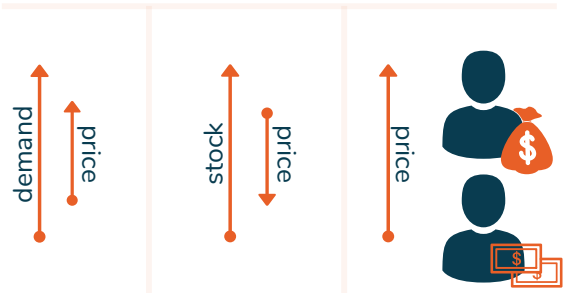
chapter 1: what is this pricing thing anyway?

a quick overview of pricing through the ages

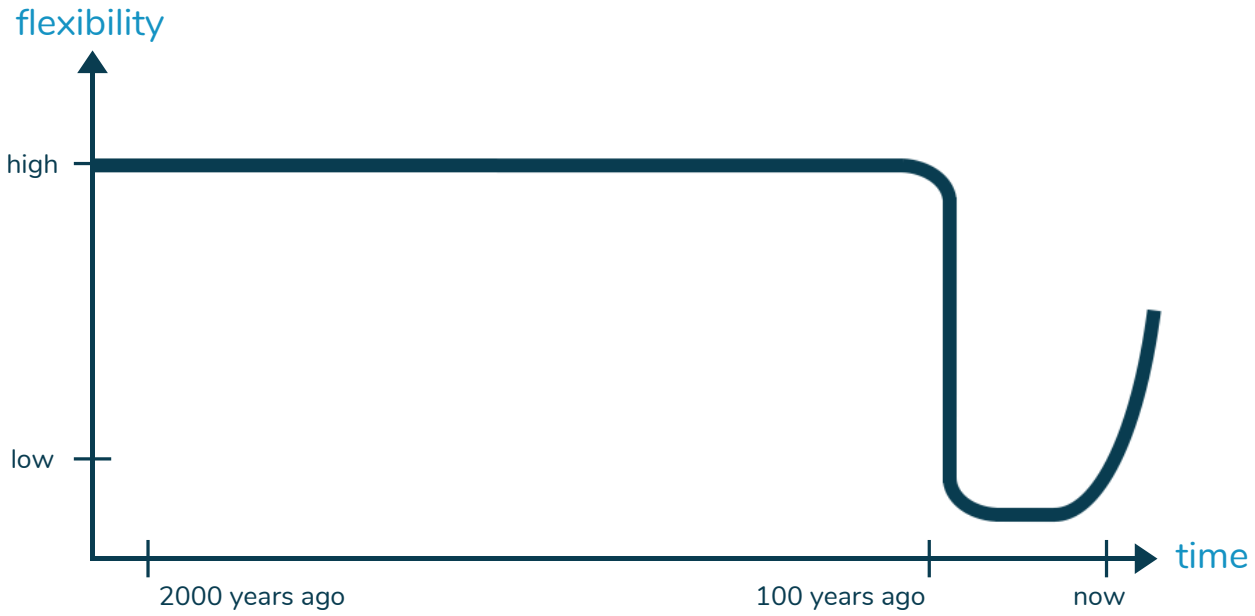
"Pricing is the exchange rate you put on all the tangible and intangible aspects of your business. Value for cash."
- Patrick Campbell

People priced goods long before what we know as modern commerce emerged. Before the idea of the price tag was created in the 1870's, people haggled. Haggling takes place when the buyer and seller negotiate over the price of a product, the seller trying to extract as much money as possible and the buyer trying to pay as little as possible. This type of price setting is more an art than a process and it existed before money, back when people would trade goats for firewood. As currency developed the process of haggling remained. Sellers would price goods based on supply and demand or based on the buyer. Setting prices individually was possible because there weren't many types of goods and even fewer vendors meaning there was no need for a pricing process.





