UNIVERSITY OF WISCONSIN
DATA SCIENCE

DS 780

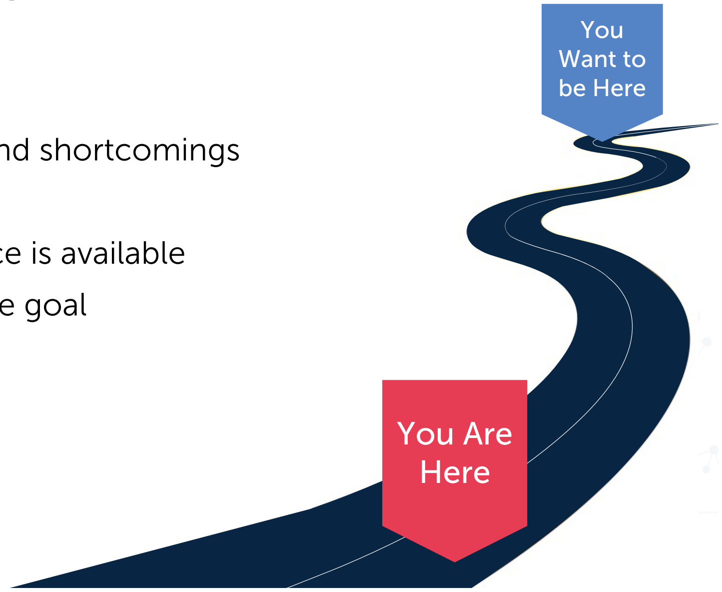
Data Science and Strategic Decision-Making

Lesson 7 Introduction

Strategic Planning

What is Strategy?

- Determine a goal
- Know where you are
- Understand abilities and shortcomings
- Understand threats
- Know where assistance is available
- Map a route to achieve goal



Hello, and welcome to the introduction to the unit on strategy. First question is, what is strategy? And there's lots of very complex definitions out there, and not all of them agree with one another. But let's take a look at just a real simple way of viewing it.

It really comes down to you're here-- wherever that may be-- as a company, in the case of business strategy, but you want to be over here. And the question is, how do you get from here to there? That's really what it all comes down to in its simplest form.

Now, obviously we're going to have to get into a little more detail than that. But it's all about determining a goal, because the goal is what drives the strategy.

Know about where you are. You know, what's your environment and all of that. And then understanding your own abilities and shortcomings. You know, think of this in terms-- you can think of it in terms of an individual, but we'll be thinking of it in terms of a company or an organization.

Understand the threats that the company might have. Know where assistance might be available. You know, who can you hire? Or what partnership can you develop? Those sorts of things. And then the actual mapping of a route to achieve the goal-- to get from here to there.

Dictionary Definition of Strategy (New)

Definition of strategy

plural **strategies**

1. **a**: (1): the science and art of employing the political, economic, psychological, and military forces of a nation or group of nations to afford the maximum support to adopted policies in peace or war
(2): the science and art of military command exercised to meet the enemy in combat under advantageous conditions

   b: a variety of or instance of the use of strategy

2. **a**: a careful plan or method: a clever stratagem

   b: the art of devising or employing plans or stratagems toward a goal

Source: https://www.merriam-webster.com/dictionary/strategy

And maybe it helps to take a look at the dictionary definition of strategy. And you see it there on the screen. Now this is out of Merriam-Webster's online dictionary. It is not slanted towards a business application.

And you can see the origins of strategy are in the military. And this goes back a long ways. Goes back, basically, to at least to the Greeks. In terms of this idea of a big picture look at military operations and things of that nature. So this gives us an idea of history, but it doesn't really help us too much with our business applications.

Business-Oriented Definition

Definition of strategy

- A method or plan chosen to bring about a desired future, such as achievement of a goal or solution to a problem.
- The art and science of planning and marshalling resources for their most efficient and effective use. The term is derived from the Greek word for generalship or leading an army. See also tactics.

Source: http://www.businessdictionary.com/definition/strategy.html

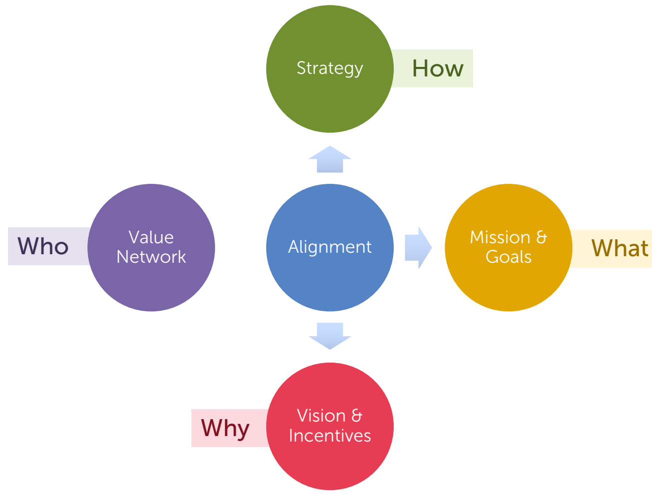
Now there's an excellent online business dictionary aptly named BusinessDictionary.com that provides a much better definition of strategy for us. And by the way, it's a great resource for business definitions in general for your future use.

