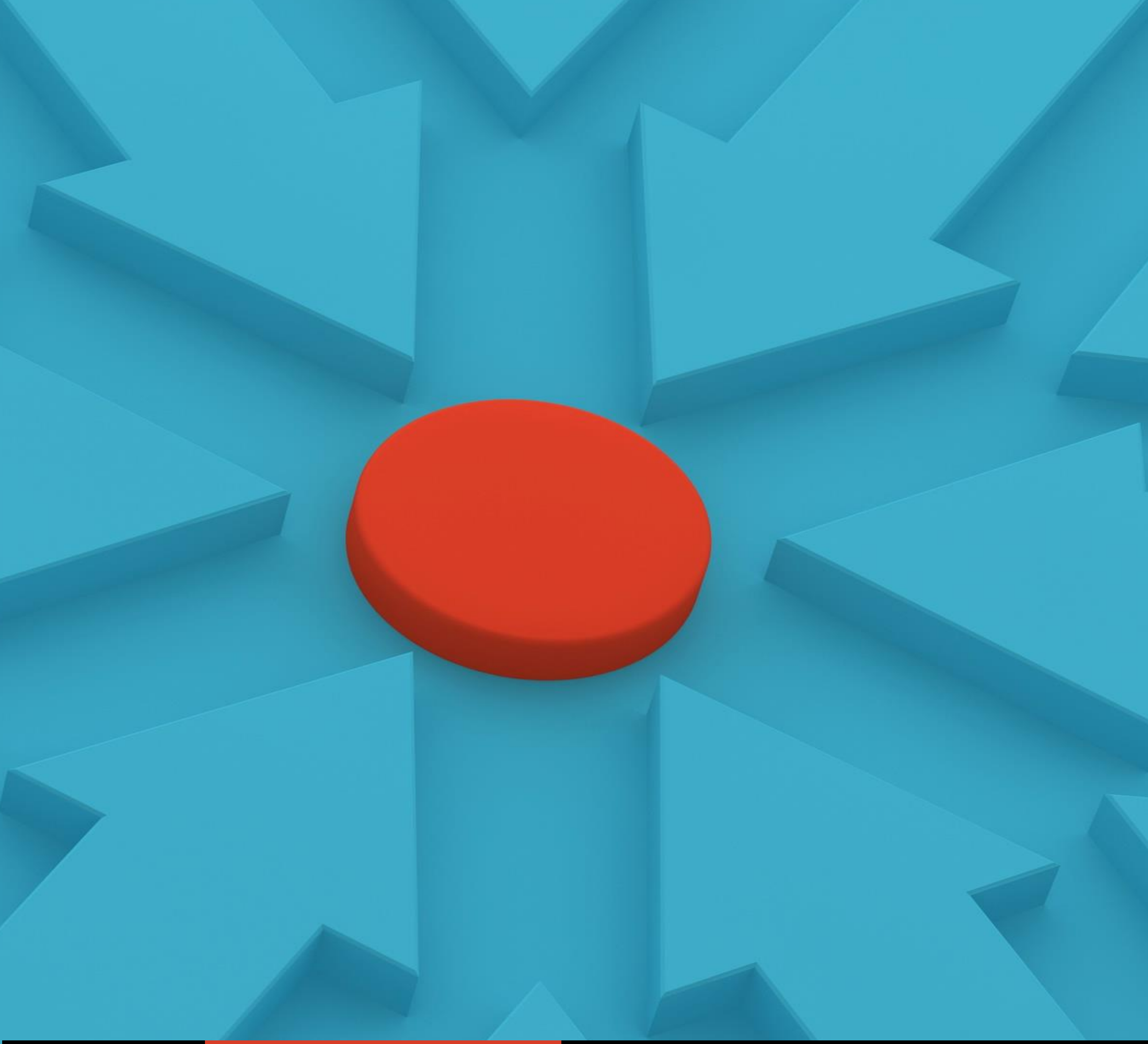

FUTURE BUSINESS MODEL INNOVATION FOR A FITNESS EQUIPMENT MANUFACTURER

A DISRUPTIVE GUIDE FOR MANUFACTURERS AND OPERATORS – WORKING PAPER (V2 UPDATE JAN 2022)

ROBERT SAWHNEY MAY 2021 – UPDATE JAN 2022 www.strategycompetitiveness.com

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Robert has had a varied career spanning health and fitness, consultancy, and academia. Currently he works in an international director role for one of the largest fitness solutions providers in the world. He has a BSc in Sports Science and Management from Brunel University and an MBA from the University of Lincoln. He did his doctoral studies in marketing at a university in Hong Kong.

He is the author of 2 books. Marketing Professional Services in Asia (Lexis Nexis, 2009) which was called one of the most indigenous books on Asian marketing by Professor Oliver Yau (Chair Professor of Marketing at City University HK) and Developing a Profitable Practice in Asia (Ark Group, 2010). He has also published over 50 articles in various newspapers and magazines on the topics of strategy, marketing, and leadership. He has spoken at numerous events as a keynote speaker or panelist around Asia.

His strengths lay in strategic thinking, action, and execution. Having worked with and supported some of the largest key accounts in the world, he also has the in-depth practical experience of achieving targets and helping those around him succeed.

Robert is a keen sportsman having played professional football. He still hits the gym 5x week and plays rugby.

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Additions added to the update of Jan 2022

INTRODUCTION

The idea that competitive advantage once found should be sustained and protected against new entrants is etched into the business psyche of many leaders. Organizations often stick to the same way of doing things even when it is clear the competitive landscape has changed. In large part brought on by industry 4.0, advantages are now seen as transient and industry definitions as less relevant. Organizations should be on a continual search for new ways of doing business as core businesses come under attack or eventually decline.

Whilst innovation in product, process or service is common, business model innovation (BMI) is a less common and understood element of the innovation system. This is unfortunate as it is business model innovation which is most often disruptive and hence greatly impacts organizational performance. Think of the massive value generated (and creatively destroyed for incumbents) by the BMI of firms such as Uber, Amazon, Apple, Netflix, Tesla etc. Also consider the incumbent firms who sat on game changing innovations (Kodak and Xerox are two prominent examples) who simply did not have the necessary organizational culture, mind set, or foresight to take advantage and could not manage the paradox between the existing and future business.

The role that mind set plays in the way firms think about innovation and strategy are particularly relevant to the concept of BMI. According to Amit and Zott (in their rigorous book: Business Model Innovation Strategy), the design of a business model is not always viewed as a major strategic choice (managers accept the business model templates in their industry without questioning them). They state this is so because managers are must more used to thinking in terms of product market strategies and not in terms of organizational systems (rather than functions or business units). In my white paper from 2021 (Strategy Mind Shift: changing leadership mental models and making strategy work), I make the case that strategy processes in most organizations are severely dysfunctional where little strategy discourse takes place. Instead, strategy processes have become planning and budgeting exercises where strategic planning has been conflated with strategic thinking.

In a rare and insightful piece about behavioral strategy, using the concepts of psychodynamics, Claudia Nagel (Global Economics and Mgt Review, 2016) discusses the psychology of strategic transformation processes. The author shows how the perspective of the CEO influences the organizations construction of shared reality and hence strategic choices. In other words, every leader and organization will sense the environment differently which in turns plays a major role in how leaders choose to move forward. They are often painfully unaware of these biases.

The author goes on to state that, " *In summary, the psychodynamics of anxiety and fear influence individual strategic thinking as they result from cognitive and emotional uncertainty due to unforeseeable future and the nature of paradoxical choices. Through cognitive biases, heuristics, and intuitive reasoning, they invade our thinking and decision-making – mostly in a limiting inability to see the whole strategic situation. Therefore, it is essential for the manager to be capable of knowing about and assessing these influences".*

In the HBR classic by Henry Mintzberg (The Rise and Fall of Strategic Planning, 1994), the author describes how typical strategic planning processes have become strategic programming, the articulation and elaboration of strategies that already exist. For him, strategic thinking is about synthesis, which involves creativity and intuition. This comes from messy informal processes of learning that are carried out by people at various levels of the organization. Arie De Gues (former head of planning at Royal Dutch/Shell) stated in a 1988 HBR article, the real purpose of effective planning is to change the mental models that decision makers carry in their heads. This is perhaps the most vexing challenge in the strategy creation process.

According to Amit and Zott (ibid), managers may fall into 2 mind set traps:

1. The trap of focusing on the product, technology, or process as a source of innovation instead of the business model which requires a more system level holistic perspective.
2. The trap of taking the business model as given and following a dominant template prevalent in their own industry.

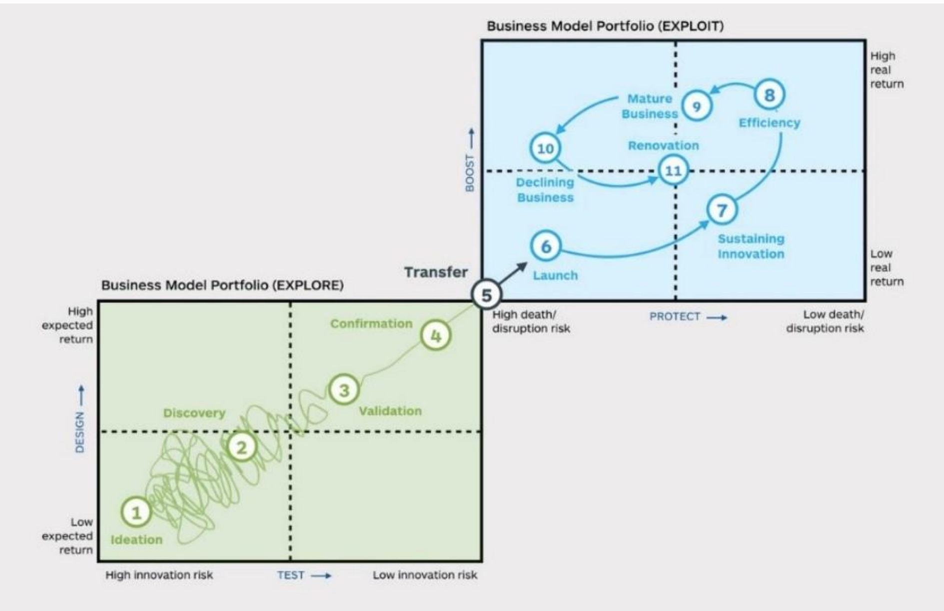
STRATEGY AS ANALYSIS		STRATEGY AS INNOVATION
Analytical, logical & linear	MINDSET	Creative & disruptive
Logical	AMBITIONS	Offensive
Stable, expect it to be much like the present	THE FUTURE	Unstable, expect it to be different
Rational actor	PEOPLE PERSPECTIVE	Passion
Preserve & tune existing business model	BUSINESS MODEL	Develop & test a portfolio of new business models
SWOT PESTEL Value-Chain Five-Forces	MAIN TOOLS	Disruptive Innovation Business Model Canvas Strategy Innovation Canvas The Innovation Pyramid
Difficult, creates resistance	CHANGE	Love to create it, make change happen
Michael Porter	LEADING PROPONENT	Gary Hamel, Rita McGrath

***Two Lenses on Strategy** (Source: Strategy Tools www.strategytools.io)*

The two lenses on strategy framework implies the very real impact that culture has on the ability to enable BMI and innovation in general. As I explained in my article, Playing to Win: the bible of strategy, should it be in your organization, deterministic approaches similar to those prescribed by Michael Porter do not seem to provide the right perspective to view environments which are volatile, uncertain, complex and ambiguous (VUCA). Strategy today is more about innovation and action requiring a culture which values learning (often through trial and error). For example, an industry analysis of the fitness industry would do little to provide insight into the threats of Big Tech and other firms that sit well outside the traditional definitions of industry. Change being seen as a one off, rather than being ongoing, is not a mind set well suited to the rapid changes we are seeing, some of which have been accelerated by COVID. Rapid digitization is breaking down traditional industry barriers hence innovation and product life cycle times are shortening as are the life span of firms and the business models they rely on. More importantly, it is the mental models that govern how most leaders run their firms that needs a complete overhaul. Innovation theatre is common, innovation substance is not!

A PORTFOLIO MIND SET

Organizations have core businesses that deliver the majority of cash flow for today. These may not be high growth businesses nor high margin, but they are critical to the current viability of the firm. In the language of the Boston Consulting Group growth share matrix, these are likely to be a mix of stars and cash cows. Every organization, at one time or another, was a start up business and the entrepreneurial culture which helped the firm succeed eventually takes on many of the traits of a bureaucracy needed to manage a large scale business seeking efficiencies. These traits, although useful in many ways, become rigidities as the core business is no longer the business that will provide longer term sustainability. The firm needs to start innovating but often does not how or where to begin. New ideas, if accepted, get squeezed into the existing business systems that either stifle the development of the ideas or kill them all together. Top management believe strategy is their purview, failing to see changes coming from the fringes of the organization or industry. Rather than having a knowledge and learning based culture which welcomes the collective wisdom of the entire organization, firms become increasingly siloed and insulated. The business press is littered with so many of these stories its surprising that this still seems to be the norm.



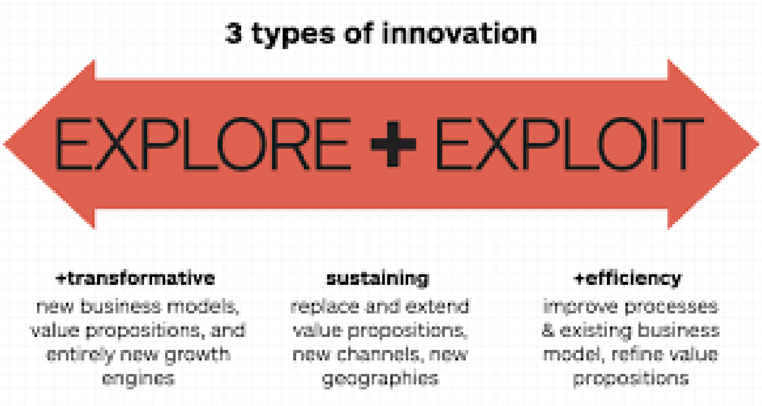
Business Model Portfolio *(Source: Strategyzer)*

The business model portfolio encapsulates this idea of moving from the organizations current core business to its future core business(es) and vice versa. One can envisage this as a kind of virtuous system whereby businesses are in a cycle of birth, growth, decline and regeneration. Where once this focus was on product innovation (consider the endless streams of product and brand extensions), the focus is now on new ways of capturing value and locking in customers through BMI. Simple examples would include Gillette using a lock in business model (similar to that of printers and toners) or the integrator approach taken by Zara to drastically cut inventory and design to production times. Indeed, the dominant market share of Gillette has been reduced by the Dollar Shave Club BMI (as Gillette focused on incremental innovation adding blade numbers almost ad infinitum) who deliver razor and blades directly to your home based on a monthly subscription.

Interestingly, P&G tried the same approach with Gillette but within the dominant logic existing within the firm (expecting much higher margins).

To have businesses in both the core and future portfolios, organizations need to both explore and exploit. This means leaders and organizations need to hold two often opposing logics and be able to function. It was F Scott Fitzgerald who said, 'the test of a first-rate intelligence is the ability to hold two opposed ideas in mind at the same time and still retain the ability to function'. Exploiting existing businesses is what most managers are used to and fits in well with the paradigm of management and strategy they have been taught. Exploring new businesses is where the challenge lays for most firms.

In his new book, The Invincible Company, Alex Osterwalder identifies the different approaches needed for exploit vs explore. These differences cross a number of dimensions including culture, focus, people and financial philosophy.