Once mass production entered the picture, and the number of available goods increased, a process was needed to manage the large number of prices being set. No one person could haggle over the price of individual purchases when there were so many goods so vendors turned to fixed pricing. Fixed pricing is the setting of a single price for a good across all vendors and markets. Fixed pricing helped vendors by simplifying how prices were set and communicated but it also cost them revenue. Setting the price based on supply or the buyer provided the chance for the vendor to maximize the revenue per purchase. In a fixed pricing world vendors maximized profits by selling more to anyone, but they often left money on the table. Today they can get that missed revenue back. With the help of advanced technology, creating a pricing process that lets you take advantage of actual demand and market conditions is easier than ever. To do this a business needs to think of pricing as a structured process and that understanding and perseverance can let them get the most out of their pricing.



Despite having computers to do the heavy lifting many businesses remain attached to fixed prices. Either they don't think pricing is relevant to their business or they are scared of creating a negative impact on their demand with an aggressive shift. Changing prices is even harder when you realize measuring and attributing the revenue increase of a price change is difficult[1]. While the hesitance is understandable, it's likewise a pity because as the title of our next chapter says...

[1] Measuring the return from activities in pricing is even more challenging: in 2013 the results of a survey of 313 pricing and revenue management professionals around the world reveal that the vast majority (70 percent) see the formal measurement of the returns from pricing and revenue management activities as important (Liozu and Hinterhuber, 2014a, 2014b, p. 198). However, a majority of respondents (53 percent) report not having a formal internal process for this measurement."
Liozu, Stephan M., Hinterhuber, Andreas (2015): Measuring the profit impact of pricing & revenue management. Journal of Revenue and Pricing Management (14). 137-139. https://doi.org/10.1057/rpm.2015.13.

chapter 2: price change = profit

why price changing is not a hail mary!

"The show is not selling, let's raise prices!"
– Ronda Helton

Price is considered to be a function of value, cost and margin. Businesses tend to set prices only once, using a weighted calculation of all three parameters if they are being scientific or, more commonly, gut feel. Once a price is set they rarely if ever change it. If they do decide to change a price it's often an across-the-board increase to try and capture a small amount of extra revenue. Alternatively, price updates are a reaction to panic caused by unanticipated inflation, the introduction of a competitor product, or a surprise drop in demand. The problem is that if you only change prices in response to a negative situation you don't take into account the factors that impact the success or failure of a pricing strategy. Making changes using a reasoned and scientific approach increases the likelihood that you can maximize both revenue and demand.

factors that impact pricing success

While having a structured pricing process and company wide pricing strategy is not common, there are many industries that have embraced the change. Industries that are proactive in their pricing have a pressing need to create a pricing process. They are facing constant pressure either from competitors, fluctuations in market conditions or risk to the supply chain. To counter these risks, they turn to a repeatable pricing process that uses technologically advanced algorithms. These algorithms help to forecast demand for their products and services so they can price accordingly.

- the price of goods changes rapidly
- industries with high turnover
- industries where the cost of raw production mateirals is tied closely to the fluctuations of the stock market

fast-paced environments

Systematic pricing and revenue management processes were first introduced by the airlines in the 1980's[2]. After the deregulation of the airline market in the USA in the late 1970's traditional airlines needed a way to compete against the first low cost airline, People's Express, that wanted to open commercial flying to a wider market. Before airlines were deregulated booking systems were built to handle universal prices on seat classes and routes. With the introduction of a low cost carrier whose prices were not tied to the traditional system, airlines needed a way to compete. To do this they developed systems to manage their pricing based on season, departures, capacity and more[3]. As returning to dynamic pricing proved efficient and profitable, other businesses began to introduce it. Today you find dynamic pricing is commonplace in the tourism industries like hotels and rental cars. As yield and revenue management systems become standard and cheaper to implement, other industries are getting on board.

Modern businesses not only compete on who has the best product, but on who has the best experience and the best deal. One way to keep up with the pace of market fluctuation is to embrace a fully functional pricing process. This gives businesses the opportunity to become flexible in what they serve to their clients. Differentiating products based on demand or other non-cost-driving factors can be an easy win to gain revenue and sometimes even increase demand. But that, of course, means that the business has decided to make pricing a standard part of their corporate strategy. Which leads to our next topic...