But for our purposes here today the definition of strategy, "Method or plan chosen to bring about a desired future, such as achievement of a goal or solution to a problem." And of course goals and strategies go together pretty well. They're integral parts or partners. So that definition kind of hits it right on the head.

Now notice the second part. It falls back into the historical origins. So, "The art and science of planning and marshaling resources for their most efficient and effective use." Well, wait a minute. Stop right there. That first sentence, that could be a definition of management in general. So that's an interesting find.

But they also note, as I mentioned before, it's actually derived-- comes out of the Greek word for generalship, if that's a word, or leading an army. So you can see that-- how tightly the two are woven together historically. And that's why quite often you'll hear business people talking in militaristic terms, you know, when they're talking about strategy.

Strategic Alignment



OK. So let's dig a little deeper here. We'll take a look at something called strategic alignment. And in fact a series of things that we're going to take a look at are rooted or directly from a fellow by the name of Michael Porter whose contributions to management over the last few decades has been pretty immense, and provides models and theories and so forth that are widely used and accepted.

So in the case of strategic alignment, this acknowledges that strategy alone can't do what needs to be done. All right? So we've got strategy up at the top there in green. And that tells us how we're going to proceed. That's what strategy is really all about. But to achieve alignment between all the pieces of an organization we're going to have to look at a few other things here.

So first of all, whatever the organization's mission and its goals are. Now sometimes the goals and the strategy kind of get developed about the same time. But keep in mind strategy is developed to reach a goal.

Mission is an interesting one. If you look at a company's annual report-- or if you're in the lobby of their headquarters quite often there's going to be framed copy of it, or it's going to be painted on a wall or something. There's their mission statement. And these are usually pretty high brow worded sorts of statements talking about what are they in business for. What are they trying to accomplish.

And goals are very specific things. You know, that you're going to increase sales by 25%. So there's a certain number that you're going to increase it by over the next two years. So there's a time frame as well. So goals-- good goals-- well-defined goals are very specific in that nature.

There's also the why. Now this isn't so much the why we chose that goal or anything like that. But it's explaining the why to the people in the organization that actually have to do this stuff. That's going to carry out the strategy and meet the-- meet the goals.

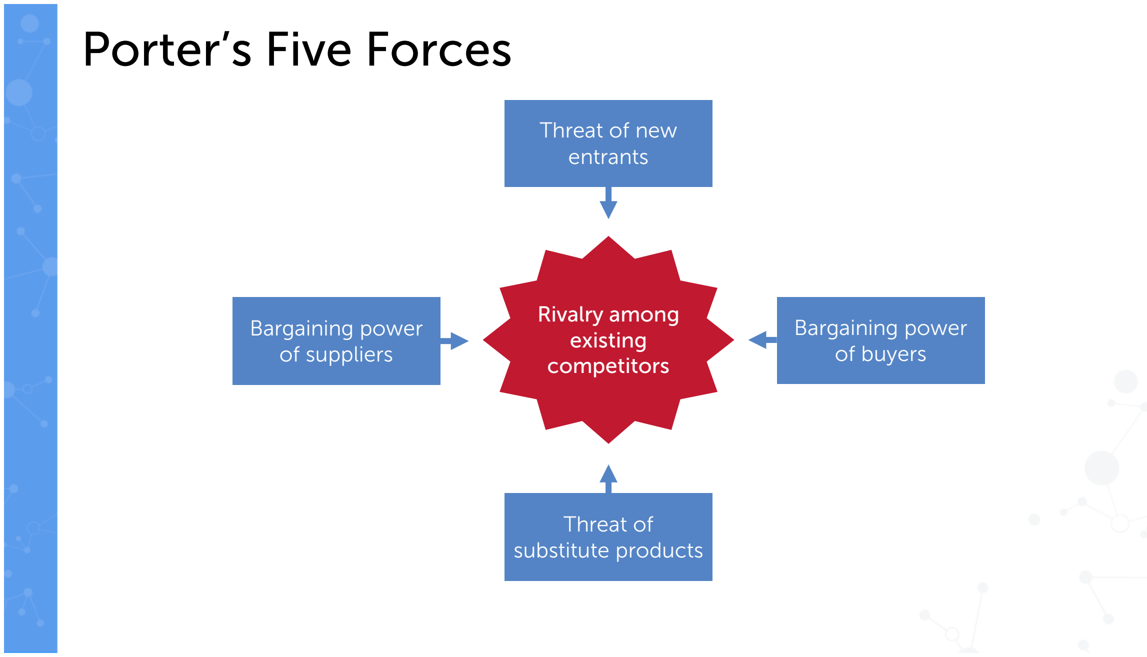
So two pieces. One is the vision. And vision can be kind of a touchy, feely word sometimes. But it's worthwhile to look at. And it can also be fairly specific in terms of people understanding where the company is going. Because if you don't really understand where the overall organization is going and your job is to move boxes from here to there, or to type up reports, or whatever it is, it really helps the individual do their jobs better if they understand what the overall goals are. What the overall strategy is. What the overall vision is.

