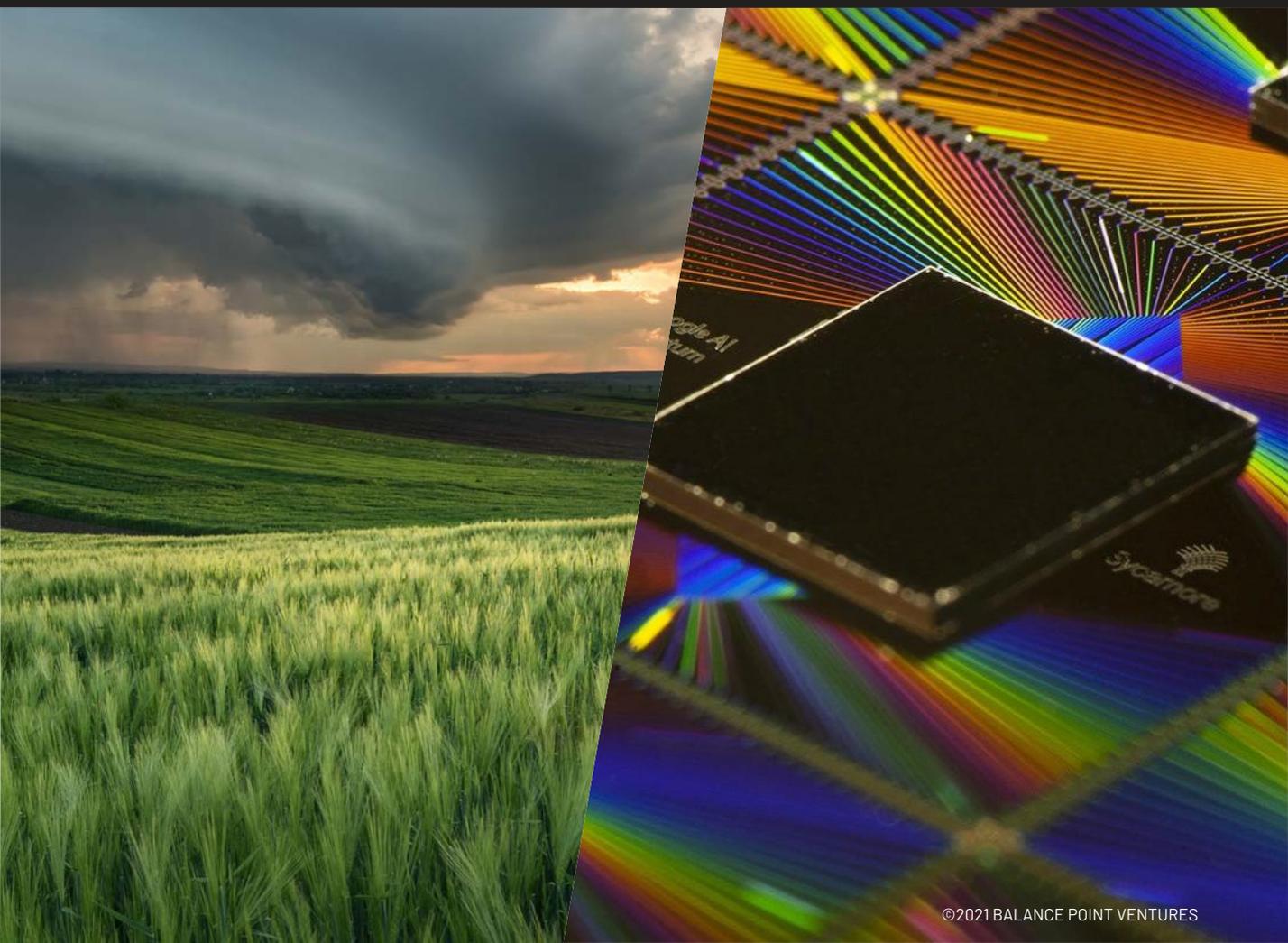




DISRUPTION DECADE **SYSTEMS VIEW ON SUSTAINABILITY**

Will the 2020s mark the collapse of the industrial economy or rise of a modern economy?



EXECUTIVE SUMMARY

01 // The global focus on sustainability is symptomatic of the disruptive period of economic transformation underway in the 2020s

During this time, we will either (A) send the industrial economy into a state of collapse or (B) give rise to a modern economy optimised for the 2020s and beyond. While the choice seems obvious, it depends on our ability to overcome our hardwired resistance to change and instead follow our equally innate desire for change. A static view guides us to do more of the same, keeping us on Path A, whereas a systems view opens our mind to possibilities, enabling us to creatively pioneer new ways along Path B.

02 // The industrial economy is fighting an avalanche of disruption

Decades of cumulative, convergent changes in social and environmental conditions and informational and technological capabilities have fundamentally altered the context in which the industrial economy operates. With changes in all areas set to cross key tipping points in the 2020s, continuing to organise activity under this model is like fighting an avalanche. It paves the way to collapse.

03 // The modern economy is riding a wave of transformation

The flipside of disruptive change is its ability to clear the way for the new, in this case a modern economy aligned with the conditions and capabilities of the 2020s+. The modern economy is already emerging in core areas, including power, transport and food systems. It brings with it the potential to advance exponentially beyond the industrial system, but this time in modern ways measured in new metrics.

04 // Now is the time for strategic action based on a systems view of sustainability

Riding the wave rather than fighting an avalanche depends on we allocate resources under our control. Do the majority support industrial or modern activities and as such, are they subject to headwinds or tailwinds of disruption? The answer reveals not whether we're good, bad, right or wrong, but rather how the 2020s Disruption Decade is likely to impact each of us personally. The pressure is on, the stakes are high: now is the time for strategic action based on a systems view of sustainability.

ABOUT THE AUTHOR: HANNAH TUCKER, DIRECTOR, BALANCE POINT VENTURES

Hannah Tucker does independent research into the disruptive developments transforming the economy. She presents this content to business and investor audiences, while working with clients through her sustainability advisory business, Balance Point Ventures. Hannah is also the Founder of Disruption Dinner, providing culinary adventures through our changing food system.

Previously, Hannah worked in sustainable investing, both alongside Al Gore at Generation Investment Management and at PIMCO. Hannah holds dual masters degrees in business administration and international studies from the Wharton School and Lauder Institute of the University of Pennsylvania. She is a CFA Charterholder, Former RethinkX Research Fellow, Climate Reality Leader and regular contributor at the Cambridge Institute for Sustainability Leadership.



INTRODUCTION

Sustainability now tops global agendas after having been dismissed for decades.