[2] "The initial development of dynamically adjusted pricing is often credited to American Airlines' Robert Crandall, as a response to the rise of discount airline People's Express in the early 1980s."
McAfee, Randolph Preston, te Velde, Vera (2006): Dynamic Pricing in the Airline Industry. Handbook on Economics and Information Systems (1). https://mcafee.cc/Papers/PDF/DynamicPriceDiscrimination.pdf.
[3] NPR Planet Money (2015): Episode 633: The Birth and Death of the Price Tags. In: NPR.org, 17. June. https://www.npr.org/sections/money/2015/06/17/415287577/episode-633-the-birth-and-death-of-the-price-tag

chapter 3: loving the pricing process

from strategy to execution - an overview

"Pricing strategy always has been more of a poker game than a science."
– William T. Moran

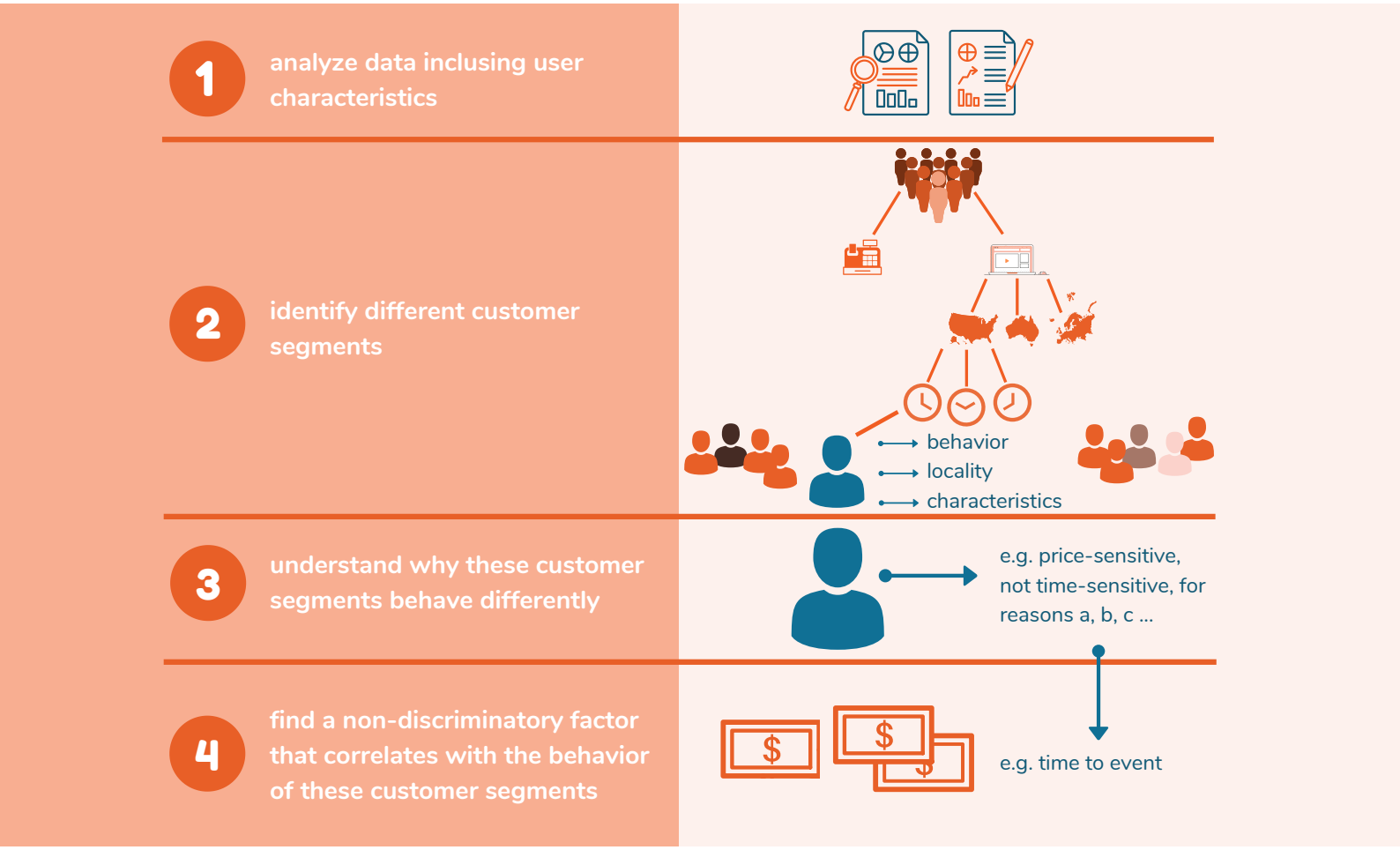
When businesses do strategic planning pricing is often overlooked. It's not as simple as choosing what product to update or how to alter your price; pricing is a holistic business practice with hundreds of aspects including strategy, process, people, technology, and KPIs. Once a business identifies pricing as a business driver it's time to take a closer look at how to create and implement a structured, data-based and unbiased decision-making process. We like to call this a Pricing Rule Book. You can see in our Quick Start Guide some simple tips on how to start building a pricing process, but for now we will focus on what it is. There are three phases: Analytics, Optimization, Execution, and to make your rule book you need to go through all three.

