

3. THE TECHNOLOGY ADOPTION MODEL – BCSA

The Technology Adoption Model, which I mainly refer to as the BCSA model (better, cheaper, simple and available), is one of the most critical tools in the tool kit. In many ways, it is the prism through which I argue you should view all decision-making when it comes to growth in transformative industries.

The likelihood of your technology gaining widespread adoption and achieving market leadership hinges on how it compares to competitors in terms of four key factors: quality, cost-effectiveness, simplicity and accessibility. If your product or solution stands out as better, cheaper, equally simple and readily accessible, it stands a much greater chance of capturing the market and driving hypergrowth.

If you look at every disruptor and every market-leading technology player in the world, you can apply the BCSA logic. Tesla, IKEA and Amazon have all succeeded because they are better, cheaper, simpler, and available at scale. If Tesla had only been better and cheaper, but not as simple to convert to – lacking its hyper-charger network or the ability to deliver and service its cars – it would not have captured the market as it has.

As you have just read, the model was developed from a need to understand why some revolutionary technologies were, in some instances, not adopted by an industry and why a seemingly great technology might face challenges in certain value chains. Being better and cheaper naturally refer to the general value proposition of any business. In addition, being better and cheaper is usually ideal when dealing with commoditised products or solutions. A better and cheaper type of lithium battery, for example, will quickly be adopted throughout the established automotive value chain.

However, when it comes to products with transformative potential – products or solutions so new that the market is not yet accustomed

CREATING HYPERGROWTH

to them – the attractiveness of being better and cheaper gives way to complications and mistrust. Here, ‘ease of adoption’ plays a significant role. There will be massive resistance from large clients to adopt your technology if you are not as simple as the competition to integrate and available at relative scale.

The BCSA model is by far the most influential model in this entire tool kit when it comes to creating hypergrowth. You should never embark on a hypertransformation journey with a technology that is not, or cannot become, BCSA at some point.

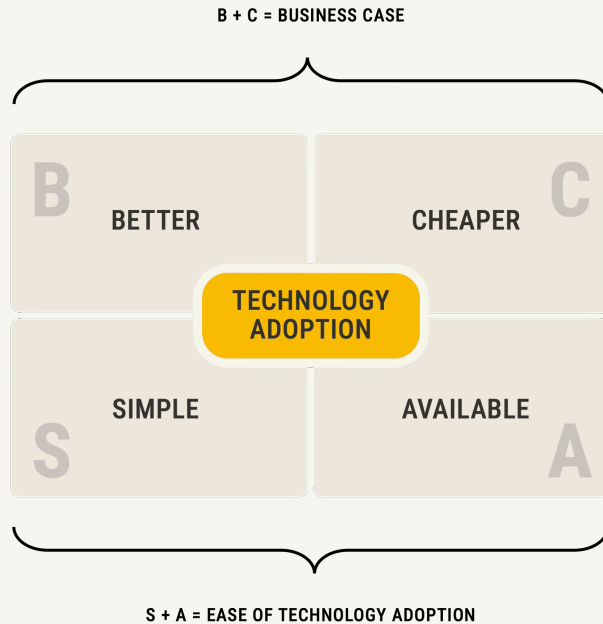
‘You should never embark on a hypertransformation journey with a technology that is not, or cannot become, BCSA at some point’.

You will find the BCSA model outlined on the next page, along with a detailed exploration of its four key components. Following this, I will share a few case studies that highlight why BCSA is crucial in markets undergoing rapid transformation.

NOTE: SIMPLICITY AND AVAILABILITY ARE ESSENTIAL FACTORS

I cannot overstate how important it is to make simplicity of integration and availability at scale – the ‘S’ and the ‘A’ – the core part of your value proposition when trying to enter hypertransformative markets.

THE BCSA MODEL



TECHNOLOGY ADOPTION DRIVERS

- Better and cheaper** When a solution is both better and cheaper, it creates a compelling **business case** for adoption. Organisations and individuals are more likely to switch if they see clear advantages in performance and cost.
- Simple and available** When a solution is simple and available at scale, it removes many obstacles to adoption. **Ease of technology adoption** makes it much easier for users to start using the new technology and transition smoothly from older solutions.

