

# Three Routes for Embracing AI

AI-ify the Present

Become Great at Experimentation

Create the Future

*By Stephen Wunker*

Enterprises struggle with disruption. Their records of dealing with major disruptive technologies – such as the advent of the web, smartphone, and cloud – are generally not encouraging. Responses are often too narrow, reactive, and late. In our team’s close collaborations with the late Harvard Business School Professor Clayton Christensen and since, we’ve seen a relatively small number of enterprises rise to the challenge and capture the upside of upheaval. It isn’t easy, but a playbook does exist.

AI promises at least as much disruption as those other technologies. It carries innumerable dangers: poor quality outputs, employee alienation, new forms of competition, regulatory crackdown, and many more. But it also offers tremendous promise, such as through hyper-tailored offerings, lightning-fast responsiveness, and step-changes in costs. In our work with AI for over a decade, we’ve seen organizations reap these bounties. This paper provides a close look at how to handle the disruption, drawing on lessons and case studies of organizations small and giant alike.

We see business leaders – in functional roles, IT, strategy, innovation, and general management – grappling with several important questions such as:



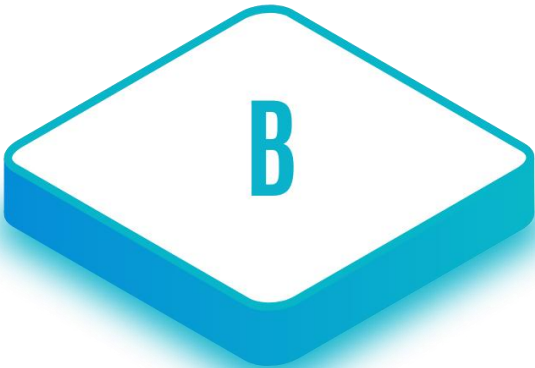
This paper addresses these questions. It lays out three routes to take, and you need to take all three. You also must pursue all of them at once. Unlike with other initiatives, you won't be able to work over distinct time horizons with different levels of urgency, because the industry's rate of change won't allow you that luxury. You'll need to move at the speed of the market. We'll show you how and give you examples.

Thankfully, the approach is as simple as ABC:



## AI-ify the Present

Improve productivity by applying AI to the way you work today



## Become Great at Experimentation

Find new and better ways to use AI through bottoms-up initiatives

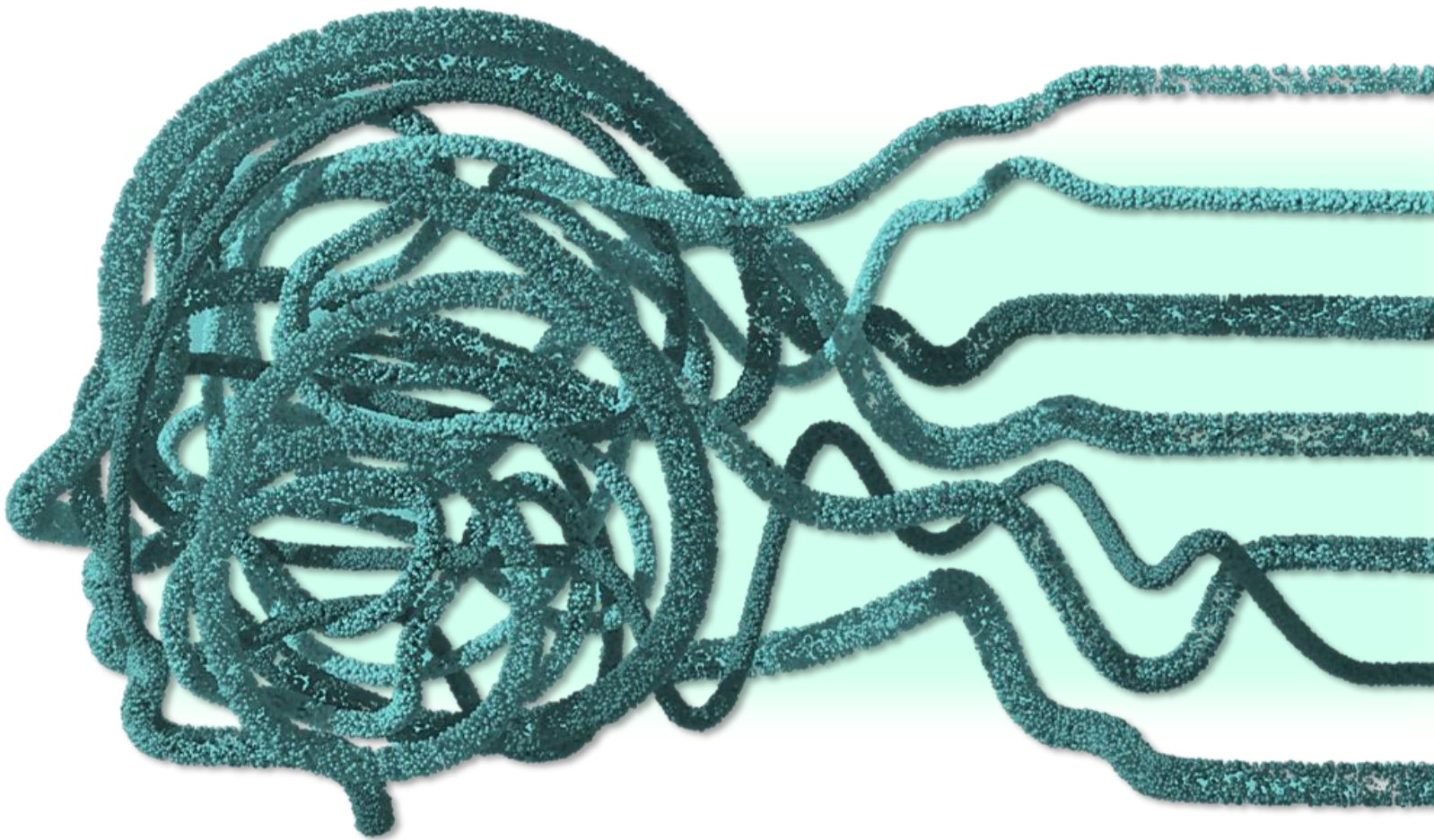


## Create the Future

Determine how AI can fundamentally change what you do

# AI-IFY THE PRESENT

Much of current writing about AI deployment in enterprises focuses on productivity enhancement. [McKinsey has estimated](#) that the potential worldwide economic gain from AI-based productivity is \$2.6 - \$4.4 trillion across 63 examined use cases. 75% of McKinsey's estimate lies in four areas: customer operations, marketing and sales, software engineering, and R&D. These are huge numbers, and they warrant immediate investigation. If you aren't pursuing these productivity gains, your competitors are.



## METHODS TO USE

The graveyard of failed IT initiatives is vast, but there are two key ways to avoid that fate here:



1

**FOCUS ON JOBS TO BE DONE** – Start with understanding the full set of jobs that your users are trying to get done. (See Next Page: What Are Jobs to be Done?) We advocate combining Jobs with elements such as [journey maps](#) to create a holistic view. Our example that follows about SOCi’s rocket-like ascent as a SaaS platform shows how empathy with users is the essential underpinning of effective tech systems, and Jobs is the approach that design professionals embrace to ensure that you focus first on fundamental user motivations rather than system features.



2

**DEPLOY 360-DEGREE SYSTEMS THINKING** – Look at all the stakeholders who have to be aligned for new solutions to work. What risks or adoption obstacles might each perceive? Who should your foothold users be to generate broader “pull” for AI systems rather than rely on organizational “push”? While these issues should be true for any tech system, they’re even more critical for AI given the need to think broadly about where data will come from, how it will be used, and how feedback learning will occur.



The focus of this paper is on large enterprises. However, if you lead a start-up, this field is ripe with early opportunity, and both Jobs to be Done and Systems Thinking are relevant to building your offering. Focus tightly on a market segment, define a full solution for it (quite possibly with features that go beyond AI), quantify the benefits you deliver, and aim for rapid market penetration prior to broadening your target.

## WHAT IS JOBS TO BE DONE?


**Jobs to be Done** is a concept first popularized by Clayton Christensen to explain why businesses succeed or fail with their solutions. It focuses not on products or their features, but on what people are trying to accomplish. For instance, a small business is not really seeking to buy accounting software, but more fundamentally to manage its cashflows and spot improvement opportunities. By concentrating on Jobs to be Done before features, you create full solutions for the right problems and avoid investing in offerings that won't get used. We have one of the [leading books](#) on this topic as well as an [extensive eBook](#) on applications of these methods to tech.



# WATCH OUTS

We see organizations falling prey to four traps in their rush toward productivity enhancement:

- ◆ **Lack of Human-Centered Design** – Begin with the user’s problems and work backwards to solutions, looking at all the levers (not just AI) at your disposal to create systems that fully address both the user’s situation and potential barriers to adopting new approaches.
- ◆ **Not Blending Forms of AI** – Some enterprises are creating programs focused on generative AI alone. This may avoid political issues of new programs becoming entwined with existing efforts that utilize other forms of AI. Unfortunately, the best solutions aren’t so cleanly divided by technology. They blend algorithmic AI as a foundation for determining actions with generative AI to tailor outputs or structure data inputs. Don’t straitjacket your solutions in order to avoid organizational complications. Well-governed initiatives can address those political concerns without limiting your technology options.