the three phases of pricing

1. analytics: the understanding of your current pricing
2. optimization: the process by which you determine your prices
3. execution: the implementation of your pricing strategy

Let's take a closer look at Step 1: Analytics.

Analytics is a tool used to understand the performance of a business - in this case pricing. In terms of our rule book analysis helps understand where to look for problems. It also shows us how to measure if our new pricing is successful. Analysis performs best when you have a well formulated business problem. If you don't have a clear cut pricing mandate you need to create one. To do so you can take cues from your executive, marketing, and product strategies, as well as any other key business areas that touch your pricing. Once you decide on your pricing goal, dig into your pricing performance by reviewing your existing sales data and your product portfolio. Here you can determine if your goal is being achieved. Next look at your customer segmentation. Customer segmentation is the identification of different customer groups to determine purchasing behavior and differentiate by willingness to pay. It is important to distinguish this from price discrimination which changes prices directly based on customer characteristics rather than analyzing the difference in behavior based on those characteristics. Customer segmentation can have a large impact not only on the price you set but how you attract customers to your product. Lastly, if it's available, you can look at third party data sources like market research or competitor analysis.



To get you started, here are some examples of basic analytics:

product portfolio overview (revenue and quantity)

spot areas in your portfolio that can benefit from your pricing strategy

atp vs. tickets sold

find the correlation between your average ticket price (atp) and quantity and spot your first areas of optimization

sales time / lead time

see the sales window for your products in relation to the day of consumption

ebit vs. volume

map your products to understand profitability in relation to quantity sold

marketshare

understand how your local market share is impacted by your sales both as a trend and point in time

The analytics step is crucial to the success of your process; without it you cannot uncover weak spots in your pricing or products that are not performing as expected.

So we've finished the first step in creating our Pricing Rule Book, next up, Step 2: Optimization.