The incentives part is pretty much what it says. This is talking about, you know, providing value-- quite often money in the form of incentives or bonuses, things like that, to the people that are actually doing the work to move them in the right direction. To make sure they're on board and they're pulling in the direction the company wants to pull-- wants them to pull in to execute the strategy.

And then the last over on the left in purple, the value network. This includes the employees, but it also includes customers. It includes suppliers. It can include the talent pool in the area around the company's facilities. So you need this group that has experience and expertise to be able to pull it off.

So for instance, if you were a high technology company and you chose to put your research lab in a small farm town in Western Nebraska-- might not be the best choice because you're not going to have the value network there that you need. That's why if you look at a place like Silicon Valley you see the concentration of firms that are there. Because they're making sure that they have a value network in both-- employed or that they're doing deals with or potential employees.

And you see the same kinds of clusters in other places around the country. You know in Austin-- you know the old route 128 thing in Boston, and so on. So there's a lot of these kinds of things for different industries that just highlight the usefulness of this value network.



Now this slide talks about Porter's Five Forces. It's probably his best known theory, I would say anyway. And what you see are five-- the five forces he talks about. The one in the center, the rivalry among existing competitors, is where most people think of a business. That we're slugging things out, you know, in the marketplace trying to outsell your competitor down the road, or across town, or in the industry.

Well, what happens though is that while you're slugging it out among the people in the industry, stuff can happen that could impact you, and for that matter your competitors-- your existing competitors. So let's take a look. We'll start at the top. And that's the threat of new entrants.

So you're slugging it out. Let's say your Kroger and your Safeway, two of the largest grocery chains in the country. And let's go back 10, 20 years. So you're slugging it out in the grocery market and you don't notice the growth of the grocery departments at Walmart and then later at Target. You don't notice the growth of Aldi.

You know if you don't, that's a pretty dangerous thing to happen. Because you're getting these new entrants that are going to change the dynamic of this rivalry among competitors. So you always have to be cognizant of that.

Let's go down to the bottom for the next one. The threat of substitute products. Again you're slugging it out and you don't notice what this trend is that's on the horizon. And by the time you notice it, maybe it's about ready to run you over.

So we talked earlier about 3M and Imation and, you know, the reason 3M spun them off. Well, they saw what was going on. They could see that the cloud, and online, and so forth was going to eliminate the need for a lot of the data storage products that they made. And that they-- that operation they spun off into Imation.

But it happens time after time after time. You know where-- if you were-- if you can go back far enough, and an outfit called Palm Computer made the Palm Pilot, a personal digital assistant. And what it was a smartphone without a phone, you know given the state of the technology at the time.

Well, guess what? Smartphone's a pretty big substitute product for that. And of course that's why you don't hear much about Palm Pilots anymore. And you can see example after example after example of this where companies haven't kept their eye on the horizon in-- of either new entrants or substitute products.

All right. Now let's go over to the right hand side and talk about the bargaining power of buyers. This is one of those four forces that impacts the rivalry among competitors, which is the fifth force.

So the bargaining power of buyers. Think about it. If you're running a gas station in eastern Wyoming or eastern Montana, say, and the last gas station is 50 miles back. The next gas station is 200 miles forward. Your customers don't really have a whole lot of bargaining power when it comes to your price for gas.

They're most likely going to pay it rather than take the time and the expense of driving back 50 miles to save, you know, \$0.26 a gallon, or \$0.05 a gallon, or whatever it might be. So that's a case where the buyers don't really have much bargaining power.