THE FOUR FACTORS OF TECHNOLOGY ADOPTION

- B – Better**
 - Offer superior quality, uptime, performance, etc.
 - Create implicit ESG gains
 - Ensure quantifiable improvements from purchasing your product
 - Focus on everything that makes the product or offering better, from a perspective where price is not a factor
- C – Cheaper**
 - Minimise up-front costs, capex, fees, total cost or lifetime cost
 - Avoid relying only on total cost of ownership if other financial metrics are more important to the buyer
 - Develop strong sales capabilities to communicate the most relevant financial benefits
- S – Simple**
 - Prioritise simplicity in technology to drive adoption; solutions must be easy to explain, understand and sell.
 - Easy to forecast, simulate, install, integrate and service for the entire value chain.
 - Identify and minimise complexity, such as distribution or compatibility issues that can hinder adoption.
 - You don't have to be overly simple to adopt – just on par with the competition.
- A – Available**
 - Ensure availability at scale through secured production capacity.
 - Build customer trust by making products instantly purchasable and deployable.
 - Provide reliable service, support and warranty throughout the product life cycle and across all regions.
 - Match the competition's level of availability; exceeding it is not always necessary for adoption.

CASE: HOW ONE COMPANY OUTPACED THE ENTIRE AUTO INDUSTRY

I once made a bet with a friend about whether Tesla would ever be able to produce 10,000 cars annually. My friend argued that no new car company had challenged the conventional industry for five decades and that the critical infrastructure and economies of scale in the automotive sector would make it impossible for new entrants to penetrate. Needless to say, I won, and I am quite certain that, despite the BCSA model not being available at the time, Elon Musk used exactly the same logic when he built Tesla's growth strategy. This resulted in Musk not only establishing a new company but also succeeding in challenging one of the most established industries and value chains in the world – and doing so in just a few years.

- B** Now, looking at the case from a BCSA perspective, **it was certainly a better offering:** Tesla introduced a car that was faster than anything else on the market. His cars featured the latest technology, required less maintenance and delivered higher performance than almost all other cars, regardless of cost. Another of my friend's arguments was that Tesla didn't stand a chance because it lacked the downstream infrastructure and outlets needed for servicing the cars. Tesla's response was simply to make cars that didn't need maintenance as well as to build mobile repair units capable of carrying out repairs at the customer's home if necessary.
- C** **So how did Tesla perform on price?** It was certainly **cheaper** – not only compared to other electric cars but also compared to the Model 3 and Model Y, cheaper than equivalent performance fossil-fuel cars. One of the first things Tesla did was to extract and industrialise the most expensive part of an electric vehicle – the batteries – by building massive battery factories to keep costs down. Second, Tesla eliminated individual configurations, prespecifying every car to the same level. This reduced both production time and cost; limited the parts catalogue required; and enabled prefabrication, further driving down costs. The result is that Tesla today is able to produce a Model 3 in one day, whereas it takes three days for Volkswagen to produce an ID.4.
- S** **Tesla was also simple:** It takes just five clicks to order a Tesla online. By comparison, it took me over two hours to even approach a configuration on a German-made high-end car brand's platform, and I was confronted with multiple compromises, as some configurations negated the possibility of certain specifications. Tesla also built proprietary charging infrastructure for its owners, with fast-charging capabilities and grid integration. Grid superiority meant increased adoption among car buyers. It is a good example of an area that other car manufacturers had neglected, or had passed off to third parties as a problem separate from selling a car. This stands out as one of the clear reasons Tesla originally became BCSA.

- A** Crucially, **Tesla was available** at par with the global car market: With a standardised production line – where only the colour is changed at the end – and a highly efficient production infrastructure, Tesla could deliver cars in weeks, whereas most other competitors faced delivery cycles of six to twelve months.