◆ **Poor Data Quality** – AI systems are only as good as the data they process, but some companies’ efforts aren’t chartered to re-think how that data is obtained. Consider the whole cycle of data, from where it originates to how granularity is preserved to how system outputs are blended with continuing contextual inputs. That way, the AI system doesn’t become just a data echo chamber.

◆ **Haphazard Feedback and Learning** – Machine Learning requires feedback, but it’s tempting to under-invest in this aspect of AI systems in the rush to deployment. Don’t. Give a lot of thought to how your solutions will not just be trained but continue to learn. The IT in AI systems is often widely available, whereas data and learning systems can be much more proprietary. This is where advantage may lie.



# HOW TO ORGANIZE

Efforts like these are frequently led by IT, although they may require dedicated resources and highly agile processes so that they can move and adjust quickly. In other situations, a CTO's office or an innovation function may be the sponsor, drawing on IT's expertise but also convening stakeholders cross-functionally to ensure well-rounded inputs.

Given their theme of AI-ifying the Present, many of these initiatives will leverage current systems and approaches. You may mandate that certain businesses or platforms embrace AI in prioritized ways and with well-considered guardrails, leaving the specifics of implementation to the people usually responsible for them.

For this first thematic area, there is no single best way to organize – the right course depends on current capabilities, what relevant IT systems are already in place, data availability, and suitability of existing internal processes. What's important is that these factors are all considered before simply defaulting to familiar approaches. Also, ensure that you invest adequately in your initial initiatives, as getting these right will generate the momentum needed for the rest of the business to demand access to these technologies rather than resist their imposition.



## EXAMPLE



SOCi was founded in 2012 as a platform to help large brands like Ford manage hundreds or thousands of websites for local operations. The company did well, but it really accelerated its growth when it infused new forms of AI into its product. That success fueled its recently raising \$120 million in venture capital.

CEO Afif Khoury explains what they did. “It used to be hard to build your own data model. We did it ourselves internally. Then software became much more prevalent and so much cheaper to develop. ChatGPT and OpenAI started to really show the power, and the tools were so easy to adopt. It’s written in the structure of prompts, not data tables. So now we could apply an approach that wasn’t available before, then build the next layer on top. We could quickly make ChatGPT the foundation.”

However, the company certainly wasn’t just pursuing AI for the sake of AI. Khoury offers wise advice on this. “Just having ChatGPT as the solution might make you stale in a month. You have to layer on top of that, putting the customer in the front and building the whole solution of workflows, experiences, visualization of data, and ROI. AI is the foundation, but our understanding of the customer enables us to deliver the full solution“

# BECOME GREAT AT EXPERIMENTATION

If there's one thing about AI that's well agreed, it's that we can't be certain about what the future will hold. In situations of high uncertainty, it pays to be outstanding at fast and inexpensive experimentation. Experiments create ownable options and open up possibilities. Then you can scale up as you learn more.

Great experimentation does not mean just letting a thousand flowers bloom. That would suck up huge amounts of time, attention, and resources without producing highly usable outputs. Effective experiments are clearly defined, crafted with full awareness about resource limitations, and designed to create learnings quickly and cost-effectively. If your firm doesn't do this well today (perhaps with the exception of its R&D labs), the right time to build these muscles is now.



## METHODS TO USE

At New Markets, we lead organizations to embrace a five-step process for becoming great at disciplined experimentation in a given arena:

1

**ESTABLISH THE KNOWNNS** – First, establish what you know as fact and what you don't know, including the X-factors that could upend your plans.

2

**DETERMINE HYPOTHESES** – From there, tease out the key hypotheses that you want to test. Keep in mind that some hypotheses might be more fundamental than others, and therefore might need to be tested earlier. These hypotheses may involve Jobs to be Done, but also other factors including what triggers or impedes behavior change, the suitability of AI outputs, how those outputs get integrated into workflows, what training data is most useful, and much more.

3

**DEVELOP TESTS** – Then, consider how you might investigate each of these hypotheses using the scientific method. How can you break hypotheses into small, easily-testable components?

4

**PRIORITIZE** – Once you've designed your experiments, consider the time, cost, and risk associated with each. Together with the importance of each hypothesis, decide which experiments must come first vs. later. This will give you a priority list to adjust along the way.