What has changed? Is doomsday upon us? Has moral consciousness grown? Or have we entered a period of disruption? This paper presents a case for why the 2020s mark a disruptive period of economic transformation in which we will either:

(A) send the industrial economy into a state of collapse, or

(B) give rise to a modern economy optimised for the 2020s and beyond.¹

Driving this shift are disruptive changes in the environmental and social conditions surrounding the economy and in the informational and technological capabilities underpinning it. Changes in both areas are not only signalling an end to sustainability but more importantly forcing us to a fork in the road. While the choice between the two paths seems obvious, the outcome depends on our collective response.

Will we give in to our hardwired resistance to change (homeostasis) or instead follow our equally innate desire for change (adaptation)?²

In times of stress, the first tendency often takes over. We narrow our focus, doubling down on what got us here, not what will get us there, keeping us on Path A. However, when we instead broaden our focus with a systems view, we begin to see greater possibilities. This enlivens our creativity, enabling us to pioneer new ways on Path B.³

With the aim of tipping the odds in favour of Path B, this paper shares a systems view on sustainability along with frameworks for decision-making. The first section examines the growing limitations on the industrial economy in a whirlwind tour of the last 150 years. The second explores the expanding possibilities of the modern economy in the 2020s and beyond. The final section runs through a three-step exercise for strategic decision-making. It's a pleasure to invite you on the journey ahead.



THE INDUSTRIAL ECONOMY IS FIGHTING AN AVALANCHE OF DISRUPTION

How did we get to this point?

When the industrial economy was first forming in the 1870s, it was aligned with the conditions and capabilities of the time. In other words, it was sustainable.

Taking a closer look at conditions: then the global population was just over one billion people living primarily in rural areas with low levels of social development.⁴ The environment consisted of extensive ecosystems benefiting from climate stability (+0°C), which produced more natural resources each year than human activity consumed.⁵

Turning to capabilities: in the 1870s the combustion engine marked the forefront of technological progress.⁶ With these machines, we unleashed energy stored in coal, oil and gas, advancing beyond wood and muscle might. This enabled us to scale the production of materials and speed the transmission of information.

This context supported the organisation of the industrial economy around a centralised, resource-heavy, machine-operated and human-run value chain. This system went on to exponentially expand human activity. During its 150 year run, equivalent to just 0.001% of human existence, the industry economy increased real GDP by 50x, global population by 8x and social development by 30x.⁷

These advancements, however, also sowed the seeds of the industrial economy's own demise by fundamentally altering the context in which it operates.

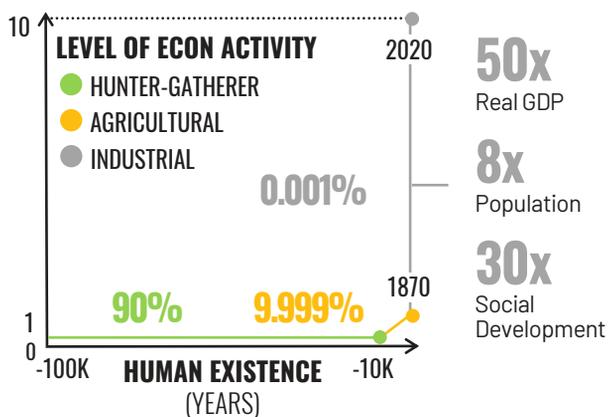


ECONOMIC CONTEXT CONDITIONS AND CAPABILITIES



Source: Balance Point Ventures

EXPONENTIAL EXPANSION IN ACTIVITY⁷ 1870-2020



Source: Balance Point Ventures

INDUSTRIAL VALUE CHAIN

CENTRALISED, RESOURCE-HEAVY, MACHINE-OPERATED AND HUMAN-RUN



Source: Balance Point Ventures

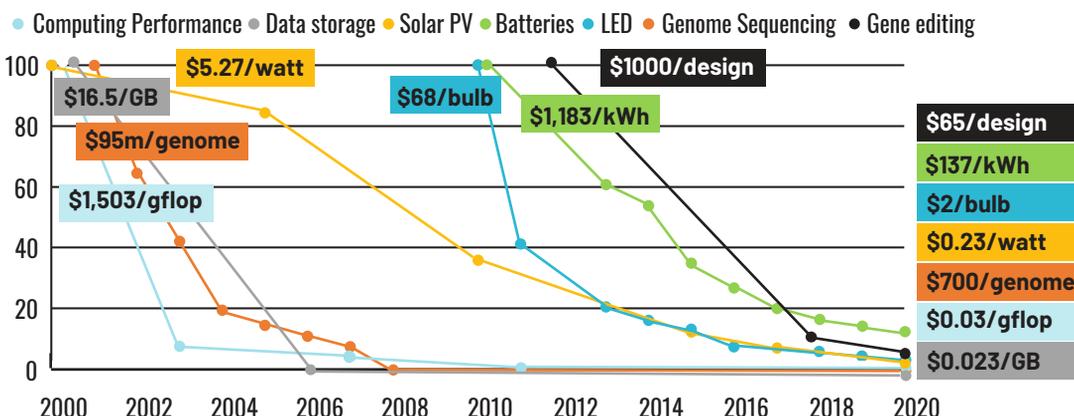
Returning to conditions, today the global population is edging towards eight billion people living primarily in urban areas with relatively high yet nevertheless unequal levels of development.⁸ Disconnected and degraded ecosystems now produce less resources each year than human activity consumes. This is destabilising natural systems, particularly evident in increasing climate volatility (+1.2°C).⁹

Capabilities have also evolved. Advancements in computing performance, data storage, solar PV, electric batteries, LED, genomics and related areas are enabling us to carry out activity with a once unimaginable level of precision. No longer are we limited to what we can physically control with our natural senses, whether that's digging for coal, corralling animals or printing documents. Instead, we're able to operate artificially beyond our senses at the level of electrons and photons, cells and molecules, bits, bytes and qubits. While these capabilities are not new, what is new is just how competitive they have become. Over the last 20 years alone, many have dropped over 100x in cost, while also improving exponentially in performance.¹⁰