But if you're say a gas station in a typical high density suburb, you know there's some-- you know there's franchise row where all the franchise restaurants are, plus the big box stores, and the little-- the medium sized box stores, and everybody in between, and a bunch of gas stations. And you can look down the street and you can see, you know, five gas station signs with prices on them. If you're \$0.02 higher, guess what? Your customers do have bargaining power. They'll bypass you and they'll go somewhere where it's \$0.02 lower unless you can give them a compelling reason to pay the extra \$0.02, which can happen.

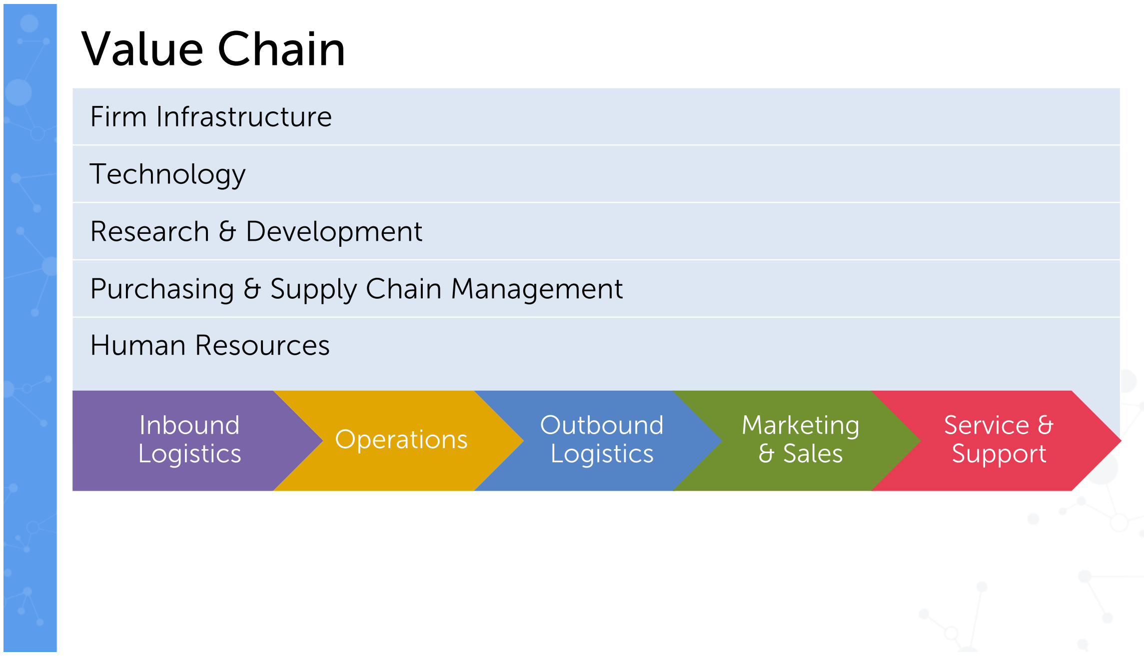
But the point is, there are situations where the customers have more power or they have less power. You have to be cognizant of that. And maybe even looking for places where your customers have less power because that might be beneficial to you.

Then there's on the left side the bargaining power of suppliers. You know that's a pretty big deal. Let's go back to smartphones, for instance. You crack open a smartphone-- if you're brave enough to do that-- and you're going to find a bunch of stuff in it.

And really a manufacturer of smartphones, or the marketer of smartphones-- first of all, most of them don't operate their own factories. But the people that do operate their factories, they don't make really a smartphone. They assemble a smartphone from components made from a bunch of suppliers.

Now the most important parts might be the chips that run things and the display, probably, in today's smartphones. So the people that make those things probably have a fair amount of bargaining power with the manufacturer and marketer of those smartphones.

But maybe there's other pieces in there that aren't. You know maybe there's certain screws that they got to be a certain quality and all this other stuff, but there's six different suppliers that could meet those requirements around the country or around the world. Whereas the chip maybe there's only one because it would be too expensive for you to retool the rest of the phone to work with a different manufacturer's chip. So those are examples of the-- of Porter's Five Forces.



Another concept to look at is a value chain. And all this really is sort of a way of mapping or illustrating, really, what a company adds. What value a company adds. They bring something in. They bring raw materials in. And they put a product out. And whatever they do in between is where they can add value.

Now if they can sell the finished product for more than the cost of the raw materials plus the cost of the value they've added, they're going to have a profit. So that's basic business. But something we don't often think of is sometimes companies exist but they don't really add much value, or sometimes they don't add any value at all, really. They're simply-- they're-- maybe it's more arbitrage between the cost of buying something and the cost of selling something somewhere, which is fairly minimal in terms of value.

So typical company-- and this is a set up really for a manufacturing company. Could easily be modified to anything-- anybody else who's providing a physical product, or a service, or some combination thereof. But in-bound you've got logistics. How do the raw materials get to your place of business?