Three Types of Innovation *(Source: Strategyzer)*

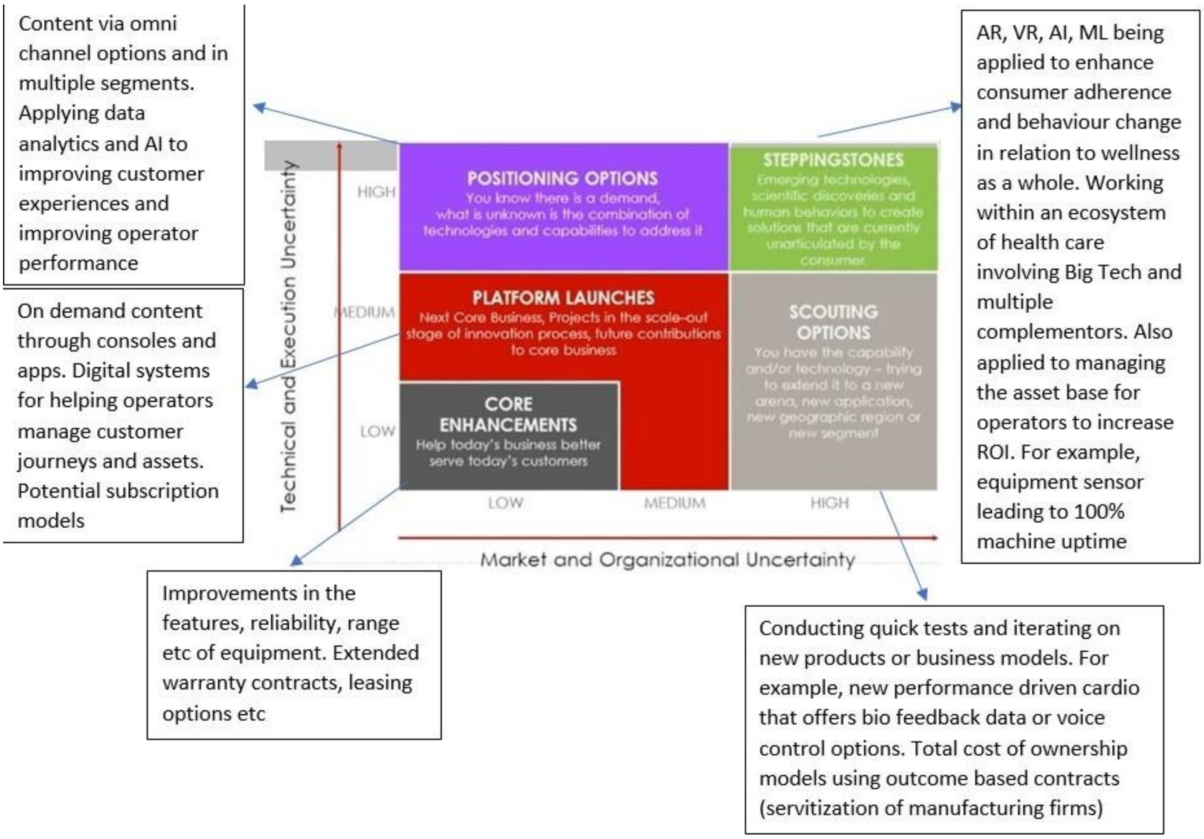
Again, according to Amit and Zott (ibid), there are two cognitive practices that stand out at firms with highly innovative business models – industry spanning research (as opposed to industry focused research) and complex system thinking (as opposed to internal efficiency thinking). They go onto suggest that two generative cognitive processes, analogical reasoning and conceptual combination, can be used to help design innovative business models. What I like about these ideas are they give you tools to actually help with the strategy thinking that improves the strategy process and actually provides insight in how strategy actually is made (this is one of the major criticisms of the dominant logic of strategy coming out of the positioning and design schools). This type of interdisciplinary thinking is not new and is well articulated in the 2004 book, The Medici Effect, by Frans Johannsson (coincidentally a student of Clayton Christensen, the author of The Innovators Dilemma and well known for his theories on disruptive innovation).

I have discussed in depth the need for strategic foresight within organizations and how one can approach strategy under uncertainty (see here). I argue that culture lies at the heart of the ability for a firm to manage paradoxes. How often do you hear arguments within exec teams when discussing short vs long term, risk vs return, standard procedures vs iteration etc. It is a knowledge, market and learning orientation that can help overcome these rigidities.

A portfolio approach essentially suggests an organization needs a number of ongoing projects that they explore and find future possible winners. Many firms believe that a handful of projects is all that is needed to fall on one that will provide future sustainability. These are often conceived at the top, mapped out into fairly full concepts and then tested with some internal discussion and a few customer focus groups. They are then 'sold' to the rest of the organization and begin some kind of waterfall project management process. With the high failure rates of new products, business models and businesses in general (plus 80% depending upon which sources you look at) it doesn't seem logical to focus on a few ideas and invest huge amounts of capital without any systematic recourse to test and iterate before consuming huge amounts of organizational resources. There are a number of validated approaches such as lean start up, design thinking, agile, bossa nova, innovators method etc but these seem too much of a stretch for most existing bureaucracies to embrace. A very interesting example is the appointment of a co CEO who is responsible for innovation and transformation. Something Ping An did in 2018.

Consider this question: How many projects do you need for one to provide a 10x ROC?

We can use research from venture capital returns as a proxy for the success rate of new ventures to answer this question. Again, depending upon the sources you look at, that percentage is around 2.5%. Less than 4 out of 1000 will return more than 50x. This suggests that you need something like 250 small scale projects running to find one that will be the next multi million dollar core business in your firm. Google is said to have 100 moonshot projects ongoing at any one time. There is no way any normal firm can afford to invest millions of dollars in hundreds of projects that drag on for years before proving unviable. This suggests you need an approach where ideas can be tested and rejected quickly. You cannot find that one successful business without expecting a significant number of failures along the way. Amazon is a prime (excuse the pun) example of a firm willing to fail.



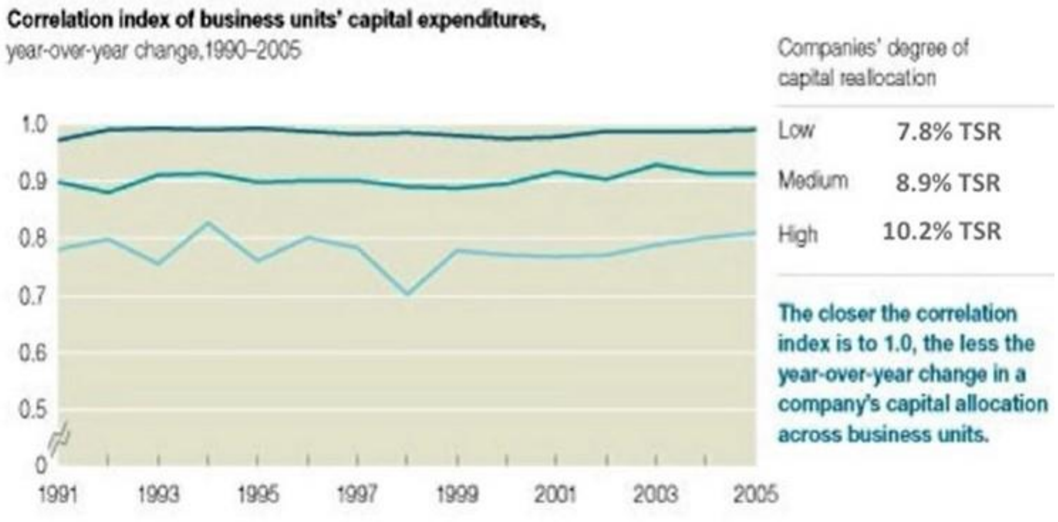
An Opportunity Portfolio *(Source: Adapted from Discovery Driven Growth (2009). Rita McGrath and Ian MacMillan)*

In the above diagram I have tried to map out the current state of where larger scale commercial fitness equipment manufacturers are and the potential opportunities that may be around the corner. Any approach you take will need to challenge the myths of strategy execution.

Reality	**Myth**
horizontal coordination	vertical alignment
strategic adaptation	implemeting a plan
building shared context	communicating strategy
dynamic resource allocation	operational excellence
execution culture	performance culture
led by distributed leaders	driven from top

The Myths of Strategy Execution *(Source: Dominic Houlder, London Business School)*

The graphic highlights some very real issues with the way strategy is carried out in most organizations. The one I would like to highlight is dynamic resource allocation. The yearly budgeting process in my view is one of the most toxic and archaic mechanisms that exist in organizations today. Not only does it eat thousands of hours in manpower each year and lead to gaming that would make an angry birds head spin, it diverts the attention of strategy away from value creation and lead indicators to a focus on financial management (lag indicators). Once yearly budgets are set it is notoriously difficult to receive funding for projects that have not been allocated for. Many of these issues can be resolved by changes in culture that allow a firm to adopt the concepts of Beyond Budgeting. Whilst not a panacea, the ideas of splitting budgets, targets and resource allocation processes makes a lot of sense and numerous organizations have successfully implemented these ideas. Research by McKinsey (below) demonstrates that firms which reallocate their capital across new or existing business units more rapidly/often outperform those that do not. In other words, traditional budgeting processes severely impede strategy execution.



(Source: McKinsey Quarterly March 2012)

BUSINESS MODEL INNOVATION

Business models have not been well articulated until recently. It was not until around the mid 2000s that serious research begun into understanding what the elements of a business model are and what types of business model innovations exist. The most well known encapsulation of this concept is probably the business model canvas developed by Alex Osterwalder. There are numerous definitions of business models:

Santos et al. (2009) "Business model innovation is a reconfiguration of activities in the existing business model of a firm that is new to the product service market in which the firm competes."

Gambardella and McGahan (2010) "Business-model innovation occurs when a firm adopts a novel approach to commercializing its underlying assets."

Yunus et al. (2010) "Business model innovation is about generating new sources of profit by finding novel value proposition/value constellation combinations."

Khanagha et al. (2014) "Business model innovation activities can range from incremental changes in individual components of business models, extension of the existing business model, introduction of parallel business models, right through to disruption of the business model, which may potentially entail replacing the existing model with a fundamentally different one."

What all these definitions have in common is the need for the organization to think about the underlying assets and competencies it may or may not have and buy/partner/reconfigure these to offer new and/or better value propositions for customers.

According to Constantinos Markides (author of Game Changing Strategies), a business model is the sum of answers to three interrelated questions:

1. Who should I target as customers?
2. What products or services should I be offering them and what should be my (differentiated) value proposition?
3. How should I do this in an efficient way?

What is striking about these questions is how similar to they seem to questions of marketing strategy. I have argued in my book, Marketing Professional Services in Asia (Lexis Nexis, 2009), that strategy and marketing are inextricably interlinked and that it is a market orientation that drives firm performance. A market orientation (both a culture and set of behaviors) consists of a competitor orientation, customer orientation, and inter-functional coordination. This is why marketing must have a seat at the strategy table.

		Scope	
		Modular	**Architectural**
Novelty	**New to firm**	Evolutionary BMI	Adaptive BMI
	New to industry	Focused BMI	Complex BMI

Business Model Innovation Typology *(Source: Foss, N. J and Saebi, T, J of Mgt, 2017, Vol 43, No 1)*

There are various types of BMI that can be categorized according to their scope and novelty.

- Evolutionary – new to the firm and incremental in nature. Consider the way most fitness equipment manufacturers have focused on solution selling which involves education and design offerings to help operators serve their members
- Focused – new to industry without major changes in BM. Examples would include serving new segments or customers that have been traditionally ignored such as offering commercial grade equipment and experiences to the home market
- Adaptive – new to the firm and architectural change. Think about how most manufacturers are now offering on demand and live content through consoles and apps in order to offer new solutions to both operators and end users
- Complex – new to industry and architectural in nature – the most obvious example would be the rush of both operators and manufacturers to offer on line content and buying opportunities (popular buzzwords reflecting this include hybridization and phygital)

None of these descriptions are intended to identify the level of sophistication or value producing potential of any BMI but are useful in understanding what is meant by BMI. Clearly those in the evolutionary or focused category are most likely to work in core businesses which are being exploited whereas architectural changes may offer a more suitable lens for exploring new businesses that may one day become the new core business. Think about how Amazon revolutionized the e commerce market by firstly engaging in complex BMI through the online selling of books then more incremental changes selling DVDs and other commodities. They have since been on a whirlwind of different innovation types in many industries including health care, delivery, and cloud services (AWS). The approach of Amazon sits squarely in the portfolio mind set discussed previously.

Business Model Triangle *(Source: St Gallen Business Model)*

There are numerous tools and concepts for analyzing customer value propositions which in turn help you think about BMI. I will discuss these later. For manufacturing firms this has focused very heavily on what is called 'servitization'. Enabled by the IOT, organizations which traditionally focused on selling hardware and offered some services for free (or at a low fee) are now creating product service systems (PSS) whereby a total solution is offered. Well known examples would include IBM and their success in technology services and Siemens in the health care business. There is a paradox to be managed here. Firms which focus on product innovation and servitization in combination actually experience a decline in short term performance. Research by Visnjic et al (published in the Journal of Product Innovation Mgt, 2014), shows that this happens due to an increase in resource commitment and coordination costs. However, after a few years, firms that engaged in concurrent innovation performed significantly better than those firms which did not. This presents another cultural challenge as senior managers are under pressure to meet short term targets at the expense of the longer term viability of the firm. The rationale for companies to engage in servitization is clear.

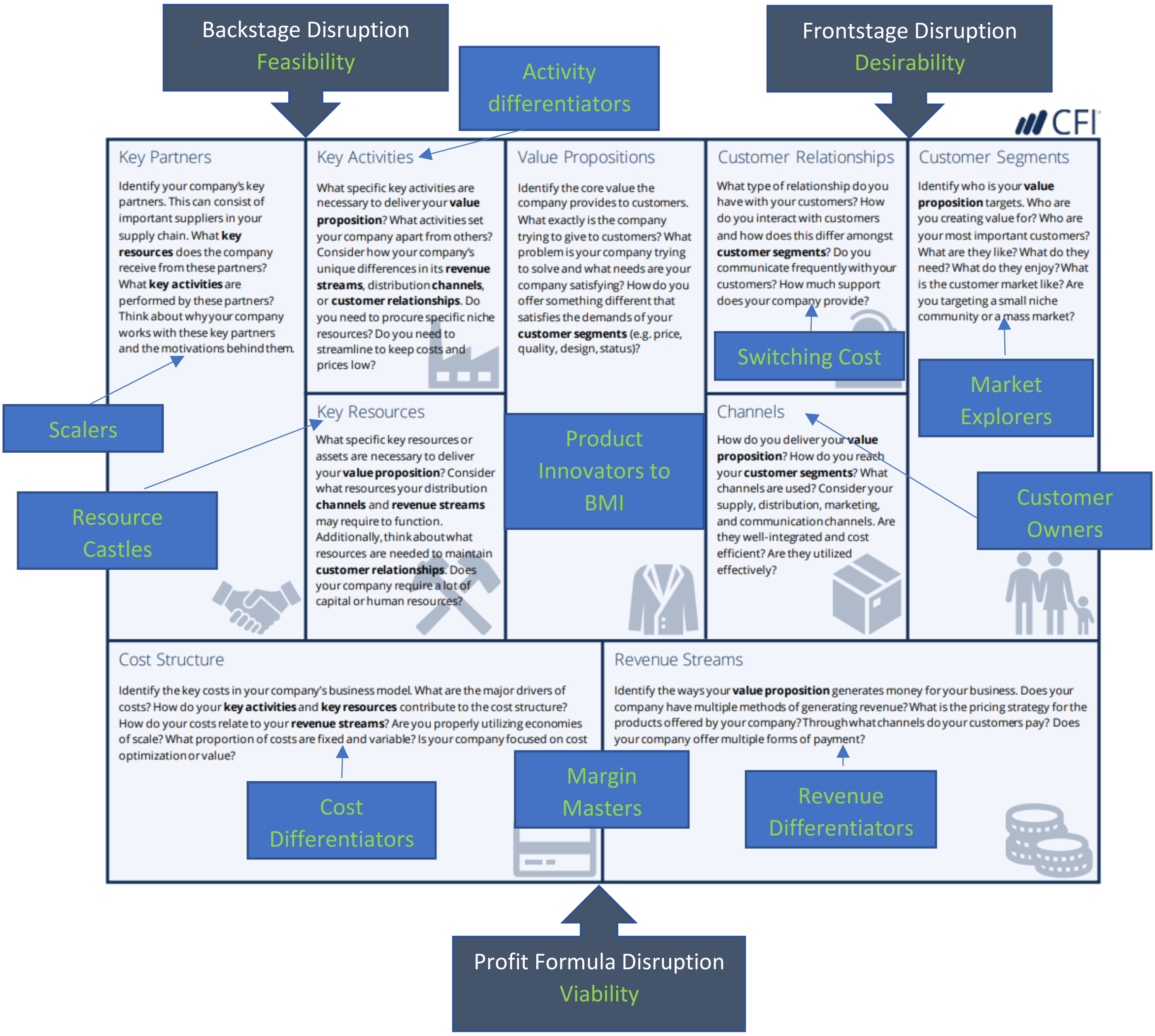
Recurring revenue business models generate some 8x business value compared to similar organizations with minimal recurring revenue.

According to Ibarra et al (Procedia Manufacturing, 2018), there are three approaches to the challenges and features created by industry 4.0 on business models:

1. **A service-oriented approach**: the need to rethink the optimal mix of product and service business has been identified, since the digital part of a hybrid solution is always a service. The result is the so-called product service system (PSS) concept, a framework describing the integrated development, realization, and offering of specific product-service bundles as a solution for the customer. As a result, suppliers, customers, and other partners become part of a networked ecosystem. Imagine a fitness equipment manufacturer who no longer 'sells' equipment but rather sells solutions helping an operator to manage the top and bottom line by managing 100% uptime of equipment
2. **A network-oriented approach**: the horizontal and vertical integration of the value chain and the related interoperability expands firms' traditional boundaries due to the organization and the stakeholders' network. New actors arise and the role of existing ones is changing. As a consequence, new ways of creating and offering value through ecosystems that goes beyond individual value chains are raising. Accordingly, traditional manufacturing companies oriented to product sales, feel increasingly compelled to revise their existing Business Models. A clear example would be multi sided platforms with content/solution developers and providers and exercise experiences driven by AI, machine learning and behavioural economics
3. **A user-driven approach**: this context opens up inroads to make manufacturing more responsive to user-driven design and to align it better with customer value creation processes and contexts. From this approach, companies need to develop new capabilities in both, learning more about their customers (using digital capabilities to obtain information about customers, promoting evidence-based decision making, developing integral customer experiences, etc.) and becoming more of an ecosystem beyond individual value chains (become great at building partnerships with new stakeholders). Thus, the Industry 4.0 provides opportunities to create new and more flexible value propositions to respond to customer demands such as the provision of individualized products and even batch-size-line production. In the future, not only will new entrants gather huge amounts of data to offer hyper personalised solutions to exercisers, manufacturers will be able to offer dynamic pricing models based on installation type and usage data. In addition, with the advances in 3D printing and rapid prototyping B2B buyers will be able to go on line and co design equipment in short run batches

There are numerous examples of old school manufacturing organisations that have recognised that hardware is quickly becoming commoditized and differentiation lays in solutions and services. In the manufacturing of fitness equipment, especially cardio equipment, commoditization has already arrived and the points of difference will be service, content, platforms and eco systems. In other words, demonstrate ROI or die!