COST OF CORE MODERN CAPABILITIES¹⁰

EXPONENTIAL DECLINE FROM 2000 - 2020

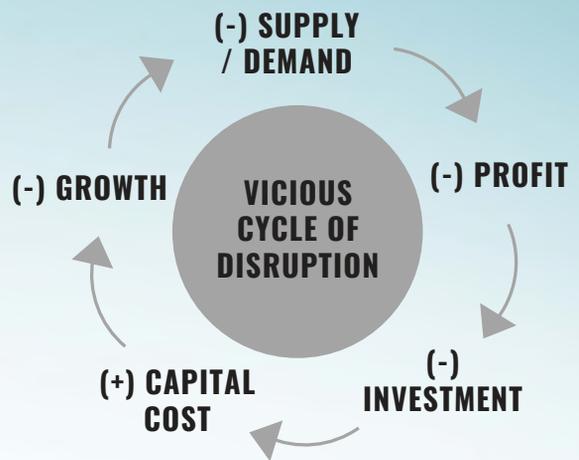


Source: Balance Point Ventures; RethinkX

From here, changes in conditions and capabilities are set to continue with many tipping points on the horizon in the 2020s. This includes the possibility of average global temperatures rising above the 1.5°C limit,¹¹ the population in Asia and Africa each growing by the size of the US (~330m people)¹² and obesity rates climbing towards 50% in many advanced economies.¹³ On the flip side, it also includes blockchain adding over a trillion to global GDP,¹⁴ biology becoming Big Data¹⁵ and the commercialisation of quantum computers.¹⁶ This is just a small, random sample of what's in store.

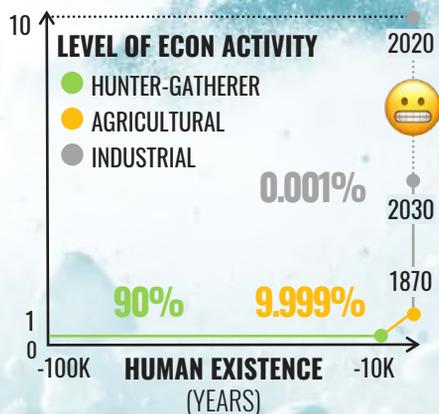
In this context, continuing to organise economic activity around the industrial model is like fighting an avalanche. Each time changes in conditions and capabilities cross another threshold, the costs of industrial ways go up and the benefits go down. This subjects industrial companies to a vicious cycle whereby declining profitability decreases investment, which raises capital costs, limits growth and further decreases supply and demand in a self-perpetuating downward spiral. The same applies to regions, with the dampening of economic activity reducing jobs and earnings, which drives people away, further degrading the area's attractiveness.

VICIOUS CYCLE OF DISRUPTION
IMPACTING INDUSTRIAL COMPANIES



Source: Balance Point Ventures; RethinkX

INDUSTRIAL ACTIVITY
BACK TO A SUSTAINABLE LEVEL?



Source: Balance Point Ventures

With pressures building and vicious cycles churning, it's no wonder talk on sustainability is reaching a fever pitch. **Is this system headed towards collapse or can we somehow bring industrial activity back down to a sustainable level?**

What about giving up beef, limiting travel or having fewer children? Unfortunately, sacrificial lambs won't do the trick. Not even a global state of lockdown was sufficient to appease the sustainability gods.¹⁷

Paraphrasing Einstein, no problem can be solved at the same level it was created.

Indeed, there is no painless way to halve economic activity, much less halve the global population. Path A is optimal for the very few. While this realisation can lead to despair, what it often misses is the other side of disruptive change: how it also clears the way for the new, bringing us to Path B.

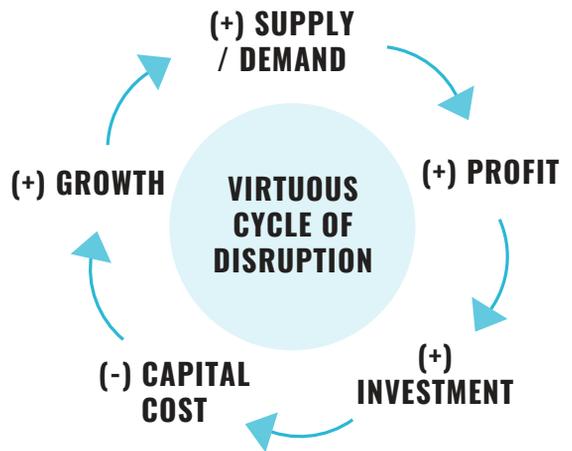
THE MODERN ECONOMY IS RIDING A WAVE OF TRANSFORMATION

The modern economy is aligned with the conditions and capabilities of the 2020s+.

As a result, this system is benefitting from virtuous not vicious cycles. In other words, it is riding a wave, not fighting an avalanche. With this wave comes the potential to expand exponentially once again, but this time in new ways based on new metrics.

While this may sound like a futuristic, fantasy scenario, the modern economy is already coming to life around a decentralised, resource-light and autonomously run value chain.

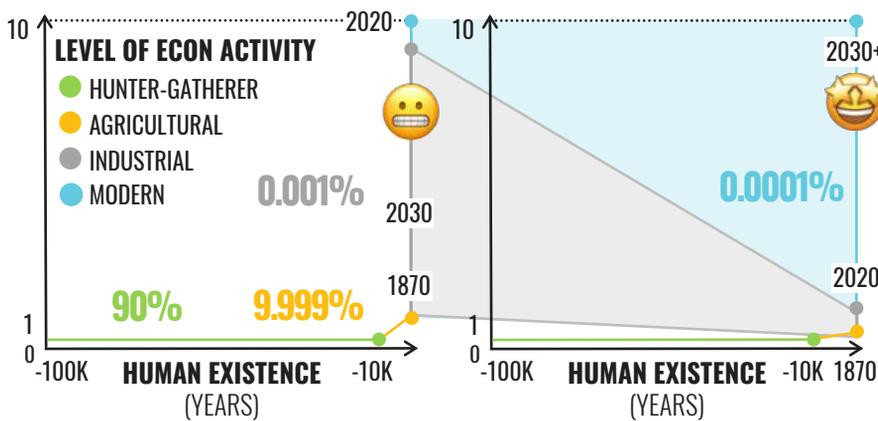
VIRTUOUS CYCLE OF DISRUPTION IMPACTING MODERN COMPANIES



Source: Balance Point Ventures; RethinkX

MODERN ECONOMY

POTENTIAL FOR EXPONENTIAL EXPANSION OF NEW WAYS ACROSS NEW METRICS



Source: Balance Point Ventures

MODERN VALUE CHAIN

DECENTRALISED, RESOURCE-LIGHT, COMPUTER-OPERATED AND HUMAN-MEDIATED

PLAN	SOURCE	PRODUCE	DISTRIBUTE	EXPERIENCE
Strategies optimising across multiple metrics	Precision flows of natural resources	Diverse outputs from local, Cloud-controlled operations	Short distances through modern transport and communications	Personalised products and services offered through digital interfaces

Source: Balance Point Ventures

To see how, let's explore the transformations underway in transport, power and food systems.