In conclusion, Tesla has not only challenged but completely leapfrogged the conventional car industry, delivering a product that is truly BCSA. This, of course, placed enormous pressure on the traditional car industry, which is now years behind in terms of EV mobility. It also removed the main profit generator of the industry, which is downstream infrastructure and servicing. Most traditional European manufacturers do not necessarily turn a profit on the product itself but instead make it back through continuous servicing.

If we look at earlier first-movers in the segment, such as Better Place (which tried to commercialise EV battery-swap technology), it never succeeded in creating a fully BCSA-solution. Instead, it spent hundreds of millions of dollars on marketing, trying to convince the market of its relevance, rather than being naturally relevant.

CONDUCTING A BCSA ANALYSIS

The BCSA model can help you determine which customers your product offering has the highest natural relevance for, and thus which customers you should target to achieve hypergrowth in the most capital-efficient manner. The model adds a new layer to the classic analysis of a product's market fit. Traditional models usually only consider the business case or the classic value proposition, namely whether it is better or cheaper. This way of assessing the attractiveness of a product offering might make sense in established environments, with other similar product offerings. However, in transformative environments with new and disruptive technologies, customers will often be reluctant to try new solutions if there is no natural way for them to adopt the technology into their current facility setup. There is a lack of focus on the degree of simplicity and availability, compared to the conventional solutions in the market.

By making it easy to implement a product and ensuring that the new offering is available to the same extent as the competition, while also being better and cheaper, the decision to purchase and adopt the new technology essentially becomes a no-brainer in a rational market. Conversely, if you have a new, disruptive or technologically different offering, and you are not as simple to adopt or available at the same level as the existing solutions you are challenging, then you will still see low adoption rates, despite being both better and cheaper. What is important, though, is that you do not have to be much simpler or more available; you generally only have to be on par with the competition, provided that the B and the C benefits are clear. In other words, you will not achieve higher conversion if you are twice as simple or available. If simplicity and availability are decision factors for adopting your offering, they are naturally part of being a better offering.

CHANGING THE MATH

Finally, it is crucial that a BCSA product is aligned with where your business operates in the value or supply chain of your industry. For full-scale disruption of an industry, your offering needs to be BCSA across the value chain, but if your offering is only BCSA at the end of the value chain and not where you are selling it in, the offering is essentially not really BCSA, so you cannot expect to achieve BCSA-level adoption rates for your offering. Being BCSA is not a feeling but something that is defined by the measurable natural adoption levels discussed earlier. A strong rule of thumb is that if you are BCSA in a perfect market, you will most likely convert more than two-thirds of your customer interactions and should be extracting above-normal gross profit when you sell your products. At over 65% conversion, it means that you are converting around two-thirds of all pipeline engagements, a level that even the most successful companies on the planet are not hitting, typically because they have run into saturation and inefficiencies as they grow large or because they are simply not BCSA, despite their success.

Essentially, all companies with a true BCSA offering will have the potential to rapidly transform or disrupt industries. A few examples to consider are Tesla, Amazon, Apple, IKEA and even the Ford Motor Company if we look back in time at those who successfully and rapidly changed entire industries. Common to all of them is the BCSA value chain analysis: finding the exact link in the chain that they can disrupt and determining what kind of research, development or product change is necessary. They each challenged the value chain on all four letters, and I will now detail how you can do that with your own offering:

The process of carrying out a BCSA analysis is quite direct. Typically, it is beneficial to break down the analysis by each letter, beginning with the most accessible section. This is often the conventional business model ('BC') or the value proposition. Once this foundation is established, the next step is to assess the simplicity of technology adoption ('SA').

BCSA ANALYSIS GUIDE

(B) BETTER

Being better than competitors offering legacy solutions is about a combination of factors. First, it is a combination of value and effect for the customers. In other words, can a customer see a positive as well as a quantifiable outcome from purchasing your product, such as increased earnings, effectiveness or quality? It also touches on elements such as customisation, ease of use, design, brand association and flexibility –everything that makes the product or offering better, from a perspective where price is not a factor. Providing a better offering may also include being better from an environmental, social or governance (ESG) standpoint.