5

**CAPTURE LEARNINGS** – Finally, set up a system by which you can quickly capture learnings and adjust. Obtain tangible measurements from these experiments. Your system should include a way to decide which experiments to follow up with, know if more are needed, and determine when you've learned enough from a given test. Critically, it should include a mechanism to end experiments and new ideas.

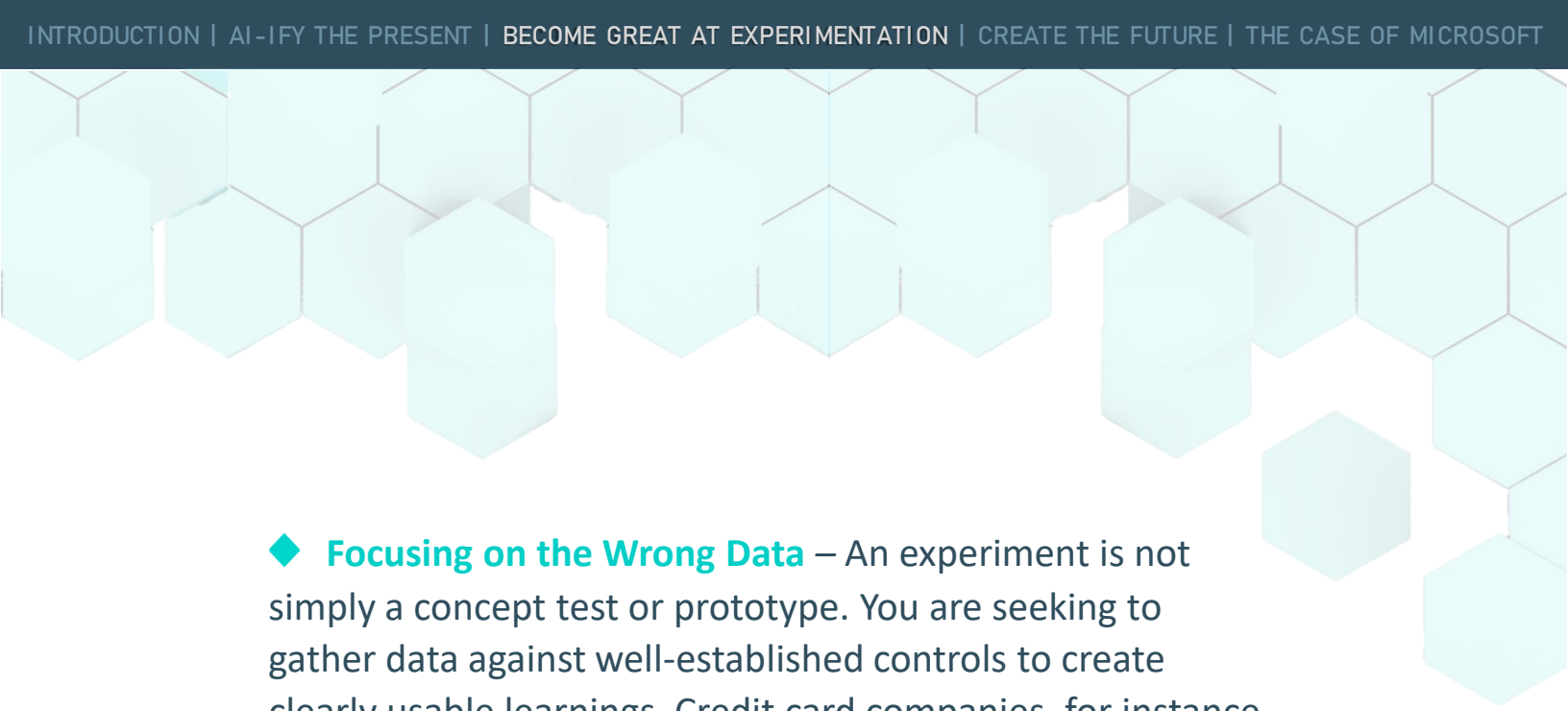
For further details, see our book chapter "[Experiment and Iterate.](#)"

# WATCH OUTS

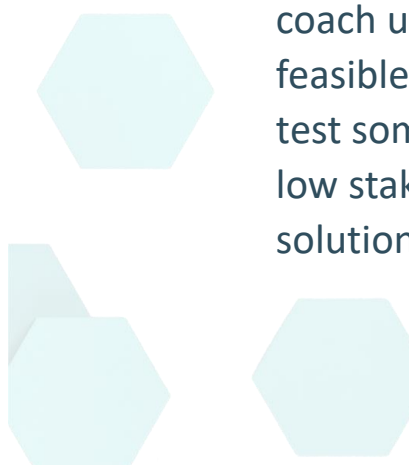
Consider the potential pitfalls of embracing experimentation:

- ◆ **Pilot Hell** – Pilots often sound alluring, but each one takes up time for all manner of staff. Control the pilots' number and your overall resource commitments.
- ◆ **Poor Governance** – While experiments can seem like low-stakes learning opportunities, surprises can happen and receive disproportionate attention. Consider the rare accidents that have beset developers of AI-based Autonomous Vehicles. Their accident rate is far lower than that of human drivers, but the failures stand out. Ensure that risks are well-articulated and that there are clear guidelines for what systems may or may not be considered. Have risks and resource commitments agreed cross-functionally so you think about things from multiple perspectives.





◆ **Focusing on the Wrong Data** – An experiment is not simply a concept test or prototype. You are seeking to gather data against well-established controls to create clearly usable learnings. Credit card companies, for instance, will deploy algorithmic AI to hone solicitations for potential customers, changing a very small number of parameters to determine their overall impact in the real world. Therefore, you want to think in a focused way about what are your dependent and independent variables. At the same time, you also should understand the full system of use and monitor for unintended consequences, so you need to be rigorous about how you capture broader observations and learnings.



◆ **Difficulty Scaling** – While it can be entirely appropriate to run experiments with systems that can never scale up with their current design, you should have a clear perspective on what would need to change to roll out a system more broadly. For instance, if the only way to gain uptake is to coach users intensively, determine upfront whether that's feasible or whether the experiment should be re-designed to test something more replicable. Consider also what relatively low stakes decisions can facilitate scaling, such as developing solutions on common platforms.

# HOW TO ORGANIZE

Experimentation requires planning, resourcing, governance, and capability building. It should not just be devolved throughout an organization with broad exhortations to learn.

Consider creating an AI Accelerator to support experimentation. It may be housed within a CTO's function, IT, Innovation, or Strategy. Whatever way this small group reports up, it should have a cross-functional governing group that meets regularly to consider priorities, resourcing, programs chartered, skills developed, learnings, and other key parameters. The group should also have clear mechanisms for sharing emerging findings, convening

people with common interests across sometimes siloed functions, and spreading capabilities while not tying experiments down with unsuitable process burdens.



## EXAMPLE



Fidelity Investments, one of the world’s largest financial services firms, established its Labs division over a decade ago. It’s continually refined capabilities to investigate areas of interest, and it’s sponsored many promising new ventures. Fidelity provides these ventures with limited amounts of money and staff, clear metrics, and a lot of latitude about how they manage day-to-day. The experiments also share common disciplines about how to collect and share learnings. Labs has publicized two AI ventures. One, Saifr, has deployed Natural Language Processing on millions of regulatory and compliance papers, helping companies to mitigate regulatory and reputational risk. A different Fidelity venture, Catchlight, leverages AI to help financial advisers save time and grow their firms by predicting which leads are most likely to convert.

Rick Smyers, a Managing Director with Fidelity Labs, shares this advice about experimentation in one of Labs’ ventures. “I can’t emphasize enough the mantra of minimizing dependencies. We were really strict about that, so we could move faster and be less of a headache to those around us. That also means they won’t object to what we’re doing. We created our own technology for instance, such as not using data feeds which were already coming to Fidelity in other businesses, so we didn’t have to be dependent on them internally. You can move so much faster and pivot quickly if you don’t have internal dependencies. Then we added those links over time.”



# CREATE THE FUTURE

Think about the big winners from the advent of the internet. Did Amazon or Netflix, for example, simply put what was offline into online form? No. It's the same for smartphones – Uber and Meta, for instance, used the technology to fundamentally re-think what was possible. AI should be no different. Productivity gains and experimentation are absolutely appropriate to pursue, but the biggest wins lie in capturing new markets. These efforts may take a while to bear fruit, so the right time to get started is now.

## METHODS TO USE

Our books [Capturing New Markets](#) and [Costovation](#) provide a large suite of approaches for these challenges. At a high-level, embrace this 6-step process:



1

### **START WITH THE PROBLEMS THAT AI CAN HELP TO ADDRESS.**

What relevant things is it really good at doing? For instance, where in your industry are there issues with unstructured data, untailed recommendations, costly customer service, long turnaround times on internal processes, etc.?