TRANSPORT SYSTEM DISRUPTION

Before we explore what's ahead in the 2020s, let's first go back to the 1890s, when the streets of New York, London and other major cities were covered in millions of pounds of horse manure. The pressing nature of the 'Great Manure Crisis' sent it to the top of the agenda at the world's first urban planning conference.¹⁸



At this time, the newly emerging **industrial transport system**—centred on individually owned, human operated, oil-fuelled combustion vehicles—offered a 'clean' solution. However, the thought of a 'toy for the rich' displacing a transport system thousands of years in the making seemed preposterous. Cost aside, people 'loved' their horses, there were no oil refineries or petrol stations, parts had to come from the carriage and bicycle industries, mechanics were blacksmiths, there were few paved roads and no right of way, world wars were raging and people didn't know how to drive!¹⁹



Yet once cars appeared on the streets of New York in the early 1900s, 20 years was all it took for the piles of manure, and horses, to disappear.²⁰ Within 50 years, the entire US had transitioned to the new, industrial way of transport, as had many other cities and countries around the world.²¹

Today we are in a similar position with industrial transport reaching its limits.²² **This system not only produces 16% of the emissions fuelling the climate crisis,²³ but also contributes to four million air pollution deaths annually,²⁴ while also trapping people in traffic for up to 100 hours per year.²⁵**

The **modern transport system**—centred on fleet-owned, autonomous, electric vehicles (A-EVs) available on-demand through mobility-as-a-service platforms—is emerging today yet seems decades away.²⁶ Cost aside, people ‘love’ their cars, minerals are in short supply and charging stations are sparse, there are no dedicated suppliers with parts coming from the computer and electronic industries, mechanics are coders, there are few digitalised roads and no ethical standards and computers don’t know how to drive!²⁷



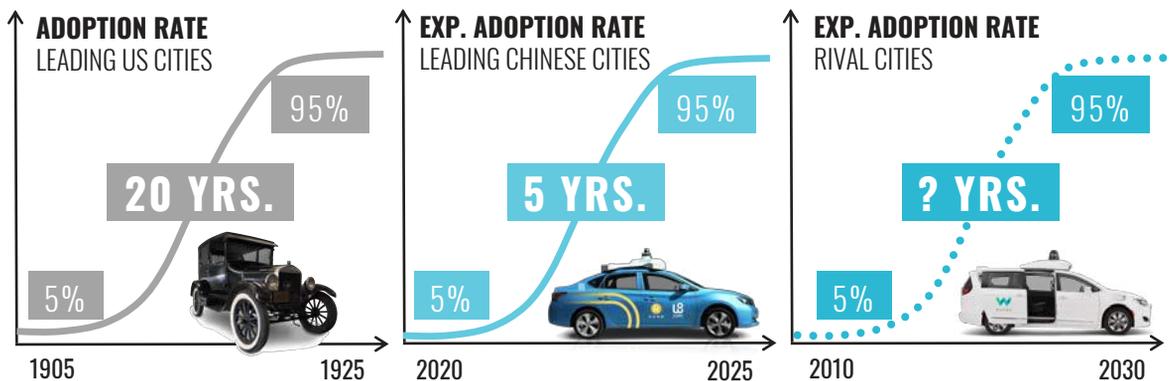
While these barriers are real, and will no doubt continue to fuel uncertainty, chaos and outrage, in the words of RethinkX founder James Arbib, they are **variables, not constants**.²⁸ Many are already beginning to fall away.

For example, in 2020, the cost of electric batteries from top suppliers dipped below the critical \$100/KWh mass market price point²⁹ and the number of public charging stations worldwide doubled to 1.4 million.³⁰ In this same year, Waymo began offering commercial robotaxi services in Phoenix, Arizona, after its fleet drove for 5 billion years virtually and 500 years physically without any major safety incidents.³¹ Alibaba’s AutoX and other Chinese companies similarly began serving Shanghai and other major cities with plans to become fully operational when regulation takes effect in 2025.³² This puts Chinese cities on track to adopt modern transport in just five years versus the 20 years it took US cities to adopt industrial transport.

When this happens, will other cities stand idly by or step up? In the words of economist Rudi Dornbusch: **things take longer to happen than you think they will, and then happen faster than you thought they could.**

TRANSPORT SYSTEM DISRUPTION

ADOPTION RATES IN LEADING CITIES THEN AND NOW



Source: Balance Point Ventures; RethinkX

POWER SYSTEM DISRUPTION

Disruption in transport is not unfolding in a silo, but rather in concert with disruption in the other core areas of the economy, such as power.

To see how, let's take a trip to South Australia, where in 2016 a superstorm suddenly left 1.7m people without power.³³ This came at a sensitive time as the region had just phased out its last remaining coal plant in favour of wind and solar facilities. Public debate turned to whether this had been a wise decision with extreme weather events becoming the norm.³⁴ It didn't take long for Tesla CEO Elon Musk to tweet an answer: yes.

To prove it, he offered to build a record-breaking battery to solve grid stability problems within 100 days, otherwise the installation would be free.³⁵



Elon Musk
@elonmusk



@mcannonbrookes Tesla will get the system installed and working 100 days from contract signature or it is free. That serious enough for you?



It took just 63-days to complete the 129 MWh Hornsdale Power Reserve.³⁶ Once connected, the system displaced 55% of natural gas peaker plants previously providing frequency controlled ancillary services (FCAS), resulting in cost reductions of up to 90%.³⁷ Copycat Hornsdale Power Reserves have subsequently popped up across Australia and around in the world, with California now serving as home to the largest installations.³⁸