Then you've got an operation of some kind. The factory floor with a bunch of machines and people working there. The kitchen in your restaurant and the servers in your restaurant. That's an operation. Whatever the business is, you've got this operation that transforms raw material into finished product.

Then you got outbound logistics. How do you get the finished product to customers? You've got marketing and sales. How would you find customers? And then how do you charge for your product? And all of that staff. Remember marketing is the four P's-- product, price, promotion, place. So all of that is a part of it.

And the place, which really goes hand-in-hand with the sales piece, because how you distribute it. You know are you selling direct to consumers? Are you selling to wholesalers who sell to retailers? Are you selling directly to retailers? Are you selling it on your own website direct to consumers? Lots-- instead of in your stores direct to consumers. There's lots of ways to play that.

And then lastly there's the service and support. Once the product's been changed hands and is in the hands of the customer, do you provide any kind of service or support? Do you do it yourself? Do you have somebody else do it? Do you not do it at all? Of those sorts of things come into play.

Now above the multi-colored value chain there is just a reminder that there's a lot of other functions that go on in the company that kind of provide lubricant-- enable, whatever term you want to use-- for the value chain. You know the technology folks in your firm that provide the technology that help with the operations, or the marketing, or whatever it might be. The research and development people who might be coming up with new products. The purchasing and supply chain management folks that really do coordinate a lot of what goes on in inbound logistics.

The human resources-- the folks who provide new talent for the various parts of the company. Maybe assist different parts of the company with managing and getting the most out of those staff members, and judging their performance. And all of the things that HR is known and quite often not necessarily loved for doing, but that's important for the organization.

And it's not a complete list, but there's plenty of others there. That's all part of your value chain. And you've got a unique recipe, a unique mix. And if it does its job well and you can transform the raw materials coming in to a product going out the door that sells for quite a bit more, the more you add in relation to the costs that you're putting into it the better organization you're going to have.

Competitive Advantage

Real competitive advantage is derived from:

- Lower operating costs than competitors
- Ability to charge a higher prices than competitors

The next concept that we'll talk about is competitive advantage. And this is-- it seems a little simple maybe, but it's a very powerful concept. Again back to Porter, basically there's two ways you can get competitive advantage. One is you can have lower costs than your competitors. If you can make something for less money because you're more efficient or you bargain better with vendors, or whatever reason, you have a cost advantage.

The second way is if you somehow or other have the ability to charge higher prices than your competitors. So there's a reason I've got a couple of ketchup bottles there on the slide. If you walk into a grocery store and you see in the ketchup aisle-- you see Heinz on the shelf and it's, I don't know, $1.75 for that size bottle. And the same size bottle of a no-name ketchup or a lesser brand name ketchup is a buck and a quarter. What would possess consumers in large numbers to pay the extra $0.50 for the same size bottle of Heinz versus any of the other ketchups on the shelf?

That's the crux of this ability to charge higher prices. Whether it's the brand name, or even without the brand name, the perceived quality of the product based on past experience, or word of mouth from other consumers. There's a reason that they're paying it.

And this is often referred to as brand equity. The fact that somebody will pay more because they see that brand as being better and having more value for them. And it's something that they prefer. And they're willing to pay, within limits, more money for it.

If you can get to that point, as Heinz has in ketchup, then you have a competitive advantage. And that's probably a big chunk of the reason that you know the investment firm, I think from down in Texas, got together with Warren Buffet and did a deal with Heinz. And now they've done another deal, but the point is they saw the value in this.

Now let's step back a minute and take a look at the cost thing again. So we've got this lower cost. What does it allow us to do from a strategic standpoint? Well, first of all defensively we're much stronger. Because if a price war starts, the lower your-- the lower cost producer you are, the less risk you have. Because you've got other competitors whose costs are higher, they're going to be the first ones that lose out in a price war. Because they're going to be losing money on everything they sell. They're going to have to make a decision, maybe withdraw from the market or whatever it might be.

If you are an aggressor in that sort of thing, you're looking to expand your market share by dropping price, you can do that. And you can best the higher cost providers because you can force them into losing money or having a price so high that their sales plummet simply by lowering the price, and you're still making money. So that's the power of the lower cost.

On the-- going back to the ability to charge the higher price, it simply gives you that freedom to be able to have-- enjoy higher margins. And be able to spend more on marketing, which sort of is a self-reinforcing thing. Or be able to reduce debt, or do other sorts of strategic moves within the company that benefits the company as a whole.