The below operationalisation of a firm's business model is one that is very well known and was popularized by Alex Osterwalder.



Business Model Canvas *(Source: Adapted from CFI and Alex Osterwalder)*

Backstage Disruption – refers to the foundational competencies and assets (configured into capabilities) that support the entire value proposition:

1. Key partners – Tesla for example relies heavily on emerging technology provided by suppliers and complementors which helps them scale. Netflix would have a different set of partners including Amazon AWS and media producers.

2. Key activities – content production and distribution would be important activity differentiators for Netflix compared to the original incumbent Blockbuster as well as existing movie studio competitors.
3. Key resources – for Netflix or Apple then platforms and eco systems are critical resources and very difficult to match due to network effects (scale and scope of learning). One could even claim the personal brand of Elon Musk is a key resource for Tesla.

Frontstage Disruption – this is what is often most visible to the customer in terms of the value proposition:

1. Customer relationships – the on demand self service nature of the Netflix service creates powerful relationships directly between the company and end user. Data analytics and machine learning acts as though the platform knows you (switching costs increase). In the B2B world, John Deere enhances relationships through real time data to help customers improve their operational efficiency.
2. Channels – omni channel approaches are not new but can be newly defined or reconfigured for an industry. Think how Dell revolutionized computer sales or Amazon in the book industry. One of the benefits of disintermediation is the direct relationship manufacturers can build with customers increasing market sensing and responsiveness.
3. Customer segments – Tesla clearly targets a mix of environmental and tech customers, a growing affluent consumer base. Netflix is able to leverage the power of data analytics to create highly specific micro segments to further personalise its offer.

Profit Formula Disruption – here the focus is on capturing value through pricing levels/mechanism and cost structure:

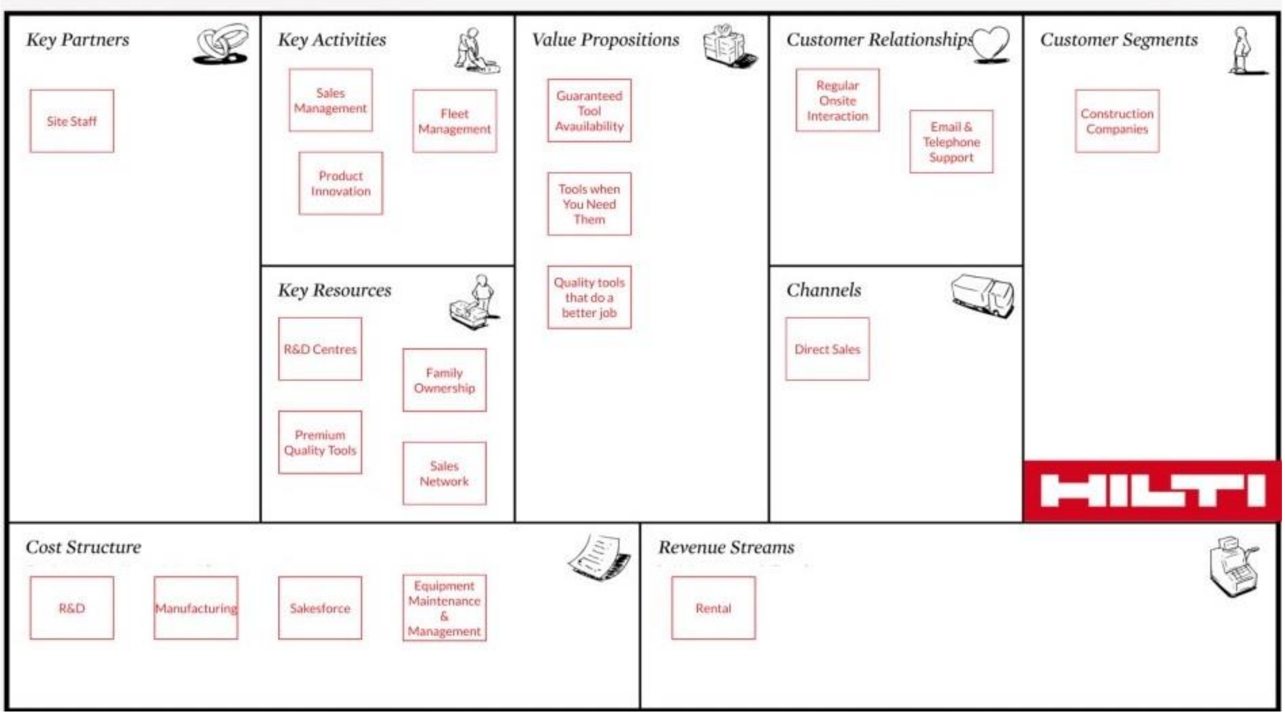
1. Cost structure – Southwest Airlines is a classic example of a low cost structure driven by low frills, point to point flying network, and quick turn around times. Dell is another well known example of a company that built deep relationships with suppliers to manage a production system highly reliant on JIT and low inventory levels. However, the bridge between being a low cost provider and differentiator has narrowed in years mainly due to the expectation of customers who demand both competitive pricing and valued features. Toyota is well known for the typical indicators of low cost structure yet with a highly featured product. Other firms increase cost structure to generate higher returns.
2. Revenue streams – one of the clearest indicators that your business can be either disrupted or substituted is a transactional revenue stream. Typical manufacturing organizations such as Otis, Caterpillar and Rolls Royce have moved to some kind of performance based pay based on a subscription model. Known as the outcome economy, these firms manage margins and revenue streams based on what they achieve for the customer. Amazon is a good example of a firm leveraging core competencies to enhance revenue stream options (think of the huge investments they made in cloud based infrastructure which they turned into a profit centre with AWS).

The final piece of the puzzle is the value proposition (more likely to come first in your thinking process). In classic marketing terminology there are 4 types of value:

1. Functional value – what does your offer do? Netflix offers 24/7 access and unlimited streaming. Rolls Royce charges customers by the amount of time the product is used and the efficiencies it delivers (power by the hour)

2. Monetary value – some products such as Apple have a relatively low cost structure but charge a premium price and hence offer little monetary value. Others such as Tesla may do the same but offer monetary advantages to customers in terms of total cost of ownership (TCO)
3. Social value – the ability to connect with others has been the foundation of social media behemoths such as Facebook and WeChat
4. Psychological value – status driven buys of premium brands such as LV, Ferrari etc are obvious examples. Less obvious examples have been the massive surge in health and fitness wearables which enhance how you feel about yourself

In reality, solutions/products may serve a number of value purposes that could differ by segment or buyer persona.



Hilti Business Model *(Source: https://www.denis-oakley.com/hilti-business-model/)*

Hilti (a power tools manufacturer) is a classic example of a transactionally based B2B seller who recognised the need to shift in light of changing market conditions and competitive pressures. You can see in the above canvas the key elements of the BMI for Hilti:

- Value proposition – shift from selling high end tools to selling 'holes'. Managing the total solution for the customer from availability at site to guaranteed uptime
- Key activities – one of the most challenging aspects of the BMI was the move to fleet management competencies so their team could coordinate the large number of customer sites where tools were leased and ensure the performance of these tools
- Customer relationships – from mainly selling to crib managers and project leaders, the sales team had to build relationships with the executive level in order to demonstrate the solutions available and their value
- Revenue streams – from one off sales to recurring revenue subscriptions through a leasing model

- Cost structure – investing in fleet management capabilities added significant cost to the BM of Hilti and took some years for the revenue increase to off set this change (this fits in with the research I cited earlier that firms which engage in PSS (product service system BMI) experience a drop off in performance in the short term)

The overall success of this BMI has been dramatic. Hilti has over 1 million pieces of equipment on lease with over 100,000 customers. Almost the entire value chain can be reconfigured based on industry 4.0 technologies including training, recruiting, logistics, invoicing and reporting.

As the CEO of Hilti Dr. Christoph Loos explains "We struggled with many operational challenges in capturing the new contractual obligations in our IT systems (ensuring fleet customers wouldn't be charged for repair costs, tool pick-ups and deliveries)". "Out of a finance perspective, it's easier to sell a tool and to get your money after 30 days than delivering a few hundred tools to a customer and receiving monthly instalments over 4 years while piling up receivables on your balance sheet."

He goes on to explain further challenges, "a very strong alignment of the executive team at Hilti and staying the course despite internal resistance over a long time period (>15 years). And to allow enough time for the required change management to take hold by scaling it up step-by-step, country-by-country. The approach in each new country to generate initial successes, typically with customers with strong ties to Hilti, with strong senior management involvement and our best sales team members. Their initial success was then used to inspire the rest of the team."

The Hilti example provides a compelling example of the cultural and structural challenges within an organization moving towards BMI. Imagine an executive team whose KPIs are strongly linked to revenue targets without much focus on lead indicators (such as innovation pipeline). What would be the motivation for them to initiate such a large scale transformation if bonuses were to be severely impacted? It is most likely much easier to overcome these challenges in privately owned firms than those which are publicly listed or controlled by private equity.

WHAT COULD BMI LOOK LIKE FOR A FITNESS EQUIPMENT MANUFACTURER?

There are numerous BMI patterns that seem to be recycled and improved upon over time, or moved from one industry to another (think about Nespresso basically following the printer/ink BM, the so called Razor and Blade pattern), very little is truly new (one idea builds on another). BMI lab has identified 55 types from major disruptive examples to much smaller scale incremental type innovations (https://businessmodelnavigator.com/explore).

The below table provides a simple scorecard for organizations to assess the attractiveness of their business model. A low score would indicate a low level of attractiveness. This could mean a few things but essentially the organisation is likely to compete heavily on price for every transaction and could be easily supplanted. Assuming the industry is an attractive one (say high margins and low NPS) one could assume that a new or existing firm will engage in BMI to seize more value from the market.

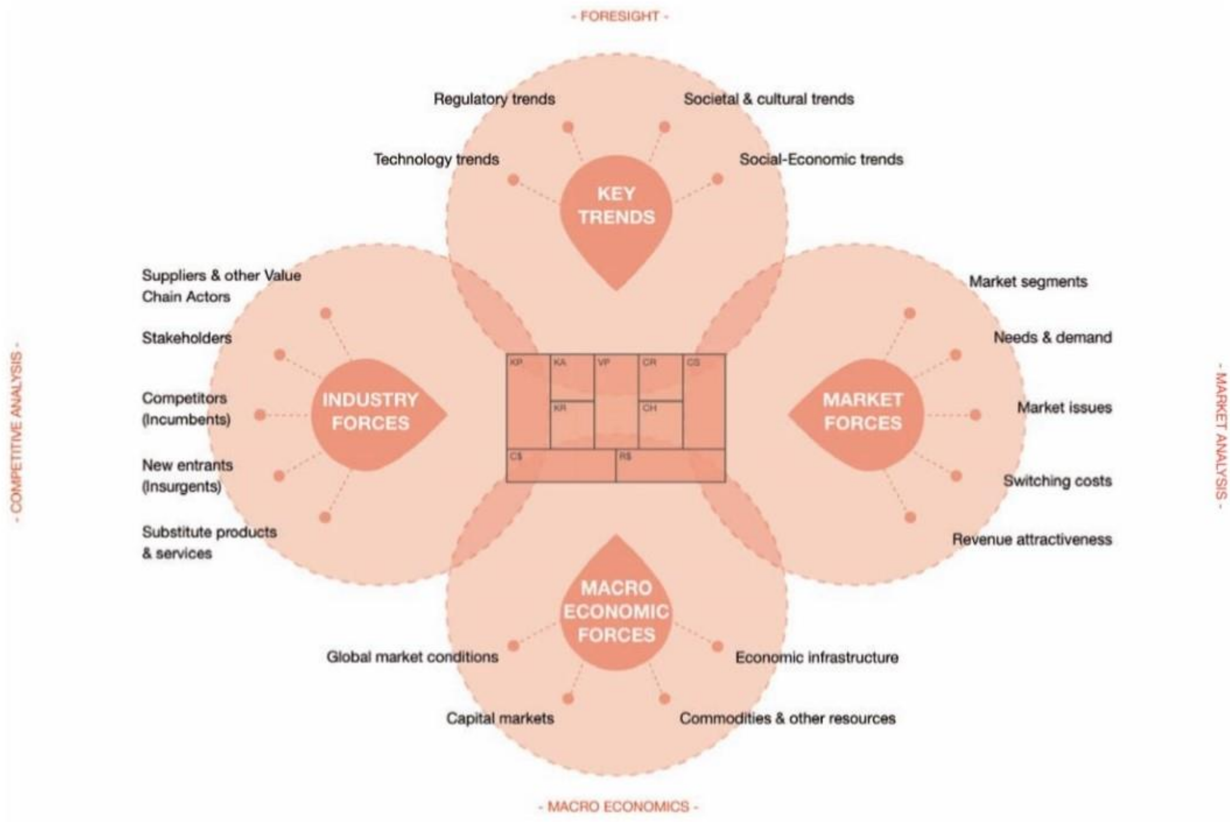
As I described in my white paper, What If Apple Makes A Treadmill: or doesn't!, the fitness industry isn't necessarily attractive for Big Tech firms but the health industry is. The scenario I laid out explained how a firm like Apple could come in and disrupt the fitness industry in pursuit of the much larger health industry. Even if that scenario does not play out in any significant way, the manufacture and supply of fitness equipment is likely to be changed by other entrants or existing incumbents (will be fascinating to see the plans Peloton has for the commercial business of Precor). If we take a look at the framework below, it becomes obvious there are significant opportunities for BMI.

The cost to a customer of switching to another provider is relatively low	1 2 3 4 5 6 7	The cost to a customer of switching to another provider once they have signed up with us is relatively high
The model is based on individual transactions which must be re-purchased each time	1 2 3 4 5 6 7	The model is based on a series of transactions (such as subscriptions or long term contracts) which are subject to renewal
The user interface for the model is pretty much the same for all providers (for instance, an ATM interface)	1 2 3 4 5 6 7	The user interface for the model is different for different providers meaning it is easier for users to learn one system and stick with it
The benefits provided by the model are optional or discretionary	1 2 3 4 5 6 7	The benefits provided by the model are required, specified in or mandatory
There are few network effects in this business or we are a late mover	1 2 3 4 5 6 7	We have the potential to create positive network externalities in this model
This model solves the customers' problem once and for all	1 2 3 4 5 6 7	The customers' problem is ongoing
The model is arms-length or transactional	1 2 3 4 5 6 7	The model establishes some kind of relationship
The model has little impact on the customers' experience or the impact is negative	1 2 3 4 5 6 7	The model involves changing the customer experience significantly and the impact is positive
The model operates on a standalone basis	1 2 3 4 5 6 7	The model creates a platform others can use to accomplish their goals
We create the offer	1 2 3 4 5 6 7	The offer is to some extent co-created

Business Model Attractiveness

I have attempted to score what I believe to be the average standing right now of the major industry providers. Overall, there doesn't seem to be much in the way business models are configured to limit moving from one supplier to another. For sure within market some suppliers may offer superior levels of service or be particularly skilled at relationship management but that is hardly a process which is built upon the capabilities of the manufacturer. In fact, most manufacturers are highly reliant upon distributors globally and hence it is the local capabilities of the distributor that sets one supplier apart from the next.

Before we start looking at what a new business model could look like for a manufacturer, we need to have some understanding of the market place and the needs of customers, both expressed and latent. This will have a major impact on the value proposition. We also need to look at customers through the perspective of the B2B buyer and their customer, the end user.



Factors Affecting BMI *(Source: Jan Schmiedgen, Innovating User Value, MA Thesis)*

Below is a high level analysis of the key factors affecting BMI based on the factors described in the figure above.