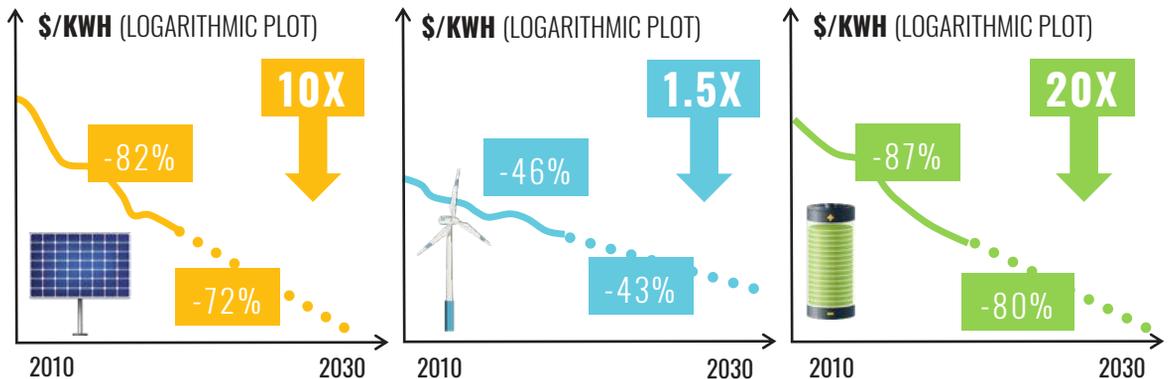
This example not only highlights the competitiveness of **substituting** coal for wind or natural gas for batteries, but more importantly, how these developments are converging to form a modern power **system**. Compared to the **industrial power system** of centrally generating power from fossil fuels for distribution across long-distance grids, the **modern power system** produces power by harnessing infinite flows of electrons from modular wind/solar and storage systems, dispatchable on-demand across decentralised, digital networks.³⁹

Modern power is already cheaper than industrial power in many places in the world and we are only just at the beginning. The exponential cost declines in solar, wind and batteries experienced in the 2010s are set to continue in the 2020s.⁴⁰



EXPONENTIAL COST DECLINE IN SOLAR, WIND AND BATTERIES

ACTUAL (2010-2020) AND EXPECTED (2020-2030)



Source: RethinkX

At the same time, the cost of distribution and maintenance is also declining with grid decentralisation and digitalisation. These savings make the system more affordable, enabling greater capacity build, including in places where power is not yet available.⁴¹ This includes parts of Southeast Asia and Sub-Saharan Africa where the adoption of off-grid, pay-as-you-go solar systems has reached 420 million users.⁴² Greater accessibility is just one of several relative benefits, ranging from lower emissions to greater flexibility. While the modern power system no doubt has many shortcomings, its overall value proposition is increasingly competitive.



FOOD SYSTEM DISRUPTION

Would you rather eat a burger made the synthetic or regenerative way?

This is a question many of us will have to answer as we shape the **modern food system**, centred on designing foods from the molecule up with ingredients from a range of organisms and cells cultivated locally through precision resource use.

It contrasts with the **industrial food system**, which much like the greater industrial economy, is no longer sustainable. For example, this system is both a villain and victim of the climate crisis, releasing an estimated 20% of emissions while contending with weather extremes.⁴³

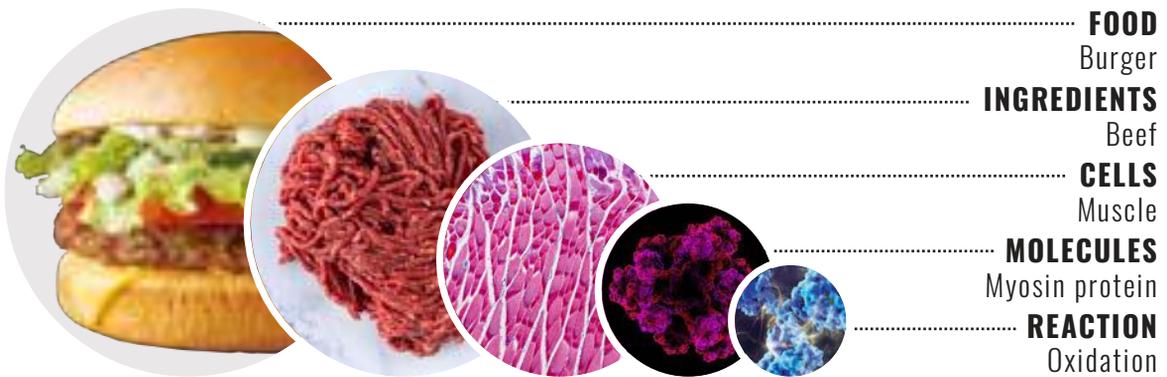


It also leaves up to half of the global population malnourished, due to both lack of nutrients in processed foods and lack of access to food. How is the modern system different? The answer comes with cheese, lettuce, pickle and tomato on top.

Modern synthetic burgers

Modern synthetic burgers are precision-produced to be both irresistible and 90% less resource-intensive.⁴⁴ They are the outcome of a range of modern capabilities, including Big Data analytics, software visualisation, A.I., genomics, 3D bioprinting, robotics and LED lighting, which together are enabling innovators to develop foods at the microscopic levels of cells, molecules and biochemical reactions.⁴⁵ This is the approach behind modern meat companies, such as Beyond Meat, Impossible Foods and Eat Just.

**APPLYING MODERN CAPABILITIES TO VENTURE INTO ONCE HIDDEN REALMS
CELLS, MOLECULES AND BIOCHEMICAL REACTIONS**



Source: Balance Point Ventures

For example, Beyond Meat began in 2009 with the question: what makes meat, meat? Turning to Big Data software, the company decoded the molecular properties of beef, identifying key factors such as haemoglobin protein ('haem') providing umami taste while triggering satisfaction. It then set out to match the molecules it identified with comparable ones from plants. Beyond Meat sources these alternative ingredients from specialty growers able to produce and extract desired molecules.⁴⁶

BEYOND MEAT BIG DATA SOFTWARE

SWAPPING ANIMAL FOR PLANT MOLECULES TO REPLICATE THE SENSORY EXPERIENCE OF MEAT

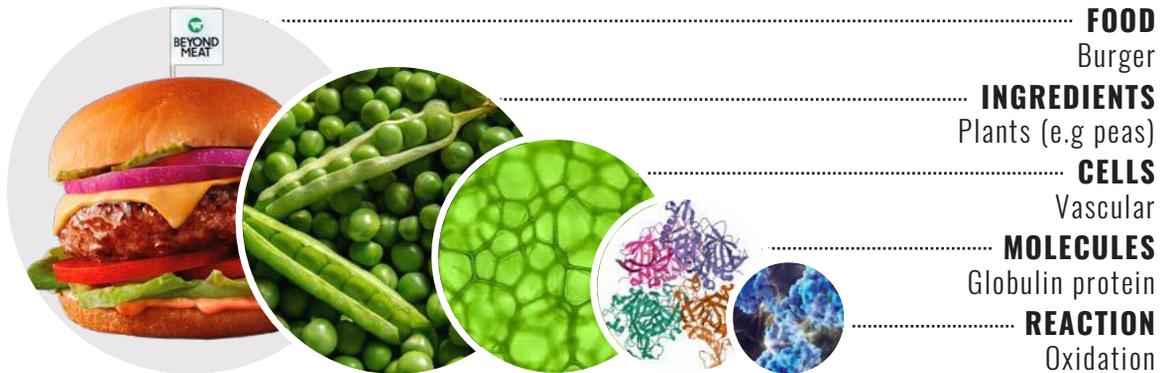
<p>HAEM PROTEIN: RED COLOUR & UMAMI TASTE</p>	<p>FAT LIPIDS: JUICY, BUTTERY BURST</p>
<p>MYOFIBRIL PROTEIN: SATISFYING CHEW</p>	<p>MAILLARD REACTION: BROWNING & AROMAS</p>