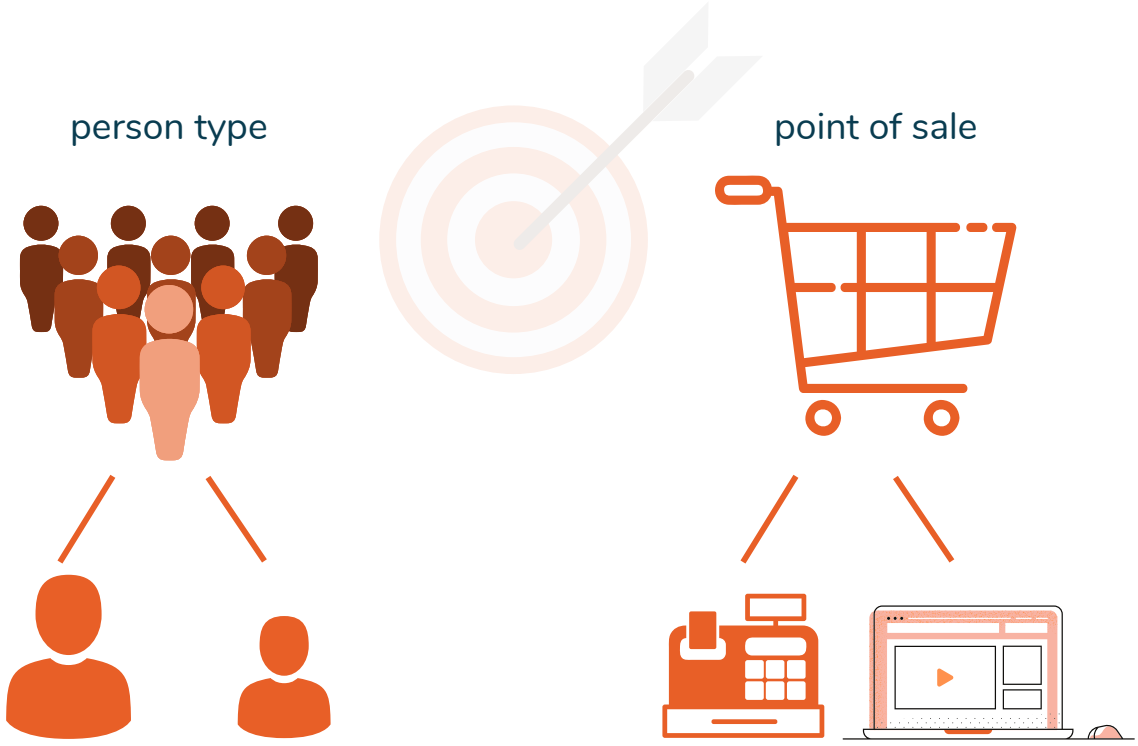
Now that you have your strategic objectives and areas for improvement, you can lay out how you want to adjust your prices. This is the start of your pricing strategy. The strategy is an important part of your rule book as it defines the types of changes you will make and when. There are two keys to optimization:

- Demand forecasting
- Simulation

Let's consider forecasting.

When you forecast, you evaluate the performance of a variable. In pricing, you forecast demand. Demand is the expected number of purchasers who are willing to pay for your product. First you look at your demand for historical periods and then use it to understand the demand for future periods. Forecasting is used in many processes from financial management to supply management. Having a proper forecast is particularly important in capacity or supply restricted industries (like ride pooling, cargo business, transportation business or parking), but is useful in all industries.

Now that you have an idea of how many customers you have, you can focus on the parameterization of your pricing. Parameterization is the identification of purchasing restrictions or quality enhancements that you can use to modify the price of products and subproducts. Identifying these parameters and seeing how they impact your overall pricing and demand can be the most interesting and fun part of your pricing process.

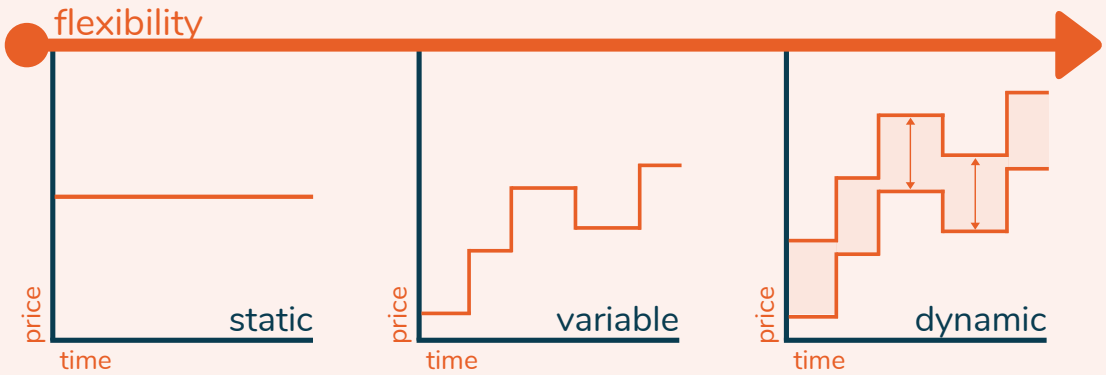


Ok so we know who will come and how you want to target them, what do we do with this information? The simplest way to start is to find high demand days and see what happens if you alter those prices. This shows you how modifying prices impacts overall sales. Over time you can develop and add more complex changes. By experimenting and understanding how the modifications interact you are able to judge which adjustments help you achieve your goals. As you continue to advance you may even add new parameters to your pricing. If you are looking for some ideas, try optimizing prices based on basket size or giving purchasers a discount for purchasing a larger number or wider range of products. This process of trial and error is called simulation and is a test of your scenario or scenarios in a safe environment. Simulations are useful in providing you instant feedback on your plan and support when you want to demonstrate its usefulness.