So this whole idea of brand equity in particular that is kind of mostly behind this idea of you being able to charge higher prices is really, really, really important. Now it's something that you're not going to find a whole lot about-- talked about in business. And partly that's because the accountants and the marketing people talk different languages. And we don't see brand equity showing up on a company's balance sheet because accountants aren't really sure how to value it. And that's something that may change in time, and would simply validate this idea of competitive advantage coming from the ability to charge higher prices.

Nature of Strategy Implementation

Formulation

- Positioning forces before the action
- Focus on effectiveness
- Primarily intellectual
- Requires good intuitive and analytical skills
- Requires coordination among a few people

Implementation

- Managing forces during the action
- Focus on efficiency
- Primarily operational
- Requires special motivation and leadership skills
- Requires coordination among many people

Now all this talk about strategy is fine. But unless we figure out a way to actually implement that strategy it's really just a verbal exercise. So this slide shows a comparison, or progression really, from strategy formulation to strategy implementation.

So if we take a look at the first items in the formulation one way to describe what goes on is positioning forces before the action. So you're setting things up. And forces, which has a military meaning and that does carry over a bit here, you might want to think as much about Porter's Five Forces as a battalion of soldiers, or a wing of fighter jets, or something like that. So we position the forces-- all the things we talked about with the five forces-- before the action.

On the implementation side, the focus is on managing those forces. So you actually have to day to day manage the process, which is very different than formulating the higher level strategy. So you have to be able to make that transition, and have the people and the tools available to be able to make it.

Second item. Focus on effectiveness for formulation versus focus on efficiency in implementation. This goes back to a classic part of the different-- you know what strategy really is all about. So when you're developing a strategy, you want to develop things that are going to be effective-- whether it be a manufacturing process, or the way you sell something, or the way you promote it. You know whatever it might be you want it in the strategy side of things, you want to make sure that it's effective. That it is going to move you towards your goal. It's going to move you along in the strategy implementation.

During the implementation when you're down in the trenches here, it's a focus on efficiency. So here, you know, if part of the strategy is to be a low cost provider-- a low cost supplier then maybe the focus on efficiency is just to day to day. How do we make slight improvements in our manufacturing process so that we can get an extra case, or an extra pallet load, or an extra truckload out the door every day using the same machinery and the same number of people?

So the important thing to note here is that strategy focuses on the effectiveness. And that includes whether what you're doing is moving you forward. Whereas the implementation is being efficient on whatever that thing is you've chosen over here on the formulation side.

What happens sometimes when things go off the tracks is a company can be very, very, very efficient at things that are ineffective. So they're absolutely fabulous say-- to go back to our 3M Imation example-- at making CDs. They are absolutely the lowest cost producer, and have the highest quality, lowest number of defects in their manufacturing process for CDs. That's great. And there's a lot of hard work that went into it. But it's not effective because people don't buy very many CDs anymore. It's a dying, if not dead, industry. So you want to make sure your focus on efficiency is on something that is effective and it's part of your strategy. OK.

Next line down. Primarily intellectual. Yeah, it is. You know sometimes it's considered, especially by maybe the rank and file workers, as another ivory towered idea. That sort of thing. Whereas on the implementation side, rubber hits the road. This is where it's all about the operations and how you actually implement whatever this thing that has come up on the strategy side.

Next item down. Requires good intuitive and analytical skills for strategy formulation. Hmm. Now intuitive and intuition is a concept-- a term that can be misconstrued. Sometimes it's considered the same thing as a gut feeling or something like that.

There's a lot of research-- or some research, anyway, that talks about maybe intuition isn't really something different or new. Maybe it's just somebody who is picking up on clues and using that to make decisions. It's extra information that other people aren't picking up on. And that appears to be something that we labeled intuition.

Whether that's true or not, in the end you know we'll see how it all plays out over time with the research. But whatever is actually causing it, there is this thing we label intuition. And it's pretty important. The analytical skills are just as important. You know if you can't run the numbers on something, or logically you know put together, you know, how dollars, or people, or goods, or whatever flow from an analytical standpoint, then you're simply guessing at stuff.

The danger on the analytical side though, of course, is sort of a naive empiricism. Well, that's what the numbers say, so this is the decision we're going to make. When somebody with whatever we believe intuition to be is saying, that doesn't sound right. We need to take a closer look at this. It really should be this.

Now it may turn out the numbers are right and there was something in the intuitive process that wasn't factored in. Or it could turn out that the numbers are naive and they don't take into account you know some human nature sort of thing, or some common sense sort of thing. So we need both. And that's important so that it doesn't end up as an ivory tower exercise. The whole formulation, the strategy.