Key trends:

Technology trends – The industrial IOT (IIOT) has created the opportunity for businesses to leverage huge amounts of data in improving operational efficiencies and delivering greater value to customers. More acute has been the digital shift in consumers experience in health and fitness marked by wearables, metabolic monitoring, tracking, sleep tech, AR, VR, biometrics, virtual training, on demand and live streaming classes etc. For an exceptional review of key tech trends see the 2021 Tech Trends report from the Future Today Institute (https://futuretodayinstitute.com/trends/)\

Socio-cultural trends – somewhat accelerated by COVID, there has been a long term trend in consumers awareness in regards to health and fitness. This has expanded from just being fitter or healthier to a broader sense of wellness and now wellbeing. In a recent report by Lululemon (Global Wellbeing Index), physical fitness only accounted for around 15% of total well being

Socio economic trends – as the developing world becomes richer there is a growing market for health and fitness offerings in places such as Asia and Africa. This means more operators are looking to international markets and suppliers will need to be able to offer solutions across continents

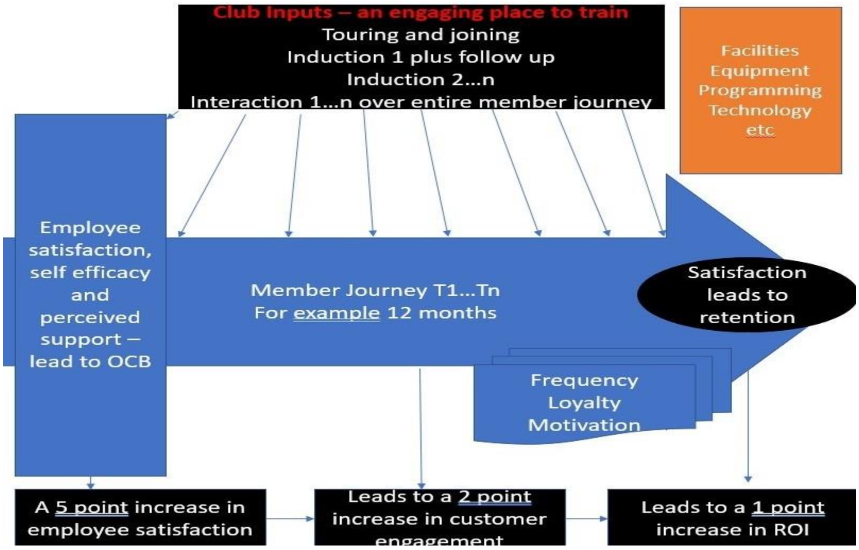
Regulatory trends – these trends are weaker signals but I can see two things happening as the fitness industry becomes more central to the health sector. One will be in better educated trainers with more standardized qualifications, especially when dealing with exercise as medicine and special populations. Trainers will need better resources to work with varying customer groups. Data driven platforms, AI and machine learning will be central to this resource as will information eco systems and apps. The other area will be in equipment safety and reliability as a more varied customer base starts using commercial gyms. Sensors that can monitor machine issues before they become critical will become increasingly important

Market forces:

Switching costs – there are very low switching costs for customers when it comes to the purchase of fitness equipment in the commercial sector. Some organizations or distributors may offer financing, leasing, rebate and buy back programs but this is all easy to copy. This is also not universally applied across all geographies

Needs and demands – Europe is probably the most advanced market when it comes to operators searching for solutions. They are expecting a supplier to offer a solution that in some tangible way affects the top or bottom line. No one can do this in any credible way. In addition, consumers have become increasingly frustrated with the typical gym experience leading to attrition rates of over 50% (depending upon the time frame measured) and a slew of new alternatives entering the market including boutiques and PT studios

Market issues and segments – operators have been facing increasing challenges in winning and keeping customers. As the industry continues to grow and consumer expectations change, the commercial operator has had to deal with a raft of new competition and multiple substitutes. Even in the short span between 2014 and 2018 the number of health clubs globally grew some 20% from 165,000 to over 210,000. This has created multiple new segments for consumers and suppliers. COVID has of course accelerated a number of trends which has seen a boom in home fitness, virtual training, and app based wellness offers (there were over 70,000 new apps launched in 2020). The industry has evolved from the days of Vic Tanny (the so called father of modern health clubs in the US), to Jack LaLanne, to Arthur Jones (inventor of Nautilus variable resistance machine), to the aerobics era led by Dr Kenneth Cooper. The hard sell approach so apparent in many traditional health clubs (24 hour fitness, California Fitness etc) probably came from those instigated by Vic Tanny and still have a negative impact on the consumer experience today. Taking a look from the fringes of the industry, we are moving towards an evidenced based approach to exercise. This will put even greater emphasis on operators to show how they can help members achieve their goals which in turn will force suppliers to show differentiation through ROI to an operator. This will not only impact experiences for members, it will necessitate the need to evaluate how an operator manages and motivates its people to enhance the member journey beyond the standard induction and program. This in turn again will pressure suppliers to demonstrate how their solutions enhances the operating procedures of the facility and the productivity of its people. Glofox state that over 40% of gym members now rely on their smart phone for training. According to Les Mills, half of all new members joining clubs are Millennials and Gen Z yet the most active visitors are boomers (70-79 years old)



An Empirical Validation of a Member Journey *(Source: authors own analysis)*

Macroeconomic forces:

Global market conditions – the growth in purchasing power of those in lesser developed countries has now made the fitness industry a global one. The first international brand which made a major move in Asia was the original Ray Wilsons California Fitness Centre which opened in Hong Kong in 1995. It didn't take them long to expand across Asia. During the last 25 years there have been an increasing number of fitness brands expanding globally through a mix of franchising, JVs and in some cases wholly owned foreign enterprises (WOFE). The spending power of these new consumers means operators will need an increasing capability from their suppliers in offering standard solutions across borders. We already see this need in financing, pricing, and servicing based on existing business models. The imperative for suppliers in the future will be offering new solutions across geographies based on a new business model. Hilti (the BMI example described above) is managing this transition on a market by market basis and highlights the challenges of fulfilling this need based on a multitude of dealers and distributors

Industry forces:

Competitors and new entrants – using the traditional industry analysis described by industrial economic models, fitness equipment manufacturers have faced an increasing number of sophisticated competitors enter the market. Whilst some may focus on the premium end of the market and others could be described to some degree as cost leaders, they are all essentially following very similar go to market strategies with very similar business models. Buying decisions have become increasingly price driven. If we look beyond traditional boundaries, then the impact that home equipment focused manufacturers could have on the commercial market will be interesting to see. The obvious example is that of Peloton (even before they bought Precor). Back in 2016 and again in 2017 when Peloton still had revenues of less than $100m a year (and was losing money), I know a number of industry professionals (including myself) who had signalled the threat (and opportunity) that the business model of Peloton presented. The attitude of the large manufacturers was typical of incumbent firms, dismissal and complacency. Fast forward to 2021 and the threat is a clear and present danger. What Peloton have proven is that a recurring revenue model built upon great content is a viable proposition. How that will extend into the commercial space with the acquisition of Precor is unclear but what we are seeing is an increasing number of facilities (such as hotels) install Peloton products. It is not a stretch to think that Peloton will rebrand all existing Precor commercial products and offer content on a commercial licence to facilities similar to the model that Les Mills uses. What will happen in terms of operator attitudes if Peloton use their platforms to target and monetize individual consumers in a commercial setting is hard to predict. A win/win solution will have to be figured out.

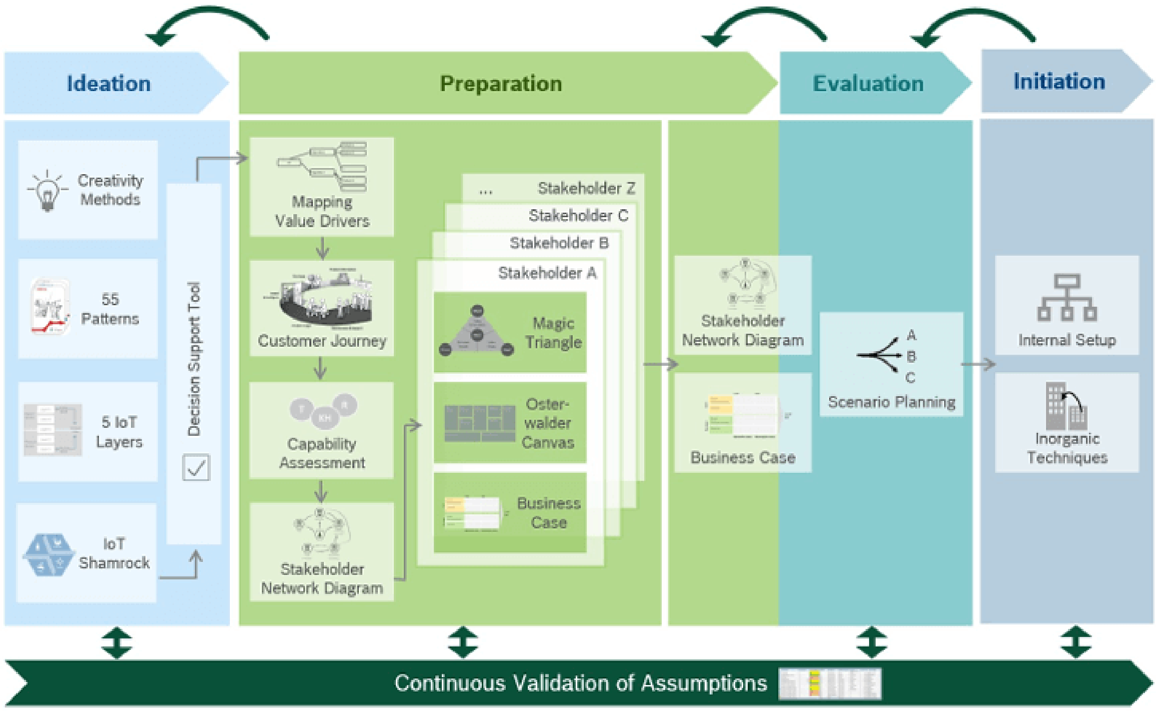
Consumers have 'pulled' the product through the channel due to the strong brand relevance that Peloton has (only second to Apple according to 2021 brand relevance index released by Prophet). Commercial manufacturers have dreamed of this type of relevance for years without getting close. We are now seeing other consumer focused suppliers target the commercial space such as Tonal, Vitruvian, and Mirror. I don't see these companies expanding into full commercial lines but they provide options for rounding out offers whilst showing glimpses of the future where AI and ML start to impact strength training technology, and potentially being attractive buy targets for existing firms or new entrants.

Looking even further to the edges of the industry, which is best described as an arena (see for example the seminal work on strategy by Hambrick and Fredrickson), the incumbent manufacturers face disruptive threats. Big tech firms (such as Apple, Google and Amazon) have made no secret of their interest to tap the $10T health market. Whilst the $15bn equipment market seems minuscule by comparison, the fitness industry will be just an entry strategy to the larger health industry. Apple Fitness+ is the clearest example of this approach and I have already laid out a clear scenario of how Apple could disrupt the industry in my white paper mentioned previously (What If Apple Makes a Treadmill: or doesn't!). I predict Apple will buy Peloton this year.

Stakeholders – I have touched on key stakeholder such as direct customers and consumers. Other key stakeholders include industry staff (part of the customer decision making unit), suppliers, eco system partners, shareholders etc. Within a club, the brand experience is primarily delivered by the staff on site. Unfortunately, in many cases the front line staff and trainers are often the most poorly engaged people in the organization (this is true of most service oriented businesses). This is due to a number of reasons to do with how an organization views the management of people and how they are motivated. A typical example is the relatively low level of base pay most trainers receive and high commission structures based on selling PT packages. If your only KPI is to sell PT packages then that is what you will focus on, normally to the detriment of the vast majority of members who do not purchase PT (and the morale and engagement of trainers who are under constant pressure to sell). Any solution offered by a manufacturer will have to take into account the impact on trainers and the perception that digitally enhanced member journeys (for example programming) could negatively affect their sales. The solution must be able to support trainers in being more productive whilst being implemented with a change process in mind. Additionally, as the industry becomes more evidence based and trainers take on the mantle of knowledge workers, any solution will need to be a source of KM to improve the capabilities of what is on offer to the end user. Any digital solution offered to a club will need the buy in of trainers and hence proof that the concept is a complementor rather than a substitute is needed (think ATM machines and bank tellers). If this is the case it seems wise to get trainer insight into any solution development as early as possible.

Traditionally, suppliers in the manufacturing of fitness equipment have been component and finished goods suppliers. This will expand out into app developers, technology firms, new investors and the eco system of content and other solution providers (think about the six figure salaries that Peloton pays its instructors). If the current BM changes and heads towards some kind of recurring revenue model (whether that includes, hardware, digital, and content or just one of these) it is likely that the standard payment terms may no longer be viable. In addition, suppliers value chains will have to be more closely aligned with the OEM to be more responsive to market needs (a good example would the Toyota Production System or Dell and their use of JIT). Overall manufacturers will have to define a new way of working with stakeholders, especially key partners.

With this high level overview of the major factors impacting BMI, we can now explore the customer value proposition and business model options for a commercially oriented fitness equipment manufacturer.



IOT Business Model Builder, *(Source: Bosch.IO)*

It is important to note there is no one right way to approach innovation and uncovering value propositions that work. Traditional project management techniques associated with a waterfall method are the least effective due to the linear approach taken and the a priori assumptions made, not to mention the time and cost it takes to launch a new idea without any real validation. Iterative approaches which seek stakeholder input (especially customers) early and often are what is needed where, as we mentioned previously, it may takes dozens if not hundreds of on going projects before landing on something that can be considered a winner. There are numerous great resources which explore at length more effective approaches such as agile, lean start up, design thinking, innovators method etc.

The above model developed by the Industrial Internet Consortium (of which Bosch is a member) shows an iterative process of BMI based on the IIOT (industrial internet of things). As stated in their blog on the subject; 'As opposed to traditional business models, we see that IoT businesses require enterprises to join forces to deliver end-to-end solutions. In part because customers (both B2C and B2B) increasingly expect a holistic user experience when literally everything connects and platforms and assistants are on the rise. That is why it is so important to focus on standards (even when it comes to business model approaches) and orchestrating value networks. Underpinning all of this with a convincing plan, such as the business model roadmap, helps to streamline all stakeholders involved in creating future-proof business models'. This is a 6 month process for Bosch that quickly tests, iterates, and if needed, discards projects that do not seem to be viable or meet the $100m business opportunity threshold expected. It is important to note that the model is not fixed nor is it necessarily sequential in process, it is based on continual feedback loops that are more in line with the concepts of systems thinking. For example, scenario planning can be a great for ideation as it allows an organization to explore ideas that may not considered viable but nonetheless lead to useful insights. Even then systems thinking approaches can be problematic as cause and effect aren't often clear. In this case ideas more closely associated with complexity theory can be beneficial. For example, some research shows that new organizational forms and sequences manifest themselves between the formal and informal parts of the organization. These cannot be directed per se but only nudged into self emergent systems. For example, instead of managing organizations by function and matrix structures, firms need to think more in terms of self regulating teams and pooling intellectual capital (wisdom of the crowd). That means management needs to not only look outside formal communication structures but actively seek them out and nurture them from any part of the organization. This is much more in line with the emergent and learning schools of strategy than the deterministic approaches prescribed by the analysis and planning schools. This is often called strategic improvisation and favours simplicity and adaptability over control and bureaucracy.

Based on the IOT Business Model Builder above, I will develop what the BMI of a fitness equipment manufacturer could look like by focusing on a few tools including the 55 patterns, value proposition development (using the canvas among other tools) and the business model canvas. Note that any analysis should take into account multiple stakeholders. I will focus on the B2B buyer and their customer, the end user in a health club setting.