So that was Step 2 of creating our Pricing Rule Book! The book now contains all information necessary to make consistent pricing decisions throughout your organization. This means you know where to look for inefficiencies and opportunities (analysis) and you know what types of changes should be made when (strategy). This should be the standard for pricing decisions going forward. Congratulations, you are now ready for Step 3: Execution.

Execution means simply changing prices. Strategic execution is defining the types of alterations you plan and the frequency that you plan them. Three examples of common pricing strategies are Static, Variable, and Dynamic. If you are hesitant, you can use a static or variable strategy and decide to modify your prices once or maybe a few times a season. Infrequent updates are done manually as the cost of automation is high. Starting with infrequent shifts gives you and your organization time to get used to the process and ensures that your approach is thoroughly vetted and in line with your goals. If you are comfortable with the execution piece and believe that your strategy is sound you may be ready to start automated changes. Automation can be tailored to any level of need from changing prices based upon capacity to fully developed algorithmic machine learning systems for real time shifts to demand. Rest assured, solutions exist for all businesses. The most important thing is to start. So now what is all this data and how should you use it...

pricing strategies



chapter 4: data! my new best friend!

how to use what you have to make more money

"Pricing decisions are not easy to make; they are often inherently 'soft'."
– William E. Johnson

Big data is everywhere. You can't open a business or tech blog without seeing the term, but what does it mean? It's simply the information gathered by the day to day actions of your company. This information can be aggregated and analyzed to understand current performance of processes and forecast future behaviors. In regards to pricing, the most important data is your transactional sales data. (This is the same data we mentioned in the previous section in relation to the analysis part of your pricing process.) By understanding what is purchased when it's possible to always set the correct price for a product! Until recently the challenge has been how to use it. Because of the volume of data created and the complexity of the needed analysis larger firms employ entire teams of data scientists to aggregate and analyze. Smaller firms just don't have the resources to focus on the topic; but now that machine learning is becoming accessible it's easier to apply these learnings to more industries.

Time to jump into your transactional data and understand what we are looking for. 'Transactional' refers to the data generated by your systems when a sale takes place. This is usually housed in your ERP, but could also be in a data warehouse or any other in-house data management tool. Transactional data includes, but is not limited to:

- Where a product is sold..
- To whom it is sold...
- When it is sold....
- And most importantly the price it was sold for!

You can have more data about the purchases in your system, and, if it's available, you should use it; but this is the bare minimum necessary for basic analytics. The next challenge is getting it out and in a form that can be analyzed. There are many helpful tips on our blog but if you encounter issues make sure to contact the company you contract with to manage your transactions. They should be able to assist you in getting the data out in a usable state. Whatever the level of data you have, the next step is to do the analysis.

The most common analysis tool is, surprisingly or not, Microsoft Excel. Excel is a versatile spreadsheet tool that has built in basic data analysis features. Even if you aren't interested in using the complex formulas or macro scripting, it's still useful. Common types of Excel analysis are:

- Trend Analysis
- Chart Analysis
- Regressions

If you are ready for more complex analysis, there are other tools. While it is possible to do the work in Excel, it becomes inefficient and expensive to do so. Tools that provide better functionality, specifically for large and complex data sets, are PowerBI, Tableau, and Crystal Reports. Each one provides robust data warehousing, reporting, and analytics suites. But realize that with great power comes greater difficulty in using. Tools like these are not simple to maintain, can come with expensive licensing agreements, and tend to need specialized knowledge to set up and use.