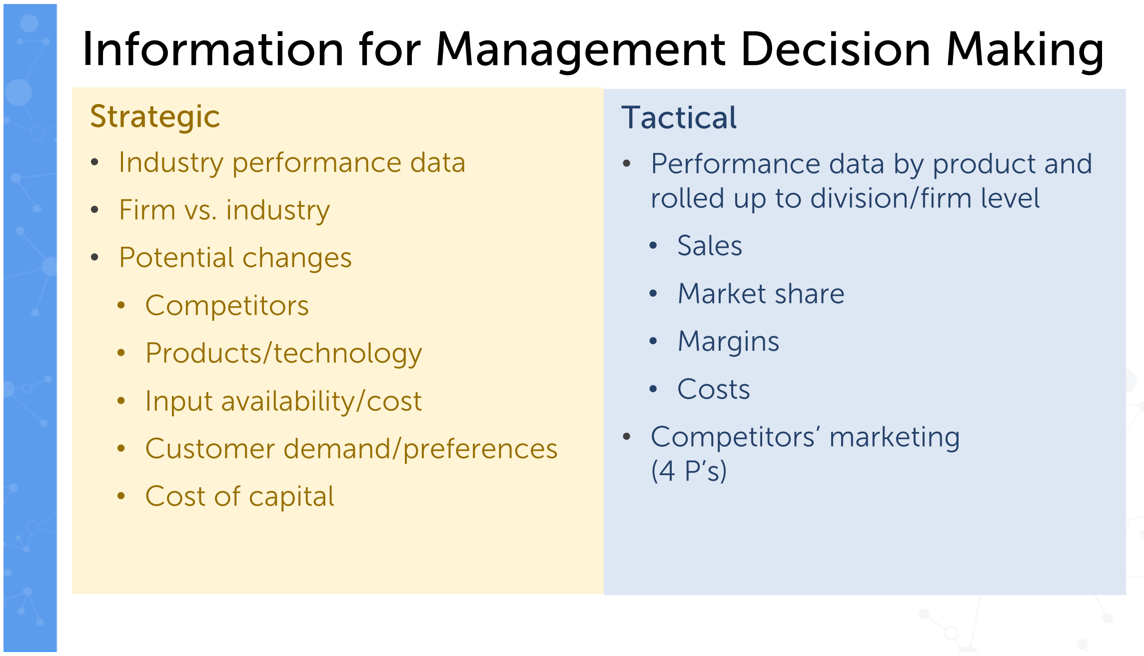
On the implementation side instead of that intuition and analytical skills, really we're talking here motivation and leadership. You've got to get the job done. And management's about getting things done through other people, which means you need to be able to motivate people. Whether it's in the office, or in the sales force, or on the factory floor, wherever it is. And you need to be able to lead people.

And by the way leadership and management are two different things. Management maybe is a little more wonky and a little more, you know, procedural and that sort of stuff. Whereas leadership-- now you start to talk, you know, charisma comes into it and some other things. So there are differences. That's a whole other area of study we won't get into. But you need to be able to have people who can motivate and lead the rank and file.

The last line on the formulation side. Requires coordination among a few people. So you've got a small team that's putting together your strategy, which is probably a good thing in most cases. Limits the overall knowledge of it. Less leaks to competitors, things like that.

The danger is, of course, it does become an ivory tower exercise. And you've got people that don't really know what goes on the factory floor, or what really goes on when you're dealing with a customer, making decisions, strategic decisions. So it's important that if you do have a relatively small team working on strategy, that they go out and they actually talk to people who are doing this in the real world within their company-- and maybe outside their company-- to fully understand the impact of what they're proposing maybe in a strategy change or a whole new strategy.

On the implementation side, it's going to require coordination among a whole bunch of people. A new strategy quite often touches on almost every part of the company. And as you know the people in the stores or the people in the factory are changing things, so are people in HR. And so are people in finance or accounting. And the sales force is doing something. It has to be coordinated, because there's going to be a whole bunch of people, practically-- or maybe your entire workforce is going to be involved.



OK. The last slide brings it back home really. We talk about information for management decision making. And have the two groups of bullet points here. One strategic one tactical. So one is at the higher level of strategy-- making strategy implementation. And then the tactical-- the kinds of data and information that might be needed for those working down in the trenches that are worried, maybe, about that fifth central force in Porter's Five Forces. You know the day to day slugging it out with competitors. All right.

So if we take a look at the strategic side, what kind of data needs to be collected and then turned into information that's actionable by managers? Well, certainly industry performance data. And now that's going to be most likely third party data, secondary research-- however you want to label it-- that's going to be brought in, purchased probably. And then probably integrated with information from the firm to make it useful information-- easy to use information.

Second is for strategic purposes we're particularly interested in information that might compare and contrast the firm with the industry the firm operates in. Because what's going on outside is every bit as important as what's going on inside the firm for somebody making decisions at a strategic level.