2

### **SEARCH FOR THE BIG AREAS THAT HAVE THOSE PROBLEMS.**

What customers or users provide the most potential gain through focusing on them? What trends are affecting their contexts? What are their full set of Jobs to be Done, not just the ones that AI solves for? As an analogy, think about Uber. A smartphone's accessibility and location were essential to the service, but Uber also solved for other problems such as estimating what time you'll arrive at a destination, which made the whole package more compelling.



3

### **UNDERSTAND THE TRIGGERS AND OBSTACLES TO ADOPTING NEW SOLUTIONS IN THOSE TOP USE CASES.**

These include what people need to *stop* doing in to order to *start* embracing something else. (Leverage our lessons on the [8 Factors that Speed Product Adoption](#)). The world is full of great ideas that have struggled to gain adoption because they ignored factors such as the perceived risks posed by new solutions and the switching costs users bear when they leave old approaches behind.



4

**ASSESS THE BUSINESS DYNAMICS OF HOW HIGH PRIORITY OPPORTUNITIES CAN BE EXPLOITED.** What are a diverse set of reasonable scenarios that provide context for what you can do? What capabilities will you need to thrive in those scenarios? What might be potential inflection points or risk mitigation milestones, and how can you construct a portfolio of options that gradually thin out as those milestones are reached?

5

**LOOK BROADLY AT THE LEVERS FOR CREATING FULL SOLUTIONS THAT BRING PARTICULAR OPTIONS TO LIFE.** Take advantage of approaches such as the [10 Types of Innovation](#) to consider how you can go beyond the AI product to find additional vectors for change.

6

**FIND THE Footholds AMONG CUSTOMERS OR USERS FOR NEW APPROACHES.** Radical changes like those promised by AI don't occur evenly; they start in footholds. Locate which ones are the best for you. Our book chapter on [foothold markets](#) will give you useful how-to guidance.

# WATCH OUTS

Of course, all this is difficult to achieve. If it were easy, intense competition would make the potential gains much less attractive. Among the many possible pitfalls, pay attention to these:

- ◆ **Pet Projects** – There can be a fine line between vision and delusion, and that line is often hard to locate. You should be certain to encourage vision and listen to how people imagine the future, making their inputs as specific as possible and understanding their inspirations. But you should also utilize tools (such as the Uncertainty Matrix in our [FutureCasting materials](#)) to parse out specific convictions and their underlying assumptions, so that you can perform “What You Would Have to Believe” tests on major theses. Before investing huge sums, determine what discoverable facts can address these tests. It’s often fast and inexpensive to do so.
- ◆ **Paralysis** – The flipside of over-investment in a few pet projects is having paralysis from considering too many options. Here, again, the FutureCasting tools will be helpful. Use them to sort out what kinds of knowledge you have, build a manageable number of distinct scenarios, and determine what strategies will work best in which cases. Three to five truly diverging scenarios are usually enough to examine in order to be humble about our knowledge but decisive enough to get moving.