Source: Balance Point Ventures

It then runs the final mixture through a software-controlled extruder to precisely match the desired texture. The result is a mouth-watering burger capable of fooling human senses, evident in the company's \$7B market valuation and growing list of global distribution partners, including Starbucks, PEPSICO and Burger King.⁴⁷

MOLECULAR MIMICRY

A BIOCHEMICAL IMPOSTER DESIGNED TO FOOL THE SENSES



Source: Balance Point Ventures

Competitor Impossible Foods follows a similar approach but with a twist. It adds haem made from genetically modified yeast cells, which has earned its burgers international acclaim for 'bleeding'. 'Precision fermentation' of molecules is a method pharmaceutical companies pioneered in the 1980s to make insulin protein previously sourced from pigs. Food companies soon adopted it to make additives in short supply, such as citric acid. This approach is now reaching the scale required to competitively produce bulk animal proteins, along with many other molecular commodities.⁴⁸

Molecular mimicry doesn't stop there. Eat Just is taking it to the next level by replicating meat with muscle, fat and connective tissue cells cultivated in bioreactors from animal stem cells.⁴⁹ Its ground meat products are already available in Singapore through the FoodPanda app⁵⁰ and rival Upside Foods will soon release its equivalent product in the US.⁵¹ The next step will be replicating prized cuts of meat by 3D bioprinting cells like ink, which is a process MeaTech and others are developing.⁵²

There are a growing range of choices when it comes to synthetic patties, but what about for burger toppings? All techniques mentioned above apply to dairy with companies such as Oatly and Ripple Foods leading the way in plant-based molecules,⁵³ Perfect Day in yeast-made dairy proteins⁵⁴ and Turtle Tree Labs in milk expressed from animal cells.⁵⁵



For lettuce, pickle and tomato, 'vertical farming', more broadly known as 'controlled-environment agriculture', is gathering force due to improvements in technologies and business models.⁵⁶ For example, 80 Acre farms is rolling out modular, software-controlled 'Plantopia' units perfected for individual plant species. Compared to open fields, this model yields 300x, uses 90% less land and 97% less water, runs locally on 100% renewables and eliminates weather-related volatility.⁵⁷

The modern synthetic approach is gaining public attention. In 2020, investors directed £3.1B into private meat and dairy companies⁵⁸ and comparable sums into listed companies, while \$400m+ went to six vertical farm leaders.⁵⁹ Although this approach addresses many industrial issues, it also falls short in other areas. In health, synthetic foods are addictive by design, while containing high concentrations of ultra-processed, pro-inflammatory ingredients lacking in nutrient complexity.⁶⁰ Many synthetic ingredients also come from industrial operations. Using less of them slows degradation but it does not (yet) reverse it.⁶¹



Modern regenerative burger

The **synthetic approach** focuses on individual species, while reducing food down to cells, molecules and reactions. In contrast, the **regenerative approach** focuses on the relationships amongst species, elevating food as the outcome of dynamic ecosystems. In doing so, it also elevates the value proposition: revitalising people and the planet. How? By enhancing traditional practices with modern capabilities.

Traditionally, the cow was more than just a piece of meat. We recognised the valuable role of this species in maintaining healthy ecosystems and in turn the role of healthy ecosystems in balancing the Earth overall. During their lifetimes, cows constantly graze grass, leaves and shrubs, which promotes growth, upping plants' intake of carbon and subsequent release of sugars for soil microbes. Cows also stomp carbon and water-containing organic matter back into the ground, while spreading fertiliser in the form of manure and urine. Overall, this supports ecosystem productivity and resiliency. At the end of their lives, cows become sources of carbon-negative, biodiversity-positive, high-quality foods, medicines and materials. **It's the how, not the cow, that matters.**⁶²

APPLYING MODERN CAPABILITIES TO REVEAL ONCE-HIDDEN CONNECTIONS

ORGANISMS, ECOSYSTEMS AND THE EARTH SYSTEM



Source: Balance Point Ventures

Today, we're not only aware of these multiple sources of value, but are able to precisely measure, manage and monetise them with modern capabilities. This includes digital platforms, drones, satellites, sensors, robotics, blockchain and more, which are enabling us to record in real-time the carbon and water content of soil, biodiversity from the micro to macro level and nutrient density and diversity. These data can either be packaged and sold or become part of product marketing.⁶³

As such, revenue is no longer limited to the sale of commodity food, but rather is a combination of premium product sales and ecosystem services. The growing list of buyers includes: (i) informed consumers connected directly to farms through online platforms such as Farmdrop in the UK,⁶⁴ Thrive Market in the US⁶⁵ and Pinduoduo in China;⁶⁶ (ii) corporates buying carbon offsets to match net zero commitments (\$14 trillion in revenues committed as of 2020);⁶⁷ (iii) investors seeking impact returns (£3.9B+ directed to regenerative agriculture in 2020);⁶⁸ and (iv) governments and organisations offering incentives (UK government is shifting 90% of agricultural subsidies to this area by 2030).⁷⁰ On costs, reductions are no longer limited to negotiating the price of seeds, fertiliser and equipment, but rather come from optimising beneficial relationships amongst species and applying resources with software-controlled precision.



This value proposition is attracting a range of players applying regenerative practices across a spectrum of basic to advanced. On one end are Big Food companies, including General Mills, Danone and PEPSICO, working with their grower networks to adopt basic practices focused initially on soil health.⁷¹ They are also rolling out regenerative brands, such as General Mills' EPIC Provisions bars and Annie's Organic Elbow Cheddar Mac & Cheese.⁷² On the other end are wilding projects focused on building back the extensive network of ecosystems previously underpinning environmental sustainability. One example is Knepp Wildland in the UK, serving as a biological refuge and provider of premium food and ecotourism.⁷³

Overall, regenerative approach offers an answer to human and ecosystem health. However, it's still in its early stage with modern capabilities not yet widely commercially available and critical mass still building around platforms and accreditation standards. Regenerative foods themselves also don't match the sensory experience of the processed foods people have come to crave. There is an argument to be made for meeting people where they are.