ARE YOUR OFFERINGS BETTER?

- What value and impact do you deliver for customers?
- How do ESG factors influence your proposition?
- How do quality, uptime and performance compare?
- Is your solution easy to use, customisable and flexible?
- What role do design and brand associations play?

‘Do not underestimate what is required to credibly service a large-scale customer’.

(C) CHEAPER

Just like with B, the perception of what is cheaper or what presents a stronger financial business case depends entirely on the decision-maker's viewpoint. The C can be calculated from a variety of places such as a focus on capital expenditures, fees and total installation costs in turn-key solutions to the total lifetime costs for factories or manufacturing industries. Heavily capitalised companies might choose to achieve their goals by offering the product at minimal cost or even at no gross profit for a limited time while focus lies on promoting technology adoption in the market. As with conventional business case theory, price and cost is always a key factor in purchase scenarios, and it becomes increasingly important for determining where in the value chain one should situate the product offering. The weighting of or emphasis on price may change significantly as one moves up or down the value chain, as we will see in an example later.

ARE YOUR OFFERINGS CHEAPER?

- What is the initial capital expenditure required for your customers?
- What are the initial and recurring fees involved?
- How do the total installation costs compare, particularly for turn-key solutions?
- What are the total lifetime costs for your customers?

(S) SIMPLE

Although the simplicity of an offering is often viewed as being part of the value proposition, in the BCSA model it is viewed as an independent factor because of its critical importance for technology adoption. Being simple, at least as simple as the competition to adopt, is not only in terms of integration but also in terms of whether a product or service is simple to explain and understand in the value chain.

Simplicity for many large customers is involving integration time, ease of use, automation and whether staff will require new or future training. Part of being a simple offering is also compatibility with past, current and future technology developments as well as service and maintenance.

ARE YOUR OFFERINGS TRULY SIMPLE?

- Is the product simple to understand, explain or adopt?
- Is it simple to forecast and simulate the effects of the product or offering after purchase?
- How simple is it to install and integrate?
- Does the customer need to make changes to utilise the product?
- Is the offering or product simple to work with beyond integration?
- Does the product require servicing, or can servicing be managed in-house?

(A) AVAILABLE

Being available in the eyes of a customer is about being able to handle and deliver more than just small, low-volume orders. It makes no sense to have a product that is B, C and S and then not be able to deliver it when a large client commits. Being A means being fully capable of scaling up to deliver and service thousands of units at a moment's notice, if that is what existing providers in the value chain can offer or if it is what the targeted customers require.

To be available at scale, you must ensure that you can consistently meet the demand for large volumes in a timely manner. This relates to customers feeling confident that they can purchase and receive their orders immediately, with the ability to install and configure them as needed. Additionally, customers must trust that service, support and warranties will be provided and honoured throughout the life cycle.

The importance of availability as a key value proposition is often highly underestimated by new technology challengers. They often assume that, simply because they have a substantially better offering with a much stronger business case than a conventional solution, customers will 'wait' for delivery. This is not the case.

Do not underestimate what is required to credibly service a large-scale customer or what it takes to provide reassurance as a qualified supplier for large-scale businesses.

ARE YOUR OFFERINGS READILY AVAILABLE AND AT SCALE?

- Can you deliver your offering on time and in the required volumes?
- Do you have the appropriate staff to install and configure, or can this be managed by a third party?
- Can you provide the necessary service and support throughout the product life cycle?
- Do you offer warranties that are at least on par with, if not better than, the competition?

ASSESSING VALUE CHAINS WITH BCSA

Now, with everything we know about the Growth Formula, GP/CoE ratios and the BCSA model, let's analyse an example of a challenging technology adoption case, focusing on the value chain. With these models, we can determine why we may be facing low levels of conversion. We can understand where to invest in growth and whether it is prudent to invest in measures that can boost conversion, truly harnessing the present drivers of hypergrowth.