<u>A sample of the 55 pattern archetypes applied to the fitness industry:</u>

- Add on – core product is priced competitively with the option of numerous extras (i.e. SAP, SFDC, Ryanair): an equipment manufacturer could offer content and digital solutions on a turn key basis similar to a freemium model. In turn the operator could offer mirrored services to the end user either on a subscription basis, pay as you go, or tiered membership structure (whether in or out of the gym services)
- Hidden revenue – sources of revenue come from a third party such as advertisers or other service providers (i.e. JC Decaux, YouTube): instead of the B2B buyer paying full price for hardware, software or content, the manufacturer could build an advertiser base who would target in facility users or perhaps the actual operator on back end CRM interfaces. Another option would be adding partners to the eco system of a platform that impact a consumers health journey (for example insurance companies or other health care providers). This is similar to the banking as a market place concept
- Revenue sharing – sharing revenues with other stakeholders such as complementors or even rivals (i.e. Apple app store, Amazon Kindle): manufacturers could work with app developers to offer comprehensive solutions to facilities that impact ROI such as member retention. In particular AI and ML based training will have a huge impact on adherence to exercise and the way trainers interact with customers. Suppliers could work with operators on developing journeys that tangibly affect their business and create outcome based contracts where revenues generated are shared among the stakeholders. This could also be applied to operational efficiency whereby a manufacturer is able to demonstrate better TCO (total cost of ownership) based on analytics which improve equipment uptime and decrease usage costs.
- Affiliate programs – usually based on some kind of pay per sale or pay per display (i.e. American Express, Amazon affiliate program) – a manufacturer could work with B2B customers on selling in home fitness equipment and solutions on a commission basis
- Fractionalized ownership – sharing of assets among a group of owners (i.e. Netjet, mobility car sharing): with equipment being one of the most capital intensive parts of setting up a

facility, including the need to update/refresh (usually around the 5-7 year point) equipment to offer new or changing solutions to customers, suppliers can offer options to swap certain equipment between one customer and another much more frequently than the typical refresh date. This would motivate suppliers to offer comprehensive solutions around maintenance and upkeep whilst offering customers renewed options to members who seek different experiences. This could also be applied based on peak usage times. A hotel for example could get more equipment during the peak season as needed

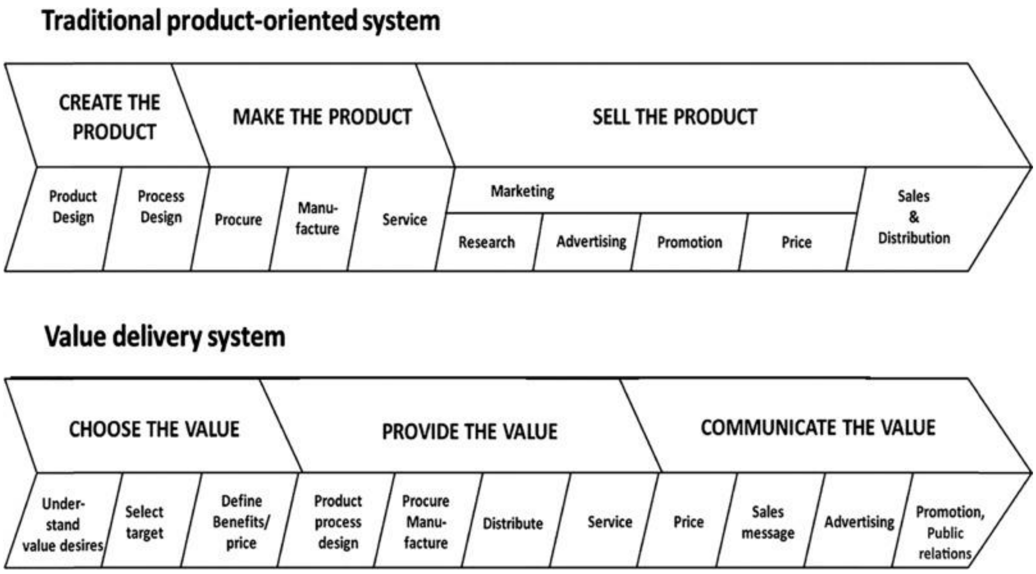
- Ingredient branding – refers to a specific component or ingredient originating from another specific brand (i.e. Intel, Bosch): Les Mills is the classic example of a supplier creating brand pull for the facility. Peloton could be the next player in the commercial space to achieve this with content (perhaps a mix of live and virtual). How can incumbent suppliers use this to engage B2B buyers and more importantly the end user? For now, this seems exceptionally challenging
- Aikido – offering something that is essence opposite of what the market has been doing (i.e. Swatch, Southwest Airlines, Nintendo): so called lower quality (featured) products can do well if the value offered is based on features that are demanded in the market (the strategy canvas from Blue Ocean strategy maybe useful here). If, especially for cardio equipment, products are becoming highly commoditized and the battle ground is moving to the platform and eco system then manufacturers could consider making scaled down hardware with easily interchangeable consoles which act as the platform to deliver a differentiated offer. An obvious benefit is low cost production and scale economies
- Cash machine and mass customization – in the cash machine the customer pays upfront for the product which leads to improved liquidity (i.e. Dell). In mass customization (again Dell but we have seem many others including Nike and Scholl), modular products and production systems enable the efficient individualization of products: Many facility operators are looking for ways to differentiate their club from the one 1000 metres down the road. Whilst service and programming form a large basis of this differentiation, so could mass customized equipment. With the technology enabled infrastructure of IIOT and advances in e commerce capabilities along with 3D printing developments (and rapid prototyping), it is feasible to see many components of fitness equipment (without moving parts) being customized to order. There are already some examples in the car industry (such as BMW and Porsche). The overall adoption of 3D printing in mass customization is still low and challenging for traditional manufacturers. One possible alternative is to use 3D printing to print moulds used for injection moulding techniques. Not specifically related to this pattern example, I can also see in country service departments 3D printing replacement parts at much lower costs than currently and of course drastically improving after sales metrics for customers
- Flat rate subscription – here a supplier charges a customer a flat fixed fee over the tenure of a contract regardless of usage (i.e. Spotify, Netflix, Vodafone, Hilti, Porsche): This would involve a supplier having detailed TCO models and the capabilities to manage install bases across large geographies and customer types plus the willingness to accept the lower returns initially involved in this type of business model (see the Hilti example above). Recurring revenue model businesses seem to outperform traditional transactional driven firms and create certainty of expenses for operators. Such models may also involve guaranteed availability and uptime
- Guaranteed availability – in this model the customer risk is minimized by a supplier offering almost zero down time (i.e. Hilti, IBM, SAP, AWS, Otis): This is often combined with the subscription model. Using equipment sensors, big data and data analytics, manufacturers are able to monitor and respond even before equipment breaks down. The benefits for the

operator and the end user are clear. If a piece of equipment cannot be fixed the supplier will replace it immediately with in country stock. This requires well developed predictive and prescriptive analytic models to accurately forecast and manage part needs. This type of service could be bundled into an all inclusive pricing model or one which separates hardware costs vs service fees, perhaps on some kind of outcome based contract

- Leverage customer data – value is created by using customer data and preparing it in beneficial ways (i.e. Airbnb, Apple app store, Facebook, Google ad words): information collected by a digital eco system about member usage and operations could provide many benefits for a business owner. Understanding how often a member uses the facility, which facilities he/she uses, and being able to test A/B interventions for different personas/user groups could have a significant impact on retention and secondary spend. This would be driven by improved member experiences where an evidence based customer journey is developed and then hyper personalised. This information can also be fed to third parties (such as health insurers and physicians) who have a stake in the adherence to a healthier lifestyle of a user. Again, the emphasis here for an operator should be on ROI and they should be asking for demonstrable evidence that the data collected is useful
- Lock in – when customers are locked into a vendor's family of products and solutions (i.e. Dropbox, Microsoft, HP): if a manufacturer builds an eco system of connected fitness products supported by a digital application that manages not only the information from its products but the information from various 3rd party providers that both operators and consumers use then switching to another vendor would involve considerable time, energy, psychic and monetary costs
- Prosumer – vendors enable customers to be producers themselves and can be integrated into the value chain (i.e. block chain, YouTube, Instagram, Smart Grids): obvious examples would include software support so that operators can add their own content to a suppliers digital offerings such as on demand workouts. Extending this further and fitting in with the concept of peer to peer interaction (another BM pattern), exercisers could connect with exercisers anywhere in the world (assuming they are on the same digitized offering) who have similar goals and challenges to share success stories and tips. This would be driven by AI and creates strong social bonds, another nudge towards exercise adherence
- Performance based contracting – the price is determined by the value delivered in terms of outcomes as instead to the cost of the physical product (i.e. Rolls Royce, Phillips Lighting, Xerox): whatever solution a vendor installs including equipment, digital, education or concepts, the vendor will be motivated to either reduce usage costs and/or improve revenue for the customer. This differs substantially from the more traditional fixed price service or extended warranty contracts. The term power by the hour was coined around 20 years ago by Rolls Royce and such contracts are used by firms such as GE. This type of contract has a variety of options form part fixed cost and part performance based to full performance based. This type of approach requires a deep understanding of costs and performance capabilities in order to be profitable. Of all the BMI examples, this pattern probably creates the greatest cultural challenge
- Solution provider – the vendor offers a full suite of products and services to cover the end to end needs of customers building closer and in depth relationships (i.e. Tetra Pak, Salesforce, SAP): an equipment vendor can add education, training, consulting services etc to the hardware it sells. Once the life of equipment is over the vendor can also take care of trade in and disposal. This could be extended to the operators customers in the forms of health and wellness advice/services

- Orchestrator – the company's focus remains on its core competencies in the value chain and then actively outsources and coordinates the other activities (i.e. Nike, Uber, Osim, P&G): a fitness equipment manufacturer could focus on the traditional hardware manufacturing activities it is good at and then outsource the rest whilst managing the total value chain in order to deliver a solution/product to a customer. For example, instead of building their own digital platform or making their own content, a manufacturer could contract with a number of partners/suppliers to create the solutions needed and offer this as a seamless solution for the customer. In a more extreme example, a vendor could focus on only parts of the manufactured product (say the consoles or motors on cardio equipment) and outsource the rest to other OEMs who may have better efficiencies
- Integrator – alternatively to the orchestrator, the integrator owns most of the activities in the value chain and if the capabilities exist may benefit from economies of scale and scope. The integrator should also benefit from lower costs and value chain stability (i.e. Zara, Exxon Mobil, Netflix): instead of partnering with content providers and digital solutions vendors the manufacturer would own these elements and be responsible for developing the solutions and products needed by customers pretty much in their entirety. This strategy could help the company be more responsive to customer needs and reduce cycle times due to internal control
- Self service – part of the value process is passed on to the customer in order to lower costs. This maybe areas that deliver little perceived value but incur high costs (such as installation or repairs). The customer can add this step and hence add to the efficiency of a process (i.e. Ikea, Car 2 Go, Fast food restaurants): manufacturers could offer online portals for B2B customers that provide technical training on simple repairs and maintenance without voiding warranty conditions. CAD files of needed parts could be delivered on line and customers can use local 3D printing firms to make parts quickly and cheaply compared to ordering and shipping 'original' parts. The same could be done for installation with modular products and specially designed packaging which makes install much more simple then it is currently. This may not apply to all products but could certainly apply to a significant portion
- Pay per use/dynamic pricing – in this model the customer actually pays for what they use (like a metred concept) which offers different types of customers flexibility based on the facility (i.e. mobility car or bike sharing, workout pods in China): it doesn’t seem reasonable that a high usage club and a low usage hotel should pay the same price for equipment when the usage levels will be drastically different. This also applies to warranty and service contracts. The benefits to the customer are clear and the operator could pass a similar pay per use model to its users (we already see this in boutiques and alternative facilities). For a manufacturer to offer this type of business model would involve a deep understanding of repair rates and costs based on a wide variety of usage data (such as average weight of user, average speed, average use per day etc)

The examples listed here highlighted the term value chain frequently. The dominant logic of the value chain put forward by Michael Porter (Harvard professor) is very much of a traditional manufacturing firm where service is clearly thought of something as after sales and not part of the core offering. This is important because the dominant logic of a model utilised by management will impact the dominant logic of solutions sought in terms of BMI. Other conceptualisations of the value chain such as the value shop or value network maybe more appropriate.



New Value Delivery System *(Source: Payne, A., Frow, P., Steinhoff, L., and Eggert, A (2020) Toward a comprehensive framework of value proposition development. Vol 87, May, pp.244-255)*

The above sample list of BM patterns is not intended at this stage to determine which approach or approaches the company should take as this is still the ideation phase. In fact, what becomes obvious when going through these examples is that they can be combined. Some are also naturally interrelated. In the paper, The Post Covid Future of Everything as a Service, researchers from INSEAD state that the complexity of servitization will grow but so will the opportunities. The authors go onto say that customer success management (and customer success managers, CSM) will play an increasingly important role to ensure the value promised to the customer is actually delivered and activated on site for a customer. In addition to the opportunities identified above in BMI, the ability of PSS to enable vendors to get to know their customers more intimately cannot be overstated. In a McKinsey paper (Prediction: the future of CX, Feb 2021), the authors highlight research which shows the high level of dissatisfaction that firm leaders have with typical customer experience (CX) measurement systems. They suggest that predictive customer insight is the future and this can be supported by customer level data lakes, predictive customer scores, and action and insight engines. Clearly this type of understanding for a club operator of their member base would be incredibly powerful in reducing attrition and improving engagement. This is an oft quoted pain point in the industry and that is why the current offering of apps by most manufacturers woefully misses the mark. Future solutions must be based on PSS BMI bringing in not only advanced data analytic techniques but also evidence based behaviour change theories based on behavioural economics, motivation theory, psychology etc. Before one can decide on the BMI needed, an organisation needs a deep understanding of the value proposition and customer needs as well as its own culture and capabilities.

Value proposition delineation:

There are no universally accepted definitions of a value proposition but there are a growing number of tools that can help in the development of compelling value propositions. Rather than try to focus on a single definition the following list of characteristics by Alex Osterwalder provides a solid guide:

1. Are embedded in great business models
2. Focus on few pain relievers and gain creators, but do those extremely well

3. Focus on jobs, pains, or gains that a large number of customers have or for which a small number is willing to pay a lot of money
4. Align with how customers measure success
5. Focus on the most significant jobs, most severe pains, and most relevant gains
6. Differentiate from competition in a meaningful way
7. Address functional, emotional and social jobs all together
8. Outperform competition substantially on at least one dimension
9. Are difficult to copy
10. Focus on unsatisfied jobs, pains, and gains.

James Anderson and colleagues (in a HBR article from March 2006), explain there are 3 kinds of value propositions which are depicted in the diagram below. They argue that a resonating focus approach is the most compelling and hardest to develop as they require a deep understanding of customer and stakeholder needs. In other words, a problem solving approach.

VALUE PROPOSITION:	ALL BENEFITS	FAVORABLE POINTS OF DIFFERENCE	RESONATING FOCUS
Consists of:	All benefits customers receive from a market offering	All favorable points of difference a market offering has relative to the next best alternative	The one or two points of difference (and, perhaps, a point of parity) whose improvement will deliver the greatest value to the customer for the foreseeable future
Answers the customer question:	"Why should our firm purchase your offering?"	"Why should our firm purchase your offering instead of your competitor's?"	"What is *most* worthwhile for our firm to keep in mind about your offering?"
Requires:	Knowledge of own market offering	Knowledge of own market offering and next best alternative	Knowledge of how own market offering delivers superior value to customers, compared with next best alternative
Has the potential pitfall:	Benefit assertion	Value presumption	Requires customer value

3 Types of Value Proposition *(Source: Anderson, J.C., Narus, J.A., and van Rossum, W (2006) Customer value propositions in business markets. Harvard Business Review, March)*

The resonating focus approach helps a company narrow down the value being sought by customers to the most important elements. It may also suggest that different customers within the buying organization have different needs and hence it makes sense to create different communication strategies aimed at different buying centre constituents. For example, a club owner maybe more concerned with capital investment costs and ROI whereas a fitness director may focus on benefits related to ease of use and education support. You cannot cover all these value factors in one statement, but you can customise these communications based on who you are talking to. According to Hub Spot, the value proposition explains how your solution solves customer problems/improves their situation, what specific benefits they can expect, and why customers should buy from you over your competitors. It is not a slogan or positioning statement. Below is what I consider to be the current value proposition (VP) of the major commercial fitness equipment manufacturers:

'We provide a complete range of cardiovascular, functional and strength equipment to meet all your customer needs. Based on the latest science and advances in technology, our premium equipment is designed to offer the best user experience in terms of biomechanics, safety, and content. Known for

industry leading reliability and service, our solutions will make sure your facility stands out from the crowd.'

If this VP sounds generic, it's because it is. Go to the web site of any major manufacturer, remove the brand name and pictures, and you will be hard pressed to tell one brand from another. If we explore this VP from the perspective of the resonating focus and some of the 10 characteristics above, it doesn't perform very well. It is most likely the local entity on the ground (such as the distributor or direct office) that forms the bulk of the VP. When thinking about BMI, manufacturers will have to explore in depth how to partner more closely (adapt the BM) to create a more compelling VP across geographies that links the entity and corporate brand more closely together in order to meet the pains, gains and jobs to be done.

Below are a few VPs from traditional manufacturing firms which have adopted BMI using a PSS:

Hilti – Hilti offers holes not hammers. With its Tool Fleet Management System, the company provides guaranteed availability, maximum uptime, with no upfront costs. Customers get access to the best tools whenever and wherever they need them.

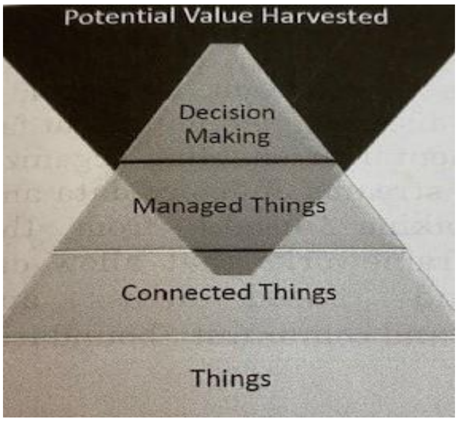
Kone cranes - At Konecranes, we are not just lifting things, but entire businesses. We have real-time knowledge of how millions of lifting devices perform. We use this knowledge, around the clock, to make our customers' operations safer and more productive.

Otis Elevators - Using smart, internet of things (IoT) technology, Otis ONE™ brings you and your passengers the next generation of service. With 24/7 real-time, connected service combined with our foundational historic data your elevator experience will be transformed as you receive new insights. Transparent, proactive, predictive: this is Otis ONE™.