These solutions are typically for larger organizations that have multiple uses for this type of software. For smaller businesses there is another option that, while looking complicated, provides power, flexibility, and is cheaper in the long term. Machine Learning algorithms can do all of the analyses listed above as well as many more, can work on larger and more complex data sets, and, while they can incur a larger upfront sunk cost, are cheaper to maintain and capable of deriving unexpected insights. So what role can machine learning play in your pricing process?

Machine learning can help your company look objectively for opportunities and inefficiencies in your pricing. Instead of relying on a pricing guru, whose gut leads your decision making, machine learning can quickly and efficiently analyze your past sales performance to detect areas of improvement in your pricing and in your product portfolio. It does so by focusing on finding underpriced and overpriced products and pinpointing ways to alter those prices. Even better, it can help you spot underperforming products, allowing you to intelligently manage your product portfolio, including discovering areas of unused demand and maximizing the value of your product lifecycle.

Machine learning also makes testing your pricing strategy easy. An average product portfolio consists of hundreds if not thousands of products. Determining and testing alterations to each and every one manually is impossible. An algorithm let's you apply hundreds of changes simultaneously, allowing you to see the impact of each one individually and to test variations quickly and efficiently. This increases your flexibility, letting you iterate with no risk. Instead of making broad unfocused adjustments, you can target the areas where your business needs the most help. Lastly, machine learning simplifies the measurement of your pricing strategies performance. With its speed and power, you can verify the impact of your optimizations in near real time, giving you constant and consistent actionable insights.

Machine learning is a buzzword but the technology has matured in the past ten years. Now it's used in most modern industries. To summarize the benefits, you can:

- Work with larger data sets
- Work with complex data models that provide better and faster results
- Automate insight generation making it cheap and efficient.

Using Excel or other business intelligence tools to create a pricing model or simulation based on historic data is a complex task, prone to error and risks not getting the best results. Excel, by design, is limited to one million rows of data and becomes slower and more unreliable the larger the data set. By contrast, machine learning can easily process tens of millions of rows and can take on more complex types of analysis than simple linear regression or manual review of charts.

While machine learning is moving into the mainstream, many companies still seem to be in the dark about the advantages, and that means they are missing out on both strategic and tactical benefits like:

- Forecasting future demand based on hundreds of factors
- Distributing / optimizing prices and price ranges across all available products
- Tracking and comparing actual demand patterns to historic data and pinpointing unexpected behavior
- Providing real-time insight into the timing of adjustments.

These insights can put you on the path to continuous improvement. With manual tools keeping up with insights generation can be a time consuming task. Taking advantage of machine learning tools can make this process affordable and efficient, ensuring long-term success.

chapter 5: how to become a pricing hero!

"Pricing is the only element in the marketing mix that produces revenue; the other elements produce costs.
– Phillip Kotler

As you can see pricing is not a simple process. Carefully tailoring your pricing process to your business needs is imperative in the fast moving markets of modern commerce. Those companies that learn to best make use of the data and insights they have will perform better and benefit from longer and more stable success. Those that don't will fall behind the competition. In a world where nine out of ten businesses judge their current pricing as not good enough there should be more focus on finding the right price. Instead companies are scared to make a change either due to fear of failing or not knowing how to start.

Pricing is an efficient and cost effective lever to improve the performance of a business. Analyzing current performance and finding opportunities for improvement is the first step to optimizing revenue and sales. It helps businesses learn to take advantage of market conditions and willingness to pay. With these tools they can set the right price at the right time, increasing flexibility and improving their outlook. Businesses should take advantage of modern tools that let them execute and manage their pricing process and strategy, minimizing guesswork and uncertainty in their pricing and product portfolio.

All of these benefits can make your business more successful. We invite you to look at our blog for more information. It is our mission to make information on pricing accessible so we will continue to find and share ways that pricing can help you grow your business to its full potential. Looking forward to seeing you around...

your th!nkpricing team

about th!nkpricing

th!nkpricing, a brand of Smart Pricer, follows the mission of “democratizing” pricing by providing easy to understand knowledge and easy to use software for everyone who prices.

Go to www.thinkpricing.com for more information and to sign up for our newsletter.