We're also looking for potential changes. And by the way as we go through this, you'll see some of these things are really qualitative. It's qualitative data, not necessarily quantitative data. And there's a need for both types. Now you can't run a company entirely on quantitative. And you can't run a company entirely on qualitative data.

But these potential changes. What's going on at competitors? Did the head of marketing just change? Is there a new CEO? Is their board looking to sell the company? You know all of those sorts of things. Are they-- did they just announce that they're-- or did we pick up somewhere that they are going to cut back on the number of new store openings? That's that kind of information.

Products and technology. What's going on in the industry or industries that touch ours? Is there some new product or some new technology that could put us out of business? Or kill one of our product lines? Or is there some new product or technology that we could conceivably get into reasonably given our resources and make it a new product line?

Or is it something we could incorporate in our production process that would make us a lower cost producer? Or make our product much higher quality? All that sort of stuff is what we have to keep our eye out for.

And then input availability and cost. That's something that's important. What's going on with the price of-- fill in the blank. Whatever it is we that we use a lot of. If you follow the Business Press, in the Upper Midwest here quite often though they'll carry articles on Buffalo Wild Wings. And almost invariably somewhere in there is mentioned the cost of chicken wings. Because it's such a huge part of their overall cost, it gets brought up all the time in any kind of analyst discussion of Buffalo Wild Wings.

So that's what every company faces. So whatever their inputs are-- whether it be the electricity to run their factory or some kind of raw material-- that the availability of it and the cost of it are things we have to keep an eye on from a strategic standpoint.

Customer demand and preferences. There are trends. There are things that happen out there. So we need to understand what those trends are. And this gets into social sciences and a lot of qualitative stuff, but it also depends a lot on surveys, and with, you know, quantitative data as well.

So what does that look like? If you miss a trend like this it can cost you. For instance if you're in the clothing business and you miss the trend of fast fashion that fuels H&M, and Forever 21, and other companies like that-- what those companies did was found a way to, number one, gather information of what the fashion trends are going to be in the coming weeks and months. And they can change pretty fast for some folks.

And then coming up with ways to be able to meet the demand of people in that industry quickly. And what they came up with, and this would have relied on a lot of information, is be able to predict it. Predict it quickly. And then immediately set in line a supply chain that can deliver this new fashion-- the dresses, shirts, whatever it is-- to their stores in about six weeks as opposed to six months or so that traditionally was the case in the industry. So that's just one example.

Then a last thing here is cost of capital. Now we're talking you know the finance side of the business here, but it drives strategy. If interest rates are going up in the-- say the-- you rely on borrowing, then what's going to happen is you're going to be paying higher interest rates. And you're going to have higher cost structure because you've got to pay those higher interest payments every month. And that's money that you can't put into R&D or something else. So that's one example of the financial side of things that data needs to be collected and then brought forward as information that can be used by top management for strategic sorts of decisions.

Now on the tactical side, the data and the information needs are different. Here we're looking for performance data you know on-- that might be sliced and diced by product, and with the ability to roll up to departments, or divisions, or firm level. That sort of thing.

And then the types of data might be sales related. They might be market share. The margins which would bring in the costs-- the next item, along with the sales and combine those two into you know what the margin is on everything we sell. Those sorts of data. Very granular detailed things that people need when they're down there in the center of Porter's Five Forces slugging it out in the marketplace. They need this information to lower costs in production, or to have the highest level of sales possible, and all of that.

We also need to know what's going on with competitor's marketing. And keep in mind when I talk about marketing, we're talking the 4 P's-- product, price, promotion, place. So it's not just whether they're running ads or anything like that. Did they introduce a new product line? Did they make a change to a product line? What's going on with their pricing? Did they just roll an across the board price increase in of 2%? Are they dropping prices in this market versus that market? That sort of thing.

The promotion, which of course would include that advertising I mentioned earlier. But anything else? You know the PR efforts, all of that. A lot of that, again, is going to be qualitative, but it's important. And there are quantitative ways of measuring many of these things as well.

And then place, the fourth P, which is really distribution. What are they doing? Are they adding dealers? Are they-- did they just expand their website? Did they announce a doubling of new stores next year? Any of those sorts of things that have to do with the place or the distribution side. That data can be very important for the managers that are worried about how to respond tactically, and therefore, stay on track with the overall strategic plan.

Well that brings us to the end, finally. Hope this is a good snapshot of strategy for you. It is by no means comprehensive. That would take a very long time. Probably more than another course. But it gives you an idea. And I think it's important that you, you know, keep that in mind as we continue to talk about data and decision making.