Royal DSM – the new resin addresses the growing market demand for powder coatings that can be cured quicker or at lower temperatures. In particular, the Uralac® EasyCure P 3225 resin can either be cured in just 5 to 6 minutes at 180ºC, compared to the 10 to 12 minutes of market alternatives, or in 12 minutes at 160ºC. In this way, the resin enables higher production output and can help prevent bottlenecks, as well as lowering energy consumption, reducing natural gas usage by up to 30%.

Siemens Health Care - We assist you in reducing risk. We increase machine uptime and increase your profitability.

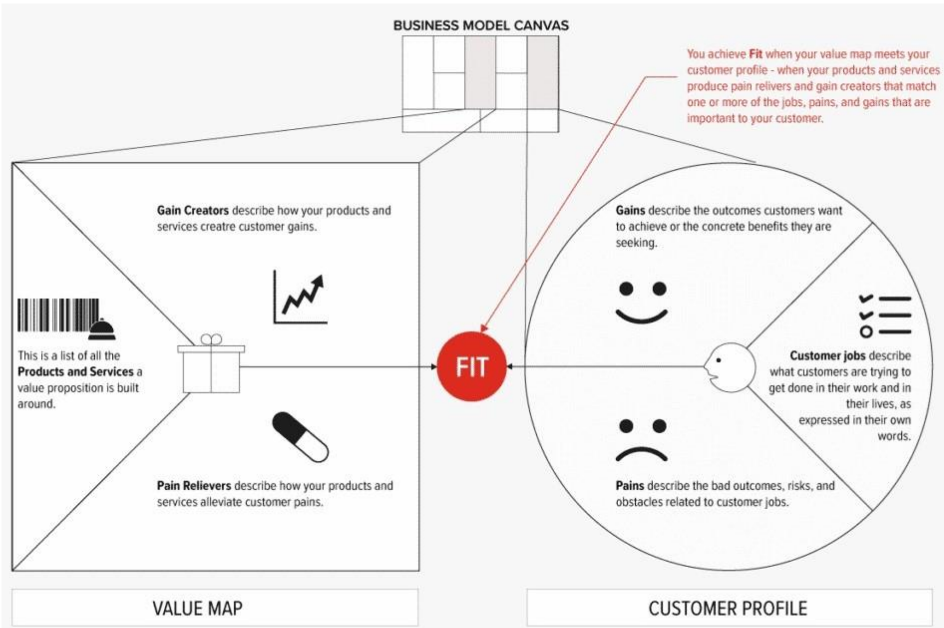
What is striking about these VPs is how similar they are despite coming from very different industries. They focus on a few key resonating points which act almost as unique selling propositions (USP) whilst aligning with customer measures of success, namely reductions in cost and improved productivity. They are also embedded in strong business models which make imitation difficult. As Didier Bonnet and George Westerman explain (The New Elements of Digital Transformation, MIT Sloan Management Review, 2021), as some firms are still implementing traditional automation approaches such as ERP and product life cycle management, others are moving far ahead by digitally reinventing operations. 'Thanks to the growing availability of cheap sensors, cloud infrastructure, and machine learning, concepts such as Industry 4.0, digital threads, and digital twins have become a reality. Digital threads connecting machines, models, and processes provide a single source of truth to manage, optimize, and enhance processes from requirements definition through maintenance (p.4)'.



Business Value Realization *(Source: Barkai, J. (2016) The Outcome Economy)*

If we consider the current status of traditional manufacturers, they are basically at the level of selling things (some with connected things, especially those targeting the consumer market). The VP examples above are much more heavily concentrated on managing things and decision making. That is how they deliver compelling VPs to their customers. Studying what those are doing in other industries is known as analogous research. Other approaches common include stakeholder mapping, customer journey mapping, exploratory research, ethnographic research, in depth interviews, desk research and quantitative approaches.

The VPs essentially address a mix of business, technical and personal value. This idea is very similar to the value proposition canvas (from Alex Osterwalder) which focuses on gain and pain points. We can use this tool to analyse the VP sought by equipment buyers and develop a new BM. The completion of the canvas would involve substantial stakeholder input including customer research.



The Value Proposition Canvas *(Source: Strategyzer)*

Customer jobs – this is based on the seminal ideas of Clayton Christensen (author of The Innovators Dilemma). The concept is that customers don't simply buy a product but rather 'hire' it to do a job. The classic example he gave was that of a McDonalds milkshake (hired to make the commute to work). For Hilti customers it could be executing contracts and for a firm like Slack enabling real time collaboration (or Zoom, virtual collaboration)

Gains – predictable costs and access to latest tools would be customer gains/needs for Hilti. In the case of remote diagnostics for medicine, customers would gain medical advice at their convenience

Pains – Hilti customer pains (to be overcome by the new VP) would include high upfront costs and risk of project delays. For Slack they aim to alleviate lost and messy communications via long email threads and other channels

Pain relievers – the aim here is to overcome some of the pains. Hilti, for example, offers subscription based services to eliminate high up front costs. Home medical diagnostics reduces the pain of travelling and waiting for medical services

Gain creators – Hilti offers immediate repairs or access to new equipment to ensure near 100% uptime. Slack offers real time project management to enhance productivity together with a fast learning curve

Products/services – the online fleet management system is the core of the solution for Hilti together with their inventory management system for tools. For Peloton it would be the content which leads the physical product allowing customers to access world class training when it suits them in their own home

Some authors have modified this canvas to change the value map to benefits, features and experience whist on the customer profile, the elements are named needs, wants, and fears. Both models are useful and can aid thinking. You should not get hung up on the methodology as the intention is to spur different lines of thought. Aside from using this model for an organization's own analysis, it can be very revealing to study the BMI of companies in other industries:

Strategy/Company	Caterpillar	Siemens Healthcare	GM
Subscription Portfolio	Smart Machines-wide range of connected industrial equipment CAT connect-onboard sensors to help optimize equipment management and productivity	Laboratory as a Business (LaaB)-consulting services that to help customers achieve business objectives Upgrade services-a suite of software applications expanding the lifespan of equipment and reducing TCO	Maven-a peer to peer rental service that allows GM owners to rent out cars using a digital platform
Transformation Strategy	Acquired Yard Club (a peer to peer rental platform to share and manage heavy equipment Repositioned digital groups under a head of Digital Enabled Services	Deploy AI-leverage data to help automate and standardize complex diagnostics	Acquired Cruise-a dedicated business unit for development of autonomous vehicles Book by Cadillac-an on demand subscription service that lets users choose from a range of curated vehicles and allows them to change vehicles up to 18x year
Other highlights	500K connected assets	55% of revenue is recurring	Over 150,000 Maven members. More then 5m On Star connected vehicles on the road

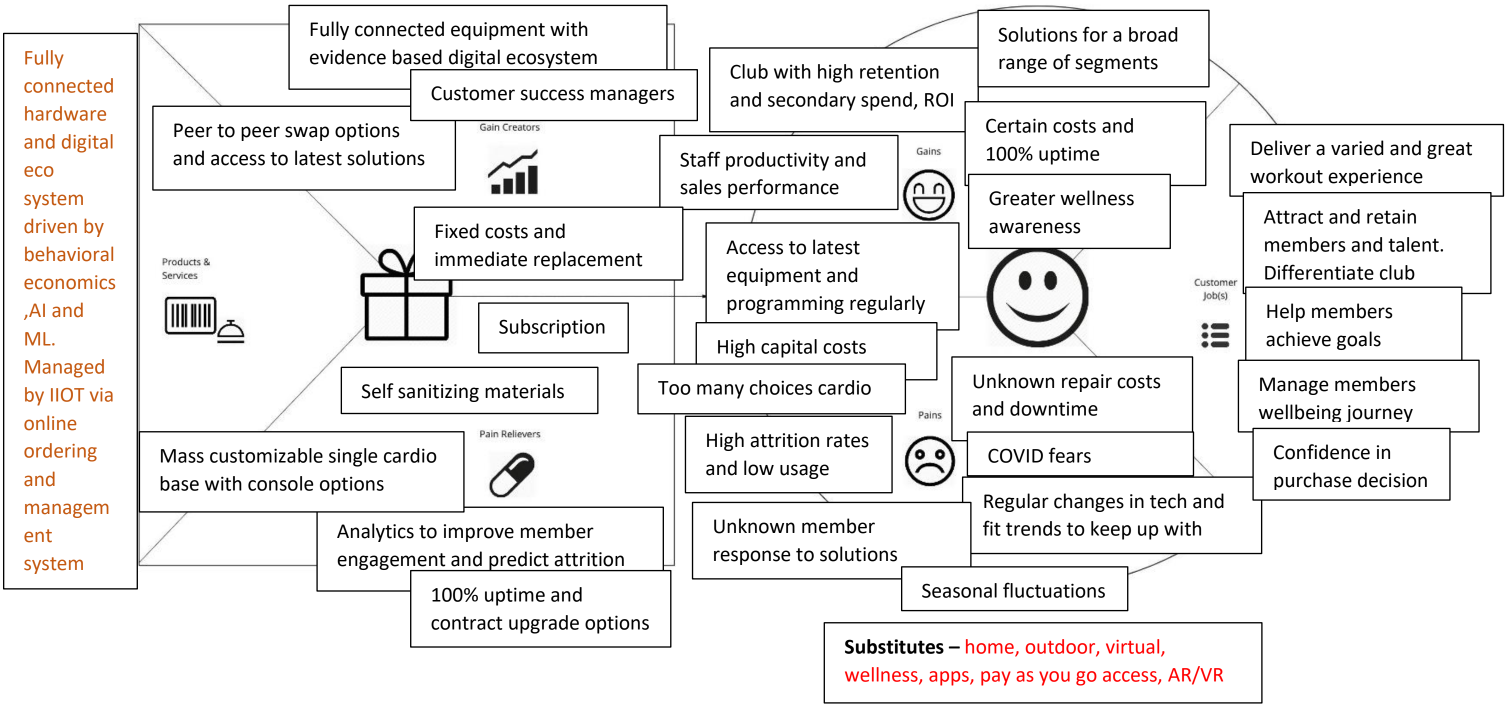
Below are some examples of organizational issues (taken from The Outcome Economy by Joseph Barkai) when servicing and maintenance are considered secondary and hence neglected early on which are indicative of what happens in the supply of fitness equipment:

- Fault diagnostic tools are unable to isolate the root cause of equipment down to a single field replaceable unity (FRU). This leads to longer repair times, multiple parts being replaced and increasing costs
- Service tech is unfamiliar with the configuration of the equipment and does not have the proper service information or parts on hand, resulting in multiple trips
- The stage gate approach to product development 'freezes' the design before service planners can evaluate the design and improve its serviceability

To overcome using IIOT:

- Onboard and remote diagnostics are designed to meet mutually agreed service level agreements (SLAs)
- These diagnostics are aligned with hardware modularity, FRUs and part inventory management policies. These allows failures to be mapped to spare parts in country
- Remote monitoring and diagnostic systems help maximise the utilisation of tech staff and allows more efficient allocation
- Back end systems are designed to take advantage of machine generated data to assist in capturing operations and failure data. This is then used to improve design of existing and new products

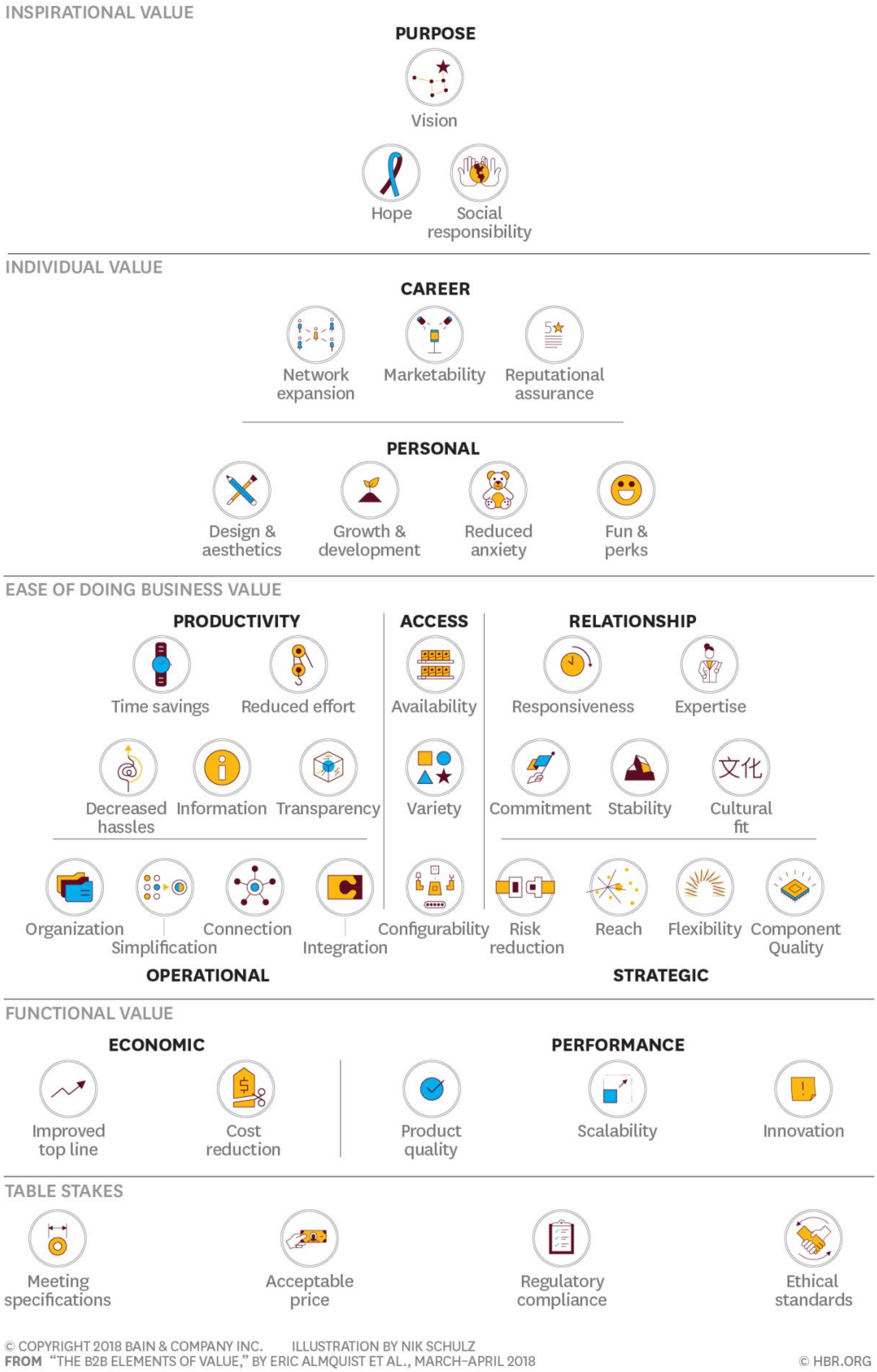
Based on all the methods available for the ideation and preparation phases, an organization will start to get a feel for the possible value propositions that could be developed. There is a plethora of customer value models available which can be incredibly useful in delineating what value is to a customer. It is also important to note that customer needs are not always well expressed by customers so a mix of inside out and outside in thinking is required. Together with an iterative process and a big enough pool of on going projects, the firm should be well positioned to explore new opportunities.