This brings us back to the would-you-rather starting question, which highlights that there is no one modern way, but many. The variations that ultimately dominate will depend on who participates in the creation of modern systems, whether in food or other areas. The answer to this question also needn't be binary. Given the level of disruption ahead, having both options creates greater resiliency, in addition to synergies. For example, the shift to synthetic meat frees land currently used to grow monocultured feedstock, which in turn opens up opportunities for regeneration. Overall, the key is to return to sustainability, otherwise we'll end up eating industrial burgers' dust.



STRATEGIES FOR RIDING THE WAVE OF DISRUPTION

Positively impacting the outcome of economic transformation

Coming back to our question: why are we talking about sustainability today? Is doomsday upon us? Has moral consciousness grown? Or are we in a disruptive period of economic transformation? While there are no doubt elements of all three at play, focusing on fear and judgement can be paralyzing. In contrast, contextualising sustainability as an economic state forming part of our evolution is empowering. We're all part of this journey, each with a unique role to play. The question then becomes how best to carry out that role. To answer that question, let's explore three short exercises.

1 // DISTINGUISHING STRATEGIC ACTION FROM PERSONAL CHOICE

We often associate action on sustainability with the personal choices we make as consumers. This partly comes from our sense of morality—the desire to walk-the-talk living life in alignment with our values. Ditching plastic straws feels virtuous—the perfect balance to whatever vice we may be drinking. Making personal sacrifices also reflects the historical advice of advocacy organisations. In the absence of competitive alternatives to industrial ways, the moral appeal has been one of 'industrial abstinence.'

However, industrial incumbents have also invested billions of dollars in shifting the focus to individual responsibility. Why do we believe the number one solution to the climate crisis is recycling? The oil and gas industry. Why do we fear saturated fats? The sugar industry. Why did we believe cigarettes were harmless? The tobacco industry. Misinformation campaigns are highly effective deflection tactics.⁷³



That’s not to say personal choices aren’t important. For example, they provide a low-risk way of familiarising ourselves with modern activities, whether that’s switching to a renewable energy provider, e-hailing a shared electric car or ordering a synthetic burger. Making these choices helps shift demand. However, personal choices are a luxury. If we all had these choices to make, we would already be living in a modern economic system...but we’re not. **We first must work to get off the path of industrial collapse and onto the path of modern advancement.**

In that regard, side efforts aren’t sufficient. **Riding the wave of disruption means strategically and holistically allocating resources in line with systems change.** What those resources are and where, how and when to deploy them differs for everyone.

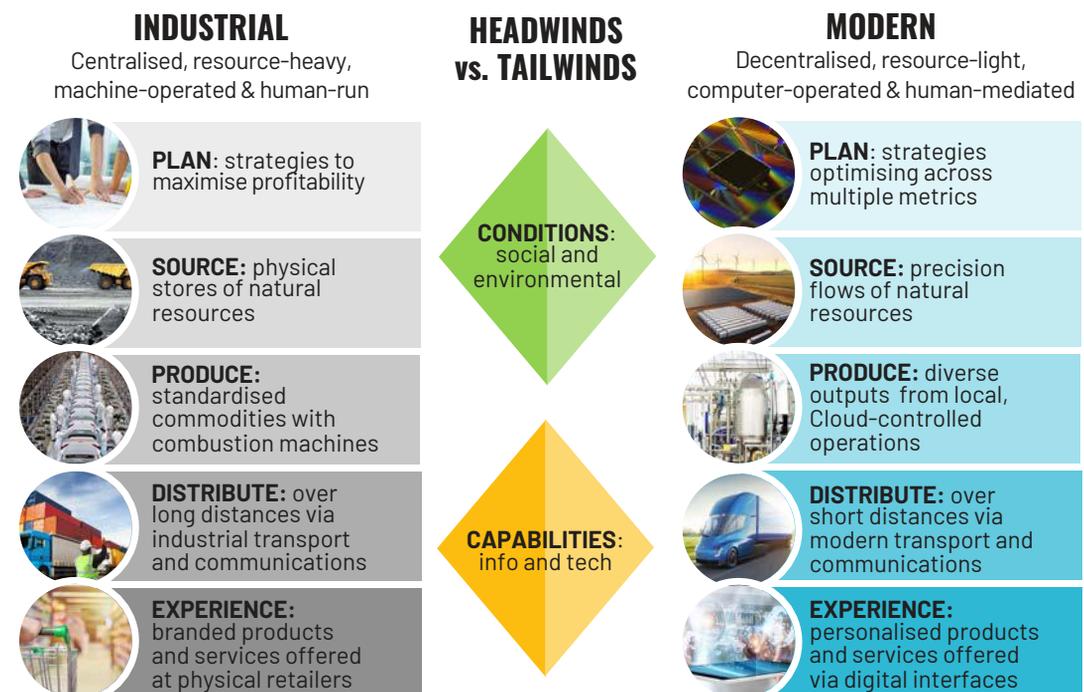
2 // IDENTIFYING CURRENT EXPOSURE TO DISRUPTION

Time, money, expertise, passion and influence: these are the resources we allocate on a daily basis. Where are you directing the majority of those under your control? Do they support industrial or modern activities or a mix of both? For the areas with a high resource concentration, what disruptive changes are likely to have the greatest impact? Are they headwinds or tailwinds? Every area is subject to a varied combination based on type of activity, sector and geography.

The answers to these questions reveal not whether you’re bad or good, right or wrong, but rather how you’re personally positioned relative to the risks and opportunities of the Disruption Decade. Once we know our current positioning, we can then begin to reposition ourselves to mitigate risks and magnify opportunities.