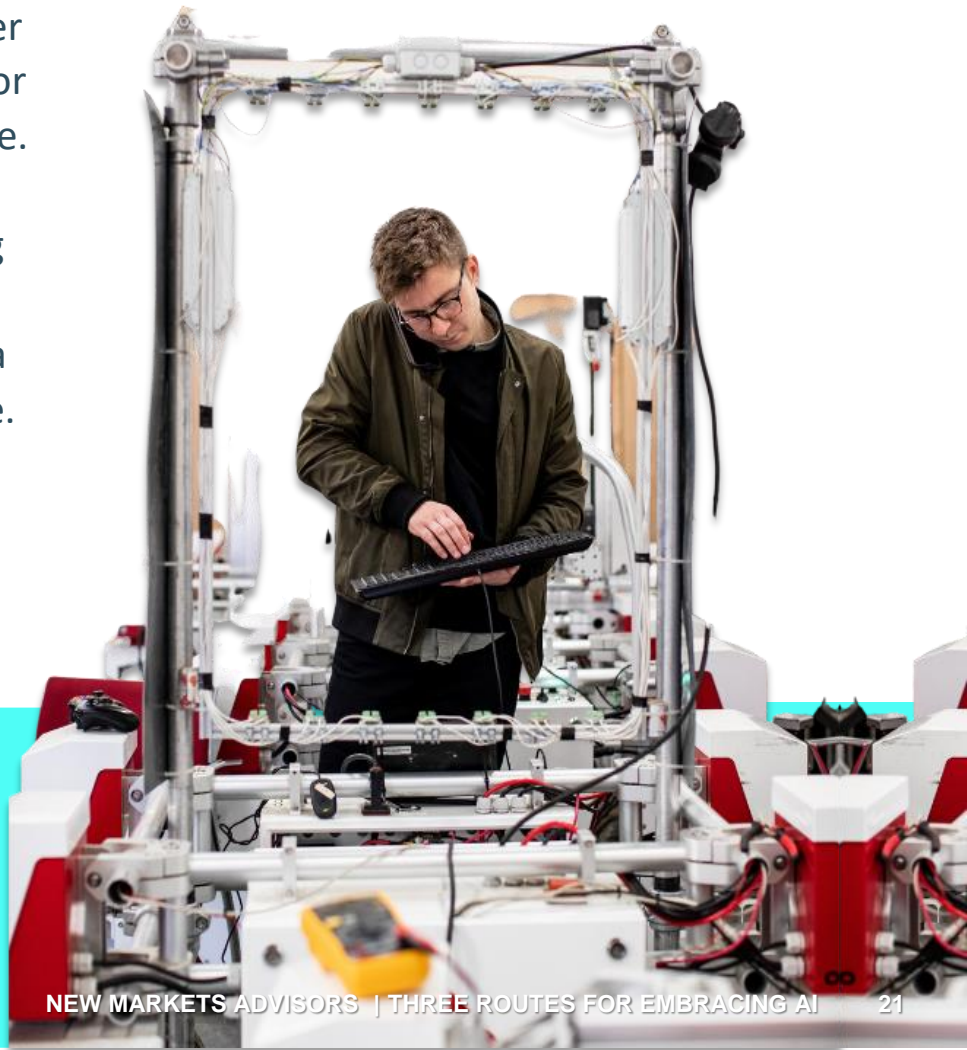
- ◆ **Not Starting with Customers and Users** – Clayton Christensen discovered through his long research that almost all successful ventures start not with technology but with understanding customers' Jobs to be Done. Over our firm's 14-year history, we've found that a deep dive into customers' or users' Jobs is warranted in about half the projects we undertake, because that understanding just doesn't yet exist. Be critical about what you really know. If you don't fully grasp customers' or users' root motivations, then build that knowledge before you start solving for the wrong problems.
- ◆ **Wrong Questions** – In the 1990s, a major electronics retailer radically underestimated the potential market for flat screen TVs by asking consumers if they would pay \$5,000 for a TV they could hang on a wall like a painting. Interest was scant. People cannot tell you thumbs up or down for solutions that they hardly grasp. Understand their motivations and don't focus too much on their reference points from today. Those will change.
- ◆ **Not Linked to Action** – Creating the future cannot be an academic exercise. Key business questions need to be in focus from the get-go, and scenarios need to be linked to how you will win within them. Moreover, theses about how to win in the future must be tied to specific steps you can take in the near term to address risks and uncertainties, and then linked to decision rules on whether to double-down on apparent winners.

# HOW TO ORGANIZE

Creating the Future involves two distinct sets of activities, and your organizational approach may well vary between them.

First, you need to determine what the future may look like and how you can win in it. This is a strategic exercise, and if you have a strategy department that may be the right home for this endeavor. However, strategy should be the convenor and not the sole author – when dealing with a disruption as broad as AI, you'll benefit from several distinct voices having seats at the table. This will also aid with buy-in to findings once they're developed.

Second, you may wish to develop new ventures, either to guard against disruption or to seize the upside of change. Carefully consider the pros and cons of commercializing these ventures in existing lines of business vs. having a distinct organizational home. The context matters greatly to determining the right solution to this question.



EXAMPLE

# Boston Scientific



Heart failure is one of the top killers of senior citizens, and yet most patients suffering from this condition see a specialist physician once every six months at best. Boston Scientific, a leading medical technology company, wondered if AI could change that situation. It defined its challenge precisely: how can data lead the right heart failure patients to be seen by the right doctors at the right time?

Its investment in AI-based technology, along with careful consideration of requisite competencies and business models, have produced the result: HeartLogic. This revolutionary system, which works alongside the company's latest generation of implantable defibrillators, uses a patient's biometric data to predict which patients are most at risk at which time, indicating to doctors who should be brought in quickly for a physical exam. Clinical data has shown HeartLogic to detect 70% of heart failure events, with a median advance notice of worsening heart failure of 34 days. Moreover, patients have less than 2 alerts generated about them per year, minimizing false alarms. AI has created a new way to manage these patients and combat this deadly disease.





## INTEGRATING THE APPROACHES THE CASE OF MICROSOFT

Microsoft is hardly new to AI. From 2010 – 18, the company claimed roughly 20% of all US patents filed involving AI – that’s about 30,000 of them. But how did the company embrace all three routes for AI to achieve a step-change in its fortunes, and how did it organize to do so?