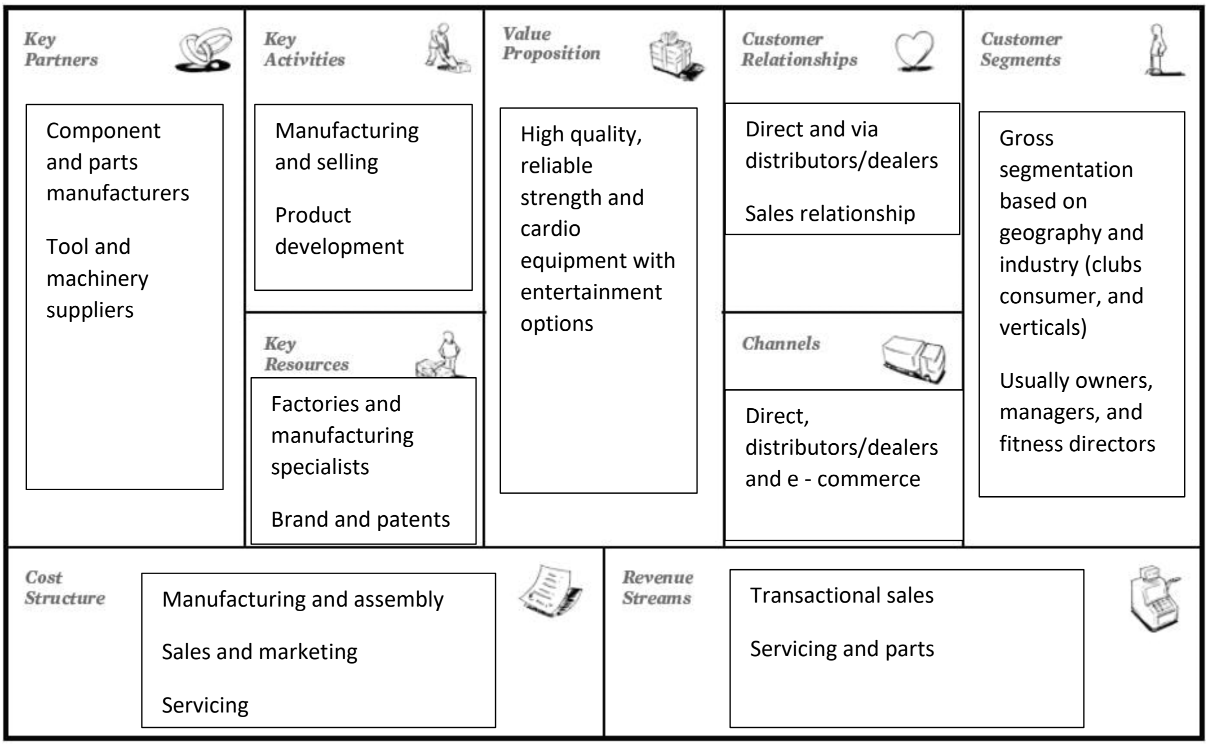
Value Proposition Canvas Focused on a B2B Buyer in a Commercial Health Club *(Source: authors own analysis)*

The VP canvas develop here is a conceptual delineation of the customer jobs, gains and pains based on a mix of existing empirical research, popular publications and anecdotal evidence. The identification of substitutes in this analysis is important as thinking about industries and direct competitors can be limiting. A health club operator needs to consider the sphere of competition more as an arena. That means not only are other fitness operators competing for the disposable income of potential members so are technology companies such as Apple Fitness+, home equipment manufacturers such as Tonal and Mirror, as are a host of other alternatives forms of movement (such as walking in the park). If this was taken to extremes, then many forms of leisure activities (such as eating or playing war games) could be considered competitors for the consumers disposable income. Whilst many customers will consume multiple 'products' at the same time (i.e. some research shows that over 50% of people who own home gym equipment also have a gym membership), it does force an operator to think more deeply about the types of customers they are trying to attract and with what offers/experiences. For example, Retro Fit in the US has just launched a subscription model including a home exercise bike with content and access to all their locations. Apple Fitness+ has teamed up with a few club chains and insurance companies that offer the watch and all the Fitness+ content as part of the package they offer customers. This then also puts the onus on vendors to be solution providers that have a tangible impact on their customers business. The current business models are outdated and not able to achieve such an impact. Equipment manufacturers need to re think what they do to become more agile in turn helping their customers become more agile. Surely the days of buying equipment outright and having essentially the same equipment/solution for members for 5 plus years are numbered.

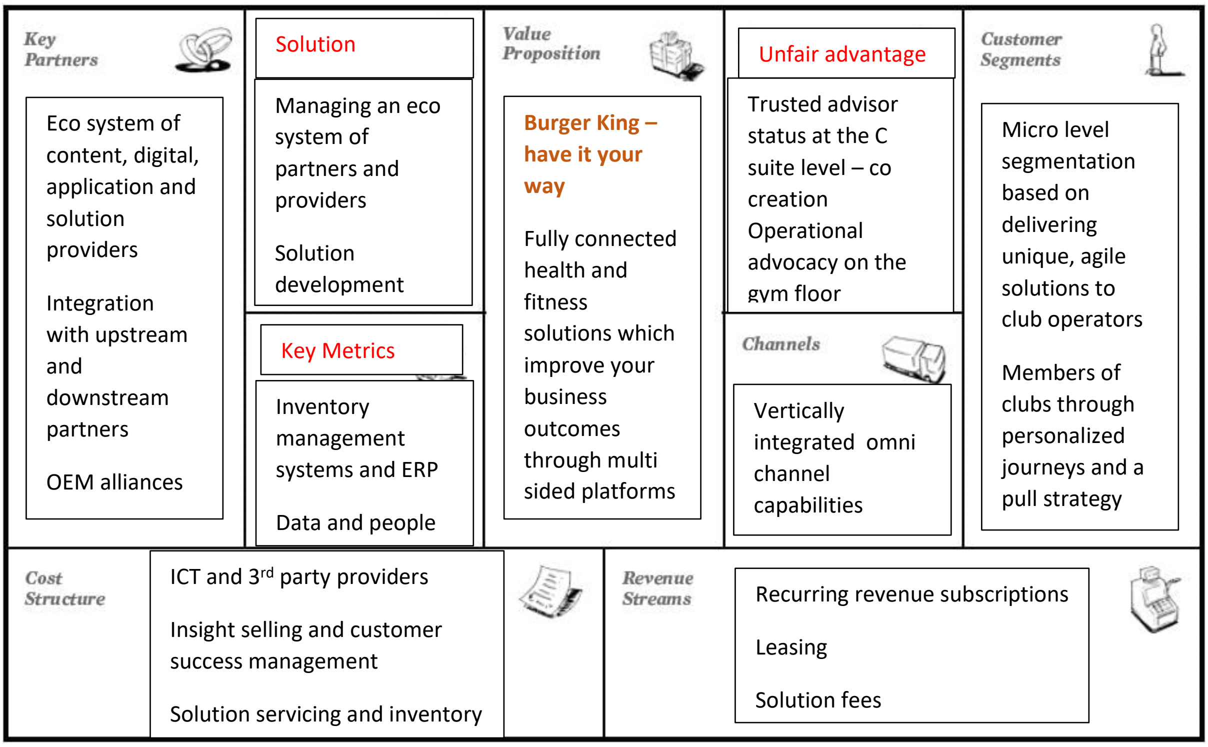
The below value depiction by Bain for B2B customers is a very useful tool in thinking about the types of customer jobs, pains and gains a B2B customer may have. The VP canvas should probably be created for different buying centre constituents based on developing buyer personas.



The B2B Elements of Value *(Source: Bain and Co, 2018)*



Existing Business Model of a Fitness Equipment Manufacturer *(Source: authors own analysis)*



New Business Model *of a Fitness Equipment Manufacturer* *(Source: authors own analysis)*

The two business model canvases above identify the stark differences between the current what is and what could be based on the factors that affect BMI. Whilst all the elements of the canvas are quite different, the connotations of key activities, key resources, and customer relationships particularly stand out which have been renamed solutions, key metrics and unfair advantage. This is based on the work of Ash Maurya who created the lean canvas which was modified from the original canvas of Osterwalder. In addition, the perspective when completing this was based on the view of competitive arenas as opposed to simply industry competitors. This considers a more holistic view of factors such as health, wellbeing, digital, nutrition, health care etc and a much broader range of potential entrants such as Big Tech and consumer focused organizations. Below is a summary of the new BM canvas as it relates to the concepts of the 55 pattern business models described above. The below focuses on the key innovations:

1. Add on – content, digital and education services are scaled as needed by customer
2. Revenue sharing – with complementors and potentially customers
3. Orchestrator – bringing together and active management of eco system players such as content providers, app developers, tech firms, health, nutrition, insurance firms etc
4. Fractionalized ownership – swap in and swap out options based on member response and seasonality
5. Mass customization – simplified 'base' offerings with customizable consoles, colours, and components enabled by IIOT, e comm and 3D printing
6. Guaranteed availability – data driven inventory and servicing capabilities for customers under subscription to ensure 100% uptime
7. Leverage customer data and lock in – through the eco system of solutions and digital member journey tied into connected equipment
8. Flat rate subscription – hardware and software bundled into an all inclusive recurring subscription model with no up front fees and certainty of costs for customer
9. Solution provider – the vendor as a health and fitness market place (hub) including education, training and consulting

A good way of summarising the types of value your BMI would create internally (beyond the VP canvas above) is the three levels of value framework. Below is a sample completed version based on some elements of the BM and VP canvases developed above.

Product/Service Feature	Function	Technical Value	Business Value	Personal Value
Predictive analytic repair models mapped to inventory parts	Predicts parts needed to keep in stock within country	Maximises part usage and minimizes wastage	Decreases inventory cost and manages customer uptime	Improves productivity of staff
Prescriptive parts model linked to connected sensor equipment	Fix equipment before it breaks down by preventative visits	Saves money and time on servicing and parts	Improves resource allocation	Enables KPIs to be aligned with customer needs
Connected equipment enabled by IIOT	Provides real time data on usage and exercisers journey	Manage asset base and company ERP	Enhance asset base productivity and TCO. Build customer insight	Create slack to work on innovation and other projects

Three Levels of Value *(Source: adapted from Sales Scripter)*

Based on a few mega trends, things happening on the fringes of the industry, and the changes prevalent in other industries, it is possible that an inflection point is being reached. Pricing pressures, commoditization, life cycle maturity, changing consumer habits, technological advances, new competition etc are all signals that a shift in value is required. However, it is important to note that tipping points or inflection points are not just caused by extraneous events. A revitalisation of product lines and product service systems can lead to this new upward sloping S curve. The above

BMI is one step in that direction. As businesses should consider a portfolio approach to BMI, another iteration of the BM has been developed below based on some further factors that could impact BMI and customer expectations of value in the next several years. In essence we are looking along a continuum of exploit and explore.

- Greater integration of heath care and fitness
- Massive acceleration of wearable health and diagnostic tech in part driven by Covid
- Wellbeing indices created moving the industry away from only fitness or wellness
- Smart contracts and democratized currency (block chain, ETH and NFTs)
- Tax on trash per KG produced – the circular economy
- AR and VR wellbeing experiences
- Rise of mindful technology
- Education delivered in bite sized chunks and shared peer to peer
- AI and ML driven strength training
- Access not ownership
- Greater acceptance of climate change needs and sustainability
- Sharing economy
- Innovation diffusion speeds up and jumps traditional models
- Exercise equipment in self driving cars
- Dating based on wellbeing scores
- Unhealthy diets illegalised
- Insurance based on behaviour
- Real time product and service adaptation
- Voice controlled everything
- Exercise as medicine grows exponentially
- Fool your brain about what you are eating and how you are exercising

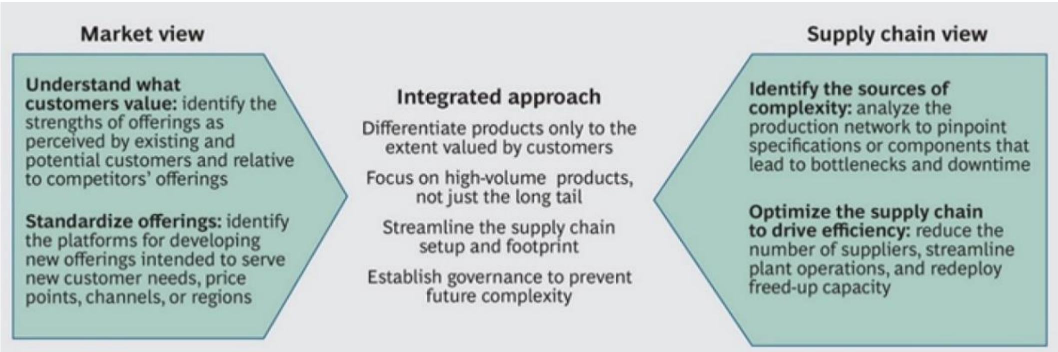
The key questions that comes out from these signals are:

1. Where is the boundary for the equipment manufacturer in terms of being a one stop solution provider for customers?
2. Does a vendor try to pre-empt the rising threat of Big Tech or non traditional firms entering the industry or seek a role in the eco system that is commanded by these new entrants? Perhaps by being acquired or being a marginal player?
3. Do vendors act as the hub in the market place or a spoke in a partner platform? And who then is the hub in the platform?
4. What role does the health club play in the eco system of customer wellbeing and how does a vendor support them?

The answers to these questions will most likely emerge as organisations test and iterate their strategies in the market place. This is also emphasises the need for organizations to build knowledge based strategy processes that tap the collective wisdom of people (inside and outside of the firm) and create a portfolio of strategic innovations that at some time may become the new core of the business (exploit vs explore). Based on the above signals, some new elements of the BMI are described below:

Trash to cash – used equipment is either collected and refurbished for developing markets (or new customer segments) or recycled into new products. This alleviates the customer responsibility for disposal and helps the vendor overcome new tax on trash laws. This also caters to customer expectations of sustainability (circular economy). This approach fits very well into the subscription model as customers are offered new products at contract expiry dates without the worry of ownership. Levi's is a prominent example of an organization using this logic. Counter intuitively, they are seeking to lower the over consumption in the fashion industry by examine how they can sell less new product and creating revenues from non-new product sales.

Aikido – is essentially doing something diametrically opposed to the mainstream market consensus. As the mainstream equipment manufacturers continue to develop more options around product features (such as different running surfaces, hand controls, product line extensions) the cost of complexity increases, as does the burden on customer choice. P&G was said to have found savings of US$3bn in waste due to complexity. As the battle ground in the fitness industry moves to the eco system and platform (with the console on cardio equipment being a key part of the hardware), a platforming approach can be used as a strategy for providing the needed variety of customers against a reduced cost base. In other words, products with greater commonality of parts and components. As the capabilities of voice control grow it is feasible to expect there will no controls other than those on a touch screen console. There are many risks and benefits associated with such an approach and decisions about the degree of commonality often involve trade offs. Trade offs are not accepted a priori by customers and are the antithesis of knowledge based strategies. BCG suggest to conduct an analysis based on the market view and supply chain view to overcome some of these trade off issues. This Aikido approach would also fit in well with the trash to cash model.



Integrating Market and Supply Chain Views *(Source: BCG, Less Can Be More for Product Portfolios, Aug, 2014)*

The benefits of commonality can include (from Cameron and Crawley, Crafting Platform Strategy based on Anticipated Benefits and Costs):

- Revenue – deploy new technologies, enter new markets, reduce time to market
- Risk benefits – lower technology risks, higher production quality, reduced downtime from sparing
- Cost savings – shared development cost, common testing procedures, economies of scale, amortized fixed costs, reduced inventory

Object adaptation – this is not in the 55 patterns. I developed this as an amalgamation of objects a point of sale, object self service, and sensor as a service. Equipment will be fitted with heat map retail technology in order to gauge usage within club zones and help operators re-design areas to maximise usage via A/B tests. Programming content will not only be evaluated by attendance/usage data but also by engagement from eye sensors. Low engagement content can be removed or updated before usage data becomes evident. Highly engaging instructors and content can be targeted to the most engaged users with the opportunity to upsell services at point of consumption.

Peer to peer – vendors can create peer to peer technologies that could have multiple uses. From a social support and learning perspective, exercisers will be able to connect with other exercisers in their club, region or anywhere in the world to share workout experiences and build a community of advice and support. Operators can be linked in networks that shares business practices, equipment repair and utilisation issues, as well as renting/ swapping equipment with other businesses.

HOW TO DESIGN A NEW BUSINESS MODEL

In the preceding pages, I have shared a number of ways of thinking about BMI and design (and how to mobilise the company to innovate more broadly) using a variety of lenses including systems thinking, mental models, complexity theory as well as varied schools of strategy thought with a major focus on culture (including learning and knowledge based strategies). I also leaned heavily on BMI tools such as the BM canvas and VP canvas (developed by Alex Osterwalder).

In this section I will focus on some specific methodologies proposed by Amit and Zott (ibid) leveraging entrepreneurial approaches – that is discovery driven planning and lean start up. These should be considered as complements to what has been discussed before rather than an either or approach.

Discovery driven planning (DDP) was originally developed by Ian MacMillan (a Professor at Wharton) and Rita McGrath (a Professor at Columbia and author of numerous books including Seeing Around Corners). In her article from Long Range Planning (2010), McGrath explains that conventional approaches to planning suffer from a mismatch between the knowledge a firm actually possesses and the knowledge its planning systems assume it possesses. As a firm ventures into new business models, increasing numbers of the underlying assumptions it makes will differ from those inherent in its existing models. In conventional strategic planning, the measure of a plan's success is how close your projections came to what happened later on. This is nonsensical in a high-uncertainty environment - if you could predict what was going to happen accurately, so could everyone else, and there would be very little advantage to be gained. The goal of a discovery-driven plan is therefore to learn as much as possible at the lowest possible cost, bringing us to the theme of experimentation. DDP is a methodology to facilitate different ways of thinking in established firms. They key steps in DDP are (from Amit and Zott, ibid, and McGrath, ibid):

1. Framing – this asks mangers to define long term success and then reason back to figure out what would be needed to achieve that success (i.e. reverse income statement)
2. Benchmarking – the business model is benchmarked against competitive models and market demand
3. Deliverables and key process metrics – critical assumptions are highlighted such as willingness of customers to pay, competences needed by the organization to implement
4. Key check points and parsimony – this is where key assumptions are tested using various methods such as market studies, pilot tests, customer research etc. This resembles rapid prototyping and gives a firm the opportunity to evaluate, pivot, and reject an idea if necessary, with limited resource investment

DDP has many advantages grounded in its philosophy around experimentation and learning. It also leads to evidence based decisions which can overcome the often problematic biases and self serving opinions that surface during the strategy process. One of the major challenges with this approach is that it is in direct opposition to the traditional linear staged gate approach to planning that most established firms take.