EXPOSURE TO DISRUPTION

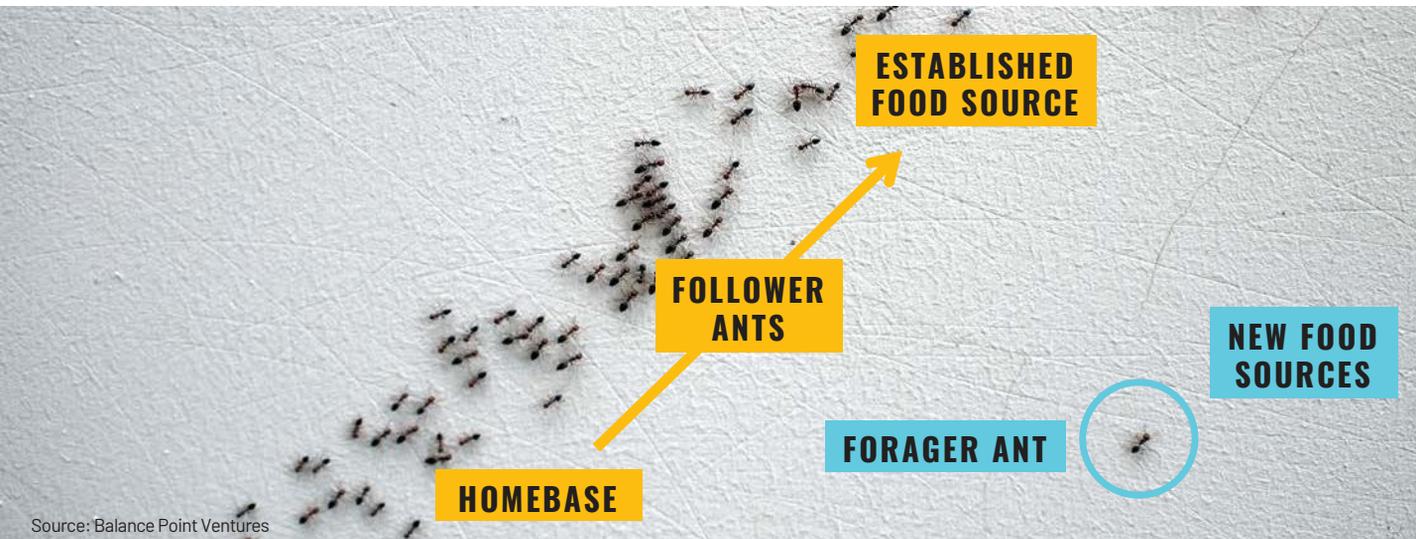
MODERN VS. INDUSTRIAL ACTIVITY // TAILWINDS VS. HEADWINDS



Source: Balance Point Ventures

3 // STRATEGICALLY REPOSITIONING, ONE STEP AT A TIME

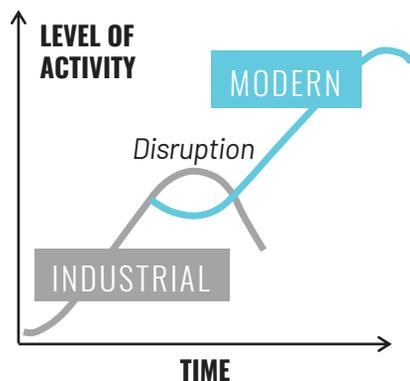
This brings us to strategic action and an unlikely source of inspiration: ants. Within each ant colony, there are two types of ants: follower ants and forager ants. The role of followers is to move along a pheromone trail from their home base to an established food source. They never stray from the known. Forager ants, however, do the opposite. Their role is to constantly scout for alternative food sources in order to lead the colony on a new path forward once the established source runs out.⁷⁴ **Based on your current resource allocation, are you more of a follower or forager ant?**



Source: Balance Point Ventures

If we continue down the trodden path of industrial economy, we will head into a state of collapse. However, if we instead pilot and pioneer new ways on the path to a modern economy, we will enable advancement. Author and social philosopher Charles Handy calls this 'jumping to the second curve': sensing imminent decline and making a leap even in the face of uncertainty.⁷⁵ But what does this look like in practice?

THE SECOND CURVE THE INDUSTRIAL TO MODERN LEAP



Source: Handy, C.; Balance Point Ventures; RethinkX

In 'Think Like a Leader, Act Like a Leader' author and organisational behaviour expert Herminia Ibarra challenges the conventional approach of developing a comprehensive plan before acting. She instead advocates trying out different approaches just like you might try on different outfits before choosing the best fit. She advocates learning through experience and constant iteration. In other words: trial and error.⁷⁶

This aligns with the approach global meatpacker Tyson foods has taken in response to imminent disruption from synthetic modern meats. The company's first step was to invest into a selection of leading players, including Beyond Meat and Upside

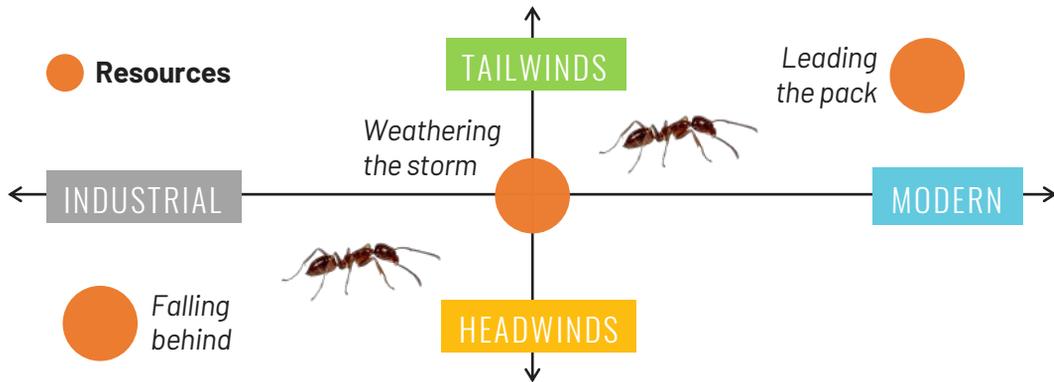
Foods, through its venture capital arm. From this experience, Tyson gained insight into all aspects of the business from extracting proteins from plant substrates to marketing to GenZ and Millenials. It then applied this learning to its own brand, Raised and Rooted.

Tyson has subsequently divested from Beyond Meat in order to invest in other areas, such as mycoproteins and cultivated meats--the next outfits to try.⁷⁷

Taking inspiration from Handy, Ibarra and Tyson Foods, how might you strategically reposition away from areas facing the greatest threats and towards those benefitting from the strongest opportunities? What pilot projects can you send out into the world as forager ants?

STRATEGICALLY REPOSITIONING

MODERN VS. INDUSTRIAL ACTIVITY // TAILWINDS VS. HEADWINDS



Source: Balance Point Ventures

CONCLUSION

Just as the 'Captains of Industry' during the 1870-1900 Gilded Age made the key decisions determining our industrial way of life, a small number of people during the Disruption Decade will make the key decisions determining the modern way of life.⁷⁸

This includes not just *our* lives, but *all* lives. From the micro to the macro to the mega level, we are connected in a complexity of ways we are only just coming to understand.

What role do you wish to play in the 2020s Disruption Decade? The pressure is on, the stakes are high. Now is the time for strategic action based on a systems view of sustainability.



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