An offering or a technology can be BCSA to varying degrees throughout different parts of a value chain. To determine when and where the technology is most BCSA and to identify where to invest if you are not, you need to establish BCSA levels for each of the value chain links or phases. This, of course, requires you to map out all the links in the chain first. Try to determine exactly which players are involved and which of them can be grouped together.

On the following pages, you will discover a case study on MicroShade and how we leveraged BCSA to pinpoint the most promising path ahead. This case illustrates the incredible potential of the BCSA ideology and the language that the model provides.

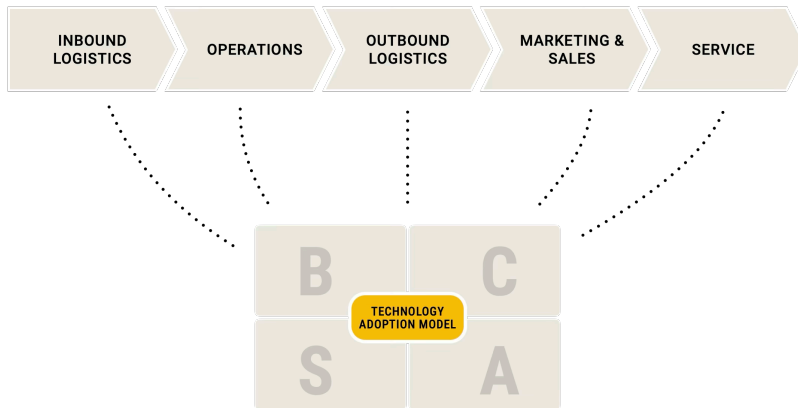
CHANGING THE MATH

VALUE-CHAIN MAPPING THROUGH THE BCSA MODEL

Value-chain mapping, as originally conceptualised by Michael E. Porter, involves dissecting a hardware company into its fundamental activities to pinpoint where competitive advantage can be achieved. This analytical approach examines each step in the value-creation process, identifying where value is added and where costs are incurred. The ultimate objective is to ensure that the value delivered to customers exceeds the costs involved, thereby driving higher profits and improved customer satisfaction.

When viewed through the lens of the BCSA model – better, cheaper, simpler, available – value-chain mapping takes on a new strategic dimension. Rather than simply cataloguing activities, the BCSA approach compels you to assess each link in the chain for its contribution to your offering’s overall competitiveness and adoption potential.

By overlaying the BCSA criteria onto the value chain, you can systematically identify bottlenecks, gaps or weaknesses that may be hindering hypergrowth.



ALL HYPERGROWTH FUNDAMENTALS ARE NOW COMPLETE

The most important learning is, of course, that a BCSA analysis can be used to thoroughly evaluate and strategise on value-chain positioning and to drive new innovation with the power to become BCSA. A BCSA position is also what we use to build towards value peaks, a topic to which we will return in chapter 4. A BCSA product can dominate a market, so the global dominance position can serve as a waypoint for other value peaks: the inflection points of value we are likely to encounter as we approach our final BCSA position in the market.

To reiterate, the complete Growth Formula looks like this:

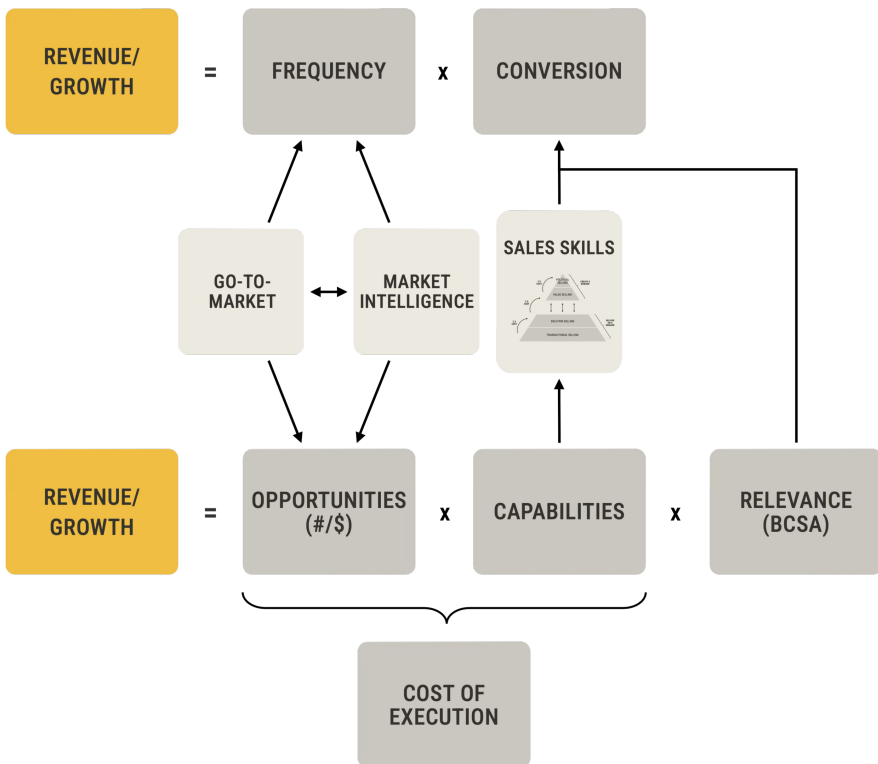


Figure 11. The Growth Formula.

CHANGING THE MATH

With the Growth Formula, the GP/CoE ratio and now the BCSA model, you have the complete foundation for creating hypergrowth. BCSA was, in many ways, the missing component, placing the Growth Formula and the logic around GP/CoE ratios into a more applicable framework for revealing natural relevance, steering capabilities and building leading technology.

If you are BCSA across your value chain in a perfectly accessible market, then you could have an outsourced call centre handling all your sales – if you need sales capabilities at all. Business leaders should, with the GP/CoE and the Growth Formula in mind, always consider what savings can be made on the cost of capabilities by reducing gross margins to achieve a true BCSA offering.

However, markets are often not perfect, and BCSA propositions will need to be communicated. Capabilities therefore remain the bridge between the market and the natural offering, and their dependency is determined by the BCSA level.

‘Only being BCSA is, for many technology offerings, not a guarantee of hypergrowth or hypertransformation’.

But only being BCSA is, for many technology offerings, not a guarantee of hypergrowth or hypertransformation. You might have external limiting factors, such as third-party dependencies or inefficiencies in the market, as described in the definition of hypertransformation. Also, as stated at the start of this chapter, there is a significant difference between being BCSA against other technology players in an industry and being BCSA towards a conventional industry that you are then disrupting. The latter is what leads to hypertransformation if you are BCSA.

CREATING HYPERGROWTH

If you are only BCSA against other technology transformers, you are certainly the category leader, which would be clearly reflected in your conversion ratio in direct competition. But if you are not BCSA against the conventional ways of working, you are not driving hypertransformation and perhaps not even consistent hypergrowth.

On the next pages, you will discover two cases of BCSA companies from the NAP portfolio. These examples illustrate hypergrowth is not only about having a superior offering but also about timing, market readiness and minimizing dependencies on other parts of the value chain. Companies in the right market conditions with a BCSA offering can achieve hypergrowth more efficiently and at lower cost.

What you need to take away from these examples is that the GP/CoE ratio will always be your growth effectiveness indicator. The Growth Formula overall represents the only three variables to methodically drive and strategise for hypergrowth.

No rational buyer at the correct part of the value chain will decide against adopting a BCSA technology, compared to the competition or conventional alternatives. Having a BCSA offering will lead to above-normal conversion ratios and market leadership – it's quite simple, really. BCSA offerings in perfect market conditions are the foundation for driving consistent, fast-paced technology adoption and capital-efficient (high GP/CoE) hypergrowth and even hypertransformation if your offering is also changing the standards of an industry.