

CHAPTER 1

A New Wave of Technology to Better Humanity

One of the best parts of my career is that I've had the privilege to sit with CEOs of major companies and ask them this: *What do you want your legacy to be?* Most often, I get the expected answers around establishing their company as the biggest, the best, or the first. But, every once in a while, I talk to a CEO who really gets it, who sees the bigger picture and has aspirations around the good their company can contribute to our world.

This was the case with Deere & Company. When I asked this of Sam Allen (former Deere chairman and CEO), his answer summed up the essence of what this book is all about . . . and how I believe every CEO should think. Most people might logically guess his answer would be to dominate the agriculture and construction business by selling more of those green and yellow machines. But his answer showed how Deere thinks and operates on an entirely different level; the company focuses on the impact it can have on humanity. Allen's answer was to help farmers maximize their land to produce more crops so they can feed the world's burgeoning population . . . and to do all of this in a sustainable way. As lofty as it sounds, that's precisely what Deere is doing.

The "how" is accomplished with innovations that are part of an amazing new wave of technology – one that is ushering our world into an entirely new era. The past several decades have been defined by many technology waves, which have impacted business operations and productivity – personal computing, connectivity, access to information via the web, connecting with each other via social media, and the internet of just about everything.

The wave we are in now stands apart from those before it, because technology has finally evolved to impact a much higher purpose: *humanity*.

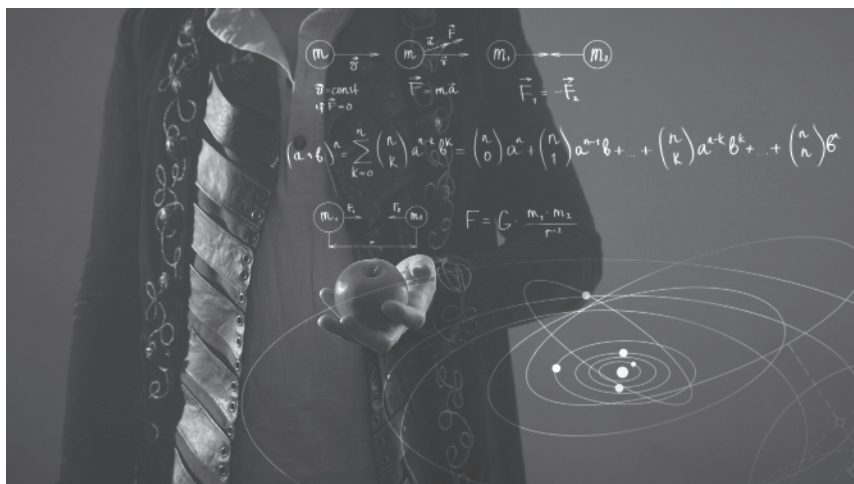
Current breakthroughs in AI and robotics, along with leapfrog advances in areas like quantum computing, biological systems, data analytics, sensors, chips, the web, and cleantech (renewables, carbon capture, etc.), have been evolving over decades to reach this point in time. These technologies have built the foundation for a plethora of new innovations that address some of today's most pressing problems, from feeding the world to climate change.

- ◆ Computer chips that can fight global warming
- ◆ Smart beehives that protect bees to ultimately help our food supply
- ◆ Blockchain systems that enable electricity sharing
- ◆ Computer vision tech that enables farmers to maximize crops to feed our burgeoning population
- ◆ AI/robotics that identify and fight wildfires
- ◆ Robotic-assisted surgery that expands the capabilities of a doctor's eyes and hands
- ◆ Wearable technology for cows so they emit less methane
- ◆ Carbon capture tech that has removed more than a million metric tons of carbon
- ◆ Affordable medical diagnostic technology that can be used without electricity or an internet connection to help under-served communities
- ◆ CRISPR gene editing technologies capable of addressing everything from blood disorders to cardiovascular disease

These are just a few of the advanced innovations available now or just on the horizon. The proliferation of these types of inventions gives us the tools to solve problems that seem unsolvable. They can impact our world in ways never before possible, evolving us into this new era: *A New Age of Reason*.

Science, Reason, and a Passion to Impact Our World

This moment in time echoes back to the original Age of Reason that took place in the seventeenth and eighteenth centuries. This major turning point in history was a time of new thinking, tremendous innovation, and inspired imagination applied to problem solving, as society embraced science and reason to improve humanity. Enlightened thinkers propelled the popularization of science, which revolutionized many aspects of the world, including communications, transportation, medicine, and the textile industry, along with a better understanding of the mechanics of the human body and the natural world. Among the many discoveries of this era are the law of gravity, the telescope, the steam engine, the cotton gin, and the vaccine, along with a breakthrough understanding of blood circulation – all of which had a



profoundly positive impact on society then and are the foundation of many aspects of life today.

Like most innovators, the greats of this era – among them Sir Isaac Newton, William Harvey, Eli Whitney, Edward Jenner – started by asking questions, saw the potential of how science could answer them, applied both reason and the magic of their imagination to “see” what could be, and then set out to create new inventions or theories that changed the world.

This new era presents us with a tremendous opportunity – and responsibility – to follow their lead, applying the combination of today’s innovations, reasoning, and the spark of imagination to address today’s most critical problems. This is the pressing call for every CEO. Today’s business leaders need to think not just about their company’s impact on shareholders, but more importantly how their organization can better our world.

Key elements have converged to usher us into this pivotal moment. We are grappling with critical global issues such as the raging battle to save our planet from climate change and the challenge to feed the world. Emerging alongside these problems is this wave of evolved technologies that are enabling our brightest minds to create new, innovative solutions that enhance the well-being of our planet and our population. The last component is a growing financial community focused squarely on investing in these types of breakthroughs to make sure they are brought to market and scaled for impact.

As these components converge, it is creating opportunities for companies like Deere and others you’ll read about in this book to heed this clarion call and make a difference in the world. The notion of tech that serves us

well, or tech for good, will not only do good for the world, but also create an entirely new value creation for corporations. When companies use technology in profoundly positive ways to benefit our world, their marketing will become a powerful, self-fueled force capable of building an irrefutable reputation that will attract all constituents, from customers to investors to talent.

Looking Ahead

In the next three chapters, we'll explore this wave of technology's impact on three key world issues: the fight to feed our ever-growing planet with less land, the battle against climate change, and the need to evolve health-care for improved patient outcomes and better working conditions for medical providers. After that, we'll take an essential look at the critical moral responsibility we have to ensure our innovations are used for good and not weaponized against us.