**AI-IFY THE PRESENT:** From CEO Satya Nadella on down, the edict to integrate AI into the full suite of Microsoft products has been clear. Nadella devolved this responsibility into the mainstream organization. He has told the organization, though, that these efforts have to start with the customer and work backwards into what technology is suitable. He says, “I would say the source of all innovation is what is the most humane quality that we all have, which is empathy.”

**BECOME GREAT AT EXPERIMENTATION:** A few years ago, Microsoft re-organized its innovation efforts to create better visibility across the company about what people were doing, without constraining experiments too much with central directives. It carefully thought through what guidelines should be in place and how these should be enforced. The results bore fruit gradually but consistently.

**CREATE THE FUTURE:** Nadella made a clear bet on AI, as evidenced by the company investing over \$10 billion in OpenAI. However, Microsoft is humble about how much it knows about the future. The company is keeping options open, such as through partnering to make available Meta's open-source Large Language Model. The company has mechanisms to envision what capabilities it needs in the future, as well as an innovation portfolio that provides distinct routes to achieve those goals.

Across these three thrusts of activity, Microsoft established clear norms on who would be responsible for what, where decision rights lay, and how information would be shared. This enabled the company to pursue change on multiple fronts while keeping the management burden feasible.

**HOWEVER, YOU DECIDE TO PROCEED, WE URGE YOU TO SEIZE THE MOMENT. AI OFFERS TREMENDOUS PROMISE AS WELL AS POTENTIAL PERIL. IF YOU'RE NOT TAKING THE INITIATIVE, YOUR RIVALS WILL BE. THIS IS THE TIME TO ACT.**

# HOW WE CAN HELP

As specialists in the business end of disruption, New Markets has deep expertise in how organizations can seize the opportunity that new technologies provide. We do this as an independent firm that is not vested in a particular platform or trying to sell IT development services.

Our engagements with clients typically range from 6 weeks to 5 months, and they deploy well-proven methods developed over our 14 years as a firm, as well as in the 6 prior years as close colleagues of Clayton Christensen. Our approaches include the following ways to tackle the three themes of this paper:

## **AI-IFY THE PRESENT**

Advise on Human Centered Design, perform Jobs to be Done analysis, and guide systems-based design of new solutions.

## **BECOME GREAT AT EXPERIMENTATION**

Do deep dives on how to experiment in focal areas, document our processes, have client staff shadow the engagement, and train the organization on how to replicate these methods.

## **CREATE THE FUTURE**

Follow the 6-step process laid out in this paper, documenting our approaches and building client capabilities to use these techniques in the future.

We also help organizations determine their relative amount of focus among these initiatives, how to organize to achieve their various goals, and how to plan the development of their efforts over time in a context where much will continue to remain uncertain.

## MEET THE AUTHOR



Steve Wunker led development of one of the world's first smartphones, has built and sold several successful businesses, and advises companies worldwide on creating and executing bold plans for growth.

Steve is the noted author of three award-winning books: *Capturing New Markets:*

*How Smart Companies Create Opportunities Others Don't* (McGraw-Hill, 2011), *Jobs to be Done: A Roadmap for Customer-Centered Innovation* (HarperCollins Leadership, 2016), and *Costovation: Innovation That Gives Your Customers Exactly What They Want—And Nothing More* (HarperCollins Leadership, 2018). He also writes for *Forbes*, *Harvard Business Review*, *The Financial Times*, and other major outlets. Steve's media appearances include Bloomberg and BBC television, and he has been a guest lecturer at Dartmouth's Tuck School of Business.

As a leading consultant on growth and innovation for nearly twenty years, Steve was a long-term colleague of Harvard Business School Professor Clayton Christensen in building up his innovation consulting practice. He authored two articles with Professor Christensen and helped to put together his book on healthcare *The Innovator's Prescription*. He also spent several years consulting at Bain & Company in their Boston and London offices. He founded New Markets Advisors in 2009 and advises innovative companies including Microsoft, Boston Scientific, Fidelity Investments, and many venture-backed firms. Early in his career, he also founded some of the earliest successful firms in the mobile marketing and mobile commerce industries.

Steve has an MBA from Harvard Business School, a Master's of Public Administration from Columbia University, and a BA from Princeton University.

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# ABOUT US



New Markets Advisors is a leading boutique firm founded in 2009 and focused on innovation. We help clients determine what to bring to market and how to do it successfully. We are experts in this space, widely published, and work with top companies around the world. We are both thinkers and doers who know you need more than slides; you need actionable recommendations.

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