The lean start up methodology has many similarities to DDP and other experimentation approaches and is most associated with work of people like Steve Blank (now a Stanford adjunct professor) and Eric Ries (author of the Lean Start Up). The idea of lean is to shorten product development and quickly find a viable business model.

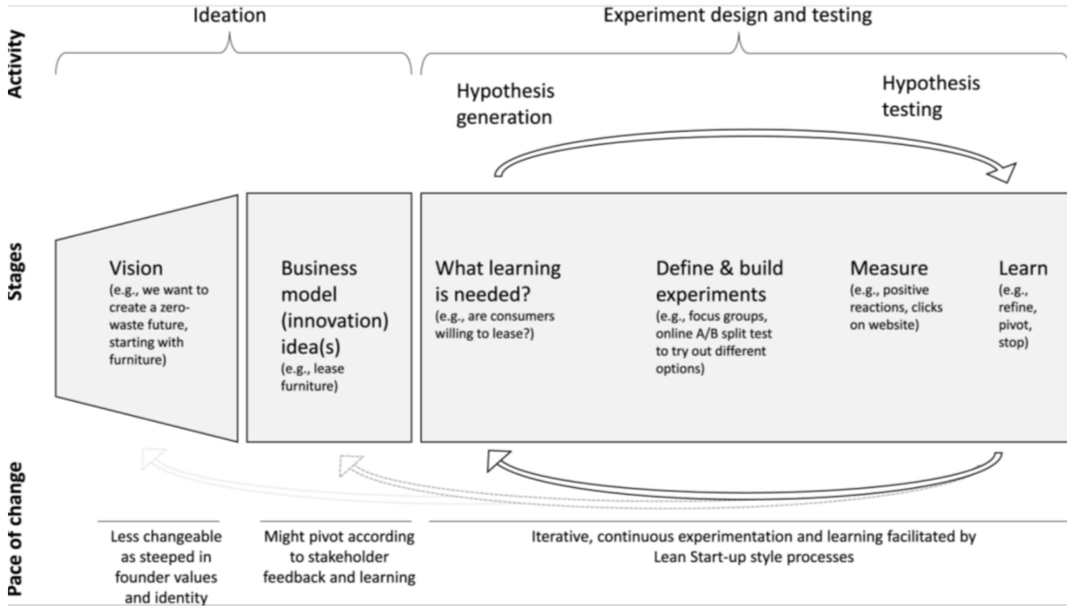
According to de Faria et al (Procedia Computer Science, 2021), the Lean Start Up methodology consists of a scientific, hypothesis-driven approach to entrepreneurship, where entrepreneurs translate their vision (i.e. business idea) into falsifiable hypotheses which are embedded in a first version of a business model. These hypotheses are then tested through a series of minimum viable products (MVPs). From the perspective of business models, this would be the development of minimum viable business models (MVBM).

Group	Hypothesis
Operations/ costs	Can we support customer service needs in a timely and cost effective manner
	What competences do we have that can be leveraged
Marketing, market conditions and customer behavior	Is the market ready for a subscription concept
	Can we market the need effectively
	Marketing resources needed are within our current resources
Financial	The market size matches our revenue needs
	The average selling price per unit covers costs and expected margins
Technology / Capabilities	We have the bandwidth for education and ongoing support for customers
	Our ERP systems provide the necessary one source of truth
Value Proposition	The concept clearly differentiates itself from other similar concepts in the market
	The VP will be compelling to customers

Example Hypotheses *(Source: authors own analysis)*

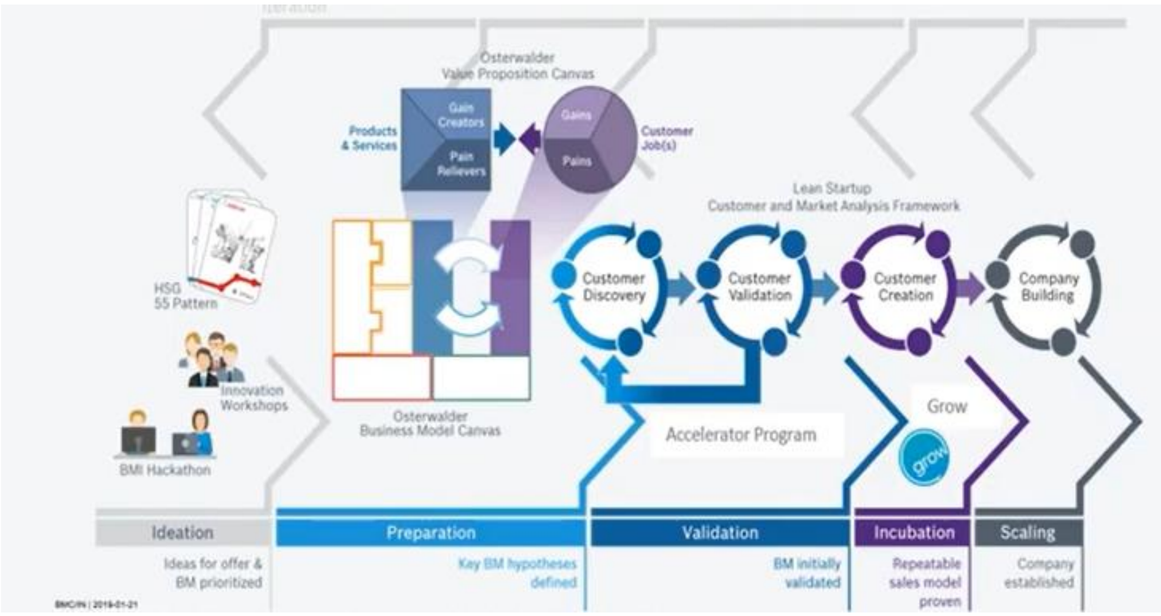
Once you have a key set of hypotheses for testing (see examples above), you would consider ways to test and validate these. For example, a firm could do some internal research with the technical and customer service team to see whether they have the resources and expertise to provide the level of service needed under a new business model.

The application of lean to BMI certainly has its limitations and criticisms but overall it provides a structured process to the development of new business models (depicted in the figure below) providing the key benefits of reduced market risk and CAPEX.



Business Model Development Process, Experimentation, and Lean Start Up in Practice *(Source: Bocken, N and Snihur, Y (2020) Lean Start Up and the Business Model: experimenting for novelty and impact. Long Range Planning, Vol 53, No 4, Aug)*

One of the most well known examples of BMI and the application of a rigorous process to designing new business models is that of Bosch. The company was struggling with the challenges being presented by IOT and the digitization of various industries. These are the questions that Bosch was grappling with when they decided to create an innovation funnel for their ideas, which would run on evidence rather than opinions. This innovation funnel enabled Bosch to go from 214 unvalidated but interesting ideas, to 19 validated and scalable growth engines. The below figure identifies the Bosch process for BMI.



The Bosch Business Model Development Framework

MOVING TOWARDS BMI – Leadership under uncertainty

There has been so much written about why organizations fail to change despite the warning signs being clear and present. Certainly the remnants of organization theory (such as Taylor's Scientific Management or Max Weber's Bureaucracy) have a major role in the way firms are led today as do MBA courses and what is taught (shareholder value as the holy grail). Henry Mintzberg (Professor of Management at McGill) has said that management is much more a practice than it is science. He also states that shareholder value has nothing to do with human values, 'it's got nothing to do with decency, it's got nothing to do with anything but greed'. He is not alone in this view.

An article in Bloomberg from a former Harvard business professor examining the fundamental problems with MBA education and her experiences at Harvard (The Old Solutions have become the New Problems). Shoshana Zuboff who spent 15 years teaching on the Harvard MBA says 'I have come to believe that much of what my colleagues and I taught has caused real suffering, suppressed wealth creation, destabilized the world economy, and accelerated the demise of the 20th century capitalism in which the U.S. played the leading role'. She goes onto criticize many of the concepts espoused on the MBA under the guise of shareholder value. These concepts include downsizing, re-engineering, outsourcing, etc, which led firms to focus on 'financialization' as opposed to innovation and wealth creation through new products and services. I would also add new business models.

According to Zuboff:

'Old rules assumed economic value. That's why Harvard Business School students have been trained for a century in the "administrative point of view." The manager's job was to oversee and control what was inside organization space, or what they were trained to view as "my company." Everything else was a distraction. The "administrative point of view" reflects a simpler time when business was about selling a product. It teaches you to operate from the perspective of organization space—how to maximize your company's efficiency and serve its interests. It's a world of boundaries: who's inside and who's out; who's up and who's down. It's a world of producers vs. consumers, my company vs. your company, us vs. them. Business is no longer just about the product. Now it's about solutions for the individual. Economic value is hidden in consumers' unmet needs and is released by providing people with the means to fulfill those needs. But in order to release new value, you need to get out of organization space and into the subjective space where individuals live. I call it "I-Space." This means shedding the "us-them" mentality. Now everyone is an insider'.

In the classic article, On the Folly of Rewarding A, in the Hope for B (Steven Kerr, Academy of Management Executive, 1975 and updated 1995), the author gives an array of examples from different fields that encapsulates even today the majority of issues with change initiatives and the way companies are run – 'it's the reward system stupid'! The below examples, in my opinion, cover 90% of the issues most organizations face:

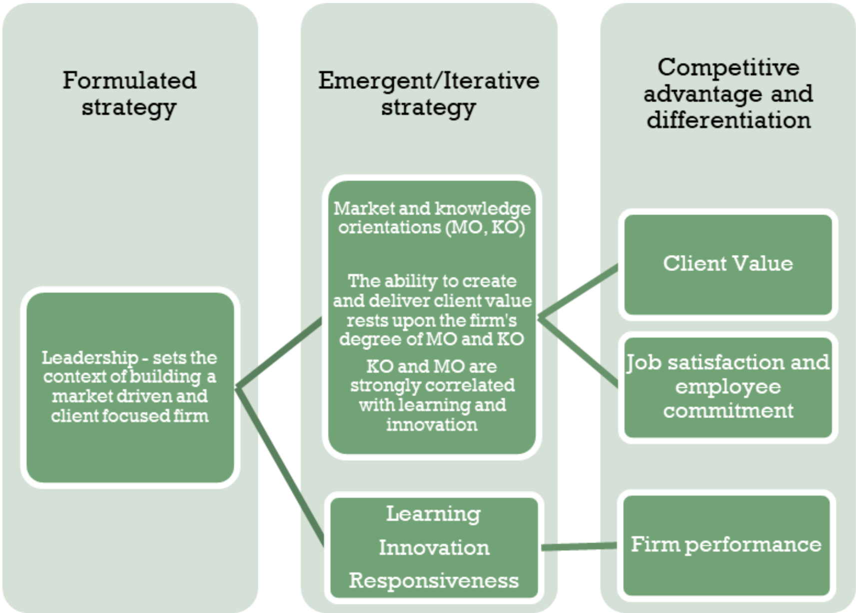
1. We **hope** for long term growth, but **reward** quarterly earnings
2. We **hope** for teamwork, but **reward** individual effort
3. We **hope** for challenging stretch objectives, but **reward** making the numbers

The ideas here echo many of the challenges discussed above in terms of exploit vs explore. Organizations need to get used to running paradoxical thought processes, and hence ambidextrous organizations, and turning these into integrated management practices. For example, dual roles managing the business of today vs the business of tomorrow. Extending this concept of dual roles and ambidextrous organizations, Innosight (the consultancy co founded by Clayton Christensen), call this dual transformation. Transformation A is repositioning the business to maximise its resilience whilst transformation B is creating tomorrows growth engine. Historically, it has always been managers that play the game and run the business of today that have more clout than those who are often considered pie in the sky thinkers (innovators).

How to Get Promoted *(Source: Sull, D., and Sull C (2018) With Goals, FAST beats SMART. MIT Sloan Management Review, June)*

In an era of shareholder returns and the holy grail of managing lag indicators (such as earnings) fueled by toxic 'strategy' mechanisms such as yearly budgeting processes, the time is here for a re-think for most organizations. The elements of a high performing culture are a market, knowledge and learning orientation. As Peter Drucker once said, 'Culture eats strategy for breakfast'. I will go further. Strategy is the how, it is action not declaration, hence your culture is your strategy as it is the how of achieving objectives.

Leadership then is fundamental as it is leadership that sets the tone and culture of the organization. There is often much more rhetoric than real action within leadership ranks. Even worse, in the language of Chris Argyris (former Harvard professor and author of Overcoming Organizational Defenses), most organizations have huge gaps between espoused values and theories in use (think Douglas McGregor's Theory X and Y). Political oligarchy has become so entrenched in most organizations that they have seriously failed to tap the collective wisdom of the crowd. According to Mark Bertolini, CEO of Aetna; 'Creating new business models is a leadership challenge. In order to create those new businesses in any organization, I don’t care how old it is, you have to start to look at what is going to be the operating model that’s going to make that new business commercially viable and sustainable for the long run'.



Relationship between Leadership, Culture, Innovation and Firm Performance *(Source: authors own analysis)*

By definition, working on BMI means working under uncertainty. The ideas and thinking that got you to where you are today is not the same thinking that will get to where you need to be tomorrow. Traditional strategy processes built on industrial economic thought are much less relevant in a world of competitive arenas, transient competitive advantage, and eco systems. Firms must be cautious not to conflate current digital initiatives with business transformation. In the fitness industry we are seeing a flood of on demand and live content, move to e commerce platforms to benefit from consumer demand driven by COVID, investment in apps etc, but none of this is BMI. According to Leinwand and Mani (HBR, March 2021):

'Companies need to step back and fundamentally reconceive how they create value. They need to reimagine their place in the world, rethink how they create value through ecosystems, and transform their organizations to enable new models of value creation. The bottom line is companies need to shape their own future, recognizing that the world has fundamentally shifted, and that they must find their purpose in it. If you can't answer the questions "Why are we here?" or "What unique value do we add for our customers?" then you are likely at best just staying in the game'.

They go on to say that organizations must:

- ***Reimagine your place in the world****, instead of focusing on digitizing what you already do. Companies that transform for success in the digital age define their reason for being in terms of the bold value they create for their customers (and their customers' customers), and why. They take advantage of new technology not to copy what everyone else is doing, but to advance their own missions by investing in the differentiating capabilities that allow them to deliver on their purpose. Filling their new place in the world with life often requires them to shed old business models, assets, and beliefs about value creation.*
- ***Create value through ecosystems****, rather than trying to do it all alone. Successful companies in the digital age recognize that the way to remain relevant comes from working together with an ecosystem of players in order to deliver the ambitious value propositions that customers want and to quickly innovate and scale up the incredible capabilities that are needed. Operating in this way requires leaders to think about value creation more boldly, question what their organization must truly own, and be prepared to open up to competitors and give up*

traditional sources of revenue in order to address some of the most fundamental customer needs.

- ***Re-imagine your organization*** *to enable a new model of value creation, rather than asking people to work in new ways within the confines of the old organizational model. Winners in the digital era break up old power structures so that new ideas and capabilities can be scaled more collaboratively. They put in place outcome-oriented teams tasked with collaborating across the organization and work with their ecosystem partners to deliver the differentiating (and often cross-functional) capabilities they need to win.*

In traditional organizations and theory, strategy has been considered the domain of top management and that their job is to strategize and once developed, sell the strategy and get buy in from the rest of the organization. There are problems with this type of approach. Firstly, top management are themselves immersed in the day to day management of the organisation and hence have limited capacity to scan and interpret the market. Secondly, an increasing number of industries are driven by knowledge workers, these highly intelligent and independent workers do not take well to what they perceive as undue top down influence and control. David Maister (ex Harvard Professor), an expert in working with knowledge intensive firms, suggests that organisations take a bottom up approach to strategy meaning that people at all levels have a major say in the strategy process.

There are many concepts and tools that can aid in bringing this new approach to life including lean start up, innovators method, agile, design thinking, bossa nova, the fifth discipline, systems thinking, cybernetics, complexity thinking, scenario planning etc. There are some great tools available now such as those developed by Strategy Tools and Strategyzer. Again, without the right culture and structure, none of these are likely to make much impact.

As Steve Blank points out in his frequently cited article in HBR, often organizations know they need to change but play a game of organizational 'whack a mole' in a futile attempt to swat every problem that pops up without understanding the root cause. He calls this innovation theatre. He goes on to say that organizations must build a mind set, culture and process that becomes innovation doctrine. In their article (How Leaders Delude Themselves about Disruption, MIT Sloan Management Review, 2020), Scott Anthony and Michael Putz describe the 4 lies that leaders tell themselves including that their organization is immune (we are safe) and that their people are not up to the task. Cognitive bias affects leaders as much as it does anyone else. Assuming people are not up to the task creates a self-fulfilling prophecy. Leaders, and organizations, need to become much more self aware in order to create strategic clarity.

Critically, organizations need to stop thinking along the lines of everything is knowable and get used to less than concrete concepts that do not fit in with arbitrary yearly budgets, targets, or hurdle rates that have nothing to do with the future sustainability of the business.

What if Apple makes a Treadmill? Or Doesn't!

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