

NOBLE AUTOMATION NOW

Innovate, Motivate, and Transform
with Intelligent Automation
and Beyond



CHRISTOPHER W. HODGES

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Christopher W. Hodges



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PART ONE

Why Noble Automation Can Be a Life-or-Death Challenge

“Shut down all garbage mashers on the Detention Level.”
Luke Skywalker to C-3PO in *Star Wars Episode IV: A New Hope*

The *Star Wars* series is about good overcoming evil and humans transcending their limitations. Humans become heroes by learning, overcoming barriers, and facing their fears. The machines help people, not replace them. In my words, it is about Noble Automation.

In the first film in 1977, our heroes confront great evil while trying to escape from within the huge Death Star spaceship. After bluffing, running, and shooting their way through overwhelming odds, they find themselves in a huge trash compactor with the walls closing in.

Luke Skywalker, the emerging rebel leader, cannot blast his way out of impending doom and death. The princess, with all her royalty and bluster, is also helpless. Even the brawn of a seven-foot-tall Wookiee is impotent. Only with help from Luke’s robot accomplices is disaster averted. The robots answer Luke’s call, search a vast database, identify the right compactor, and free the humans just in time.

Luke, Leia, and company return to the fight, where their human traits of intelligence, courage, and empathy prevail. At critical junctions, the robots are there to do the essential supporting machine tasks. In the end, humans and robots share the stage and accolades.

In the film series, humans and noble robots save the galaxy. This book suggests we can personally save ourselves and our colleagues from unnecessary drudgery and frustration. We can be heroes.

Back On Earth

Copenhagen, Denmark is often ranked among the world’s happiest places. Scandinavian business leaders are heralded for their commitment to employee well-being, gender equality, diversity, etc. Yet, the following happened while I worked there.

The CFO of a leading Nordic finance firm, seeking to improve performance and cut costs, had identified automation as an opportunity. He summoned his team to hear the plan.

He was a seasoned, smart, and successful leader who'd achieved improvements in several companies. This respected, analytical leader and likely CEO candidate backed his decisions with data.

Dutifully, his department of over one hundred people assembled and awaited their boss's announcements.

The CFO confidently walked in, prepared, focused, and Scandinavian thin. With supporting data in hand, he stood before the microphone:

Thank you for coming today, though I admit the meeting was mandatory. Before reviewing the presentation and numbers, I want to say that automation is exciting, and it is going to dramatically change the world and improve our business. In fact, half of you won't work here in two years.

Yes, he said that and reinforced the message in a press interview days later.

Questions:

- How do you think this was received?
- How would you rate the CFO's chances of success?
- As a team member, what would you have been thinking?

This real-life example is how Intelligent Automation and other technology-driven transformations can be poorly implemented. A recent McKinsey Study indicated more than 70 percent of major business transformations fail to achieve their goals.¹ The arrival of Intelligent Automation (IA) only compounds the problem.

The rate of change driven by technology is accelerating. New, more disruptive capabilities are arriving faster than ever. Paradoxically, since most changes fail, this means more value will be destroyed faster unless something changes.

Fortunately, some companies will succeed spectacularly. Will it be different this time? The data says yes, it will be both better and worse.

To be clear, you and your business may succeed with Intelligent Automation and artificial intelligence (AI) doing whatever you are doing right now. However, if your approach is shaky, you also risk destroying your competitiveness and maybe your career.

The race to stay competitive is now a multi-heat sprint where fewer competitors move forward after each run. In real running, short-distance races are often lost by minor mistakes, while long-distance runners have more time to recover. As a former hurdler, I never won a race when I stumbled early on. However, my long-distance running friends occasionally did recover from behind. The sobering reality is the life expectancy of the average CEO and senior executive is a hurdle race, not a marathon.²

In earlier eras, companies had many competitors and loyal customers who were less likely to switch providers. Companies could lag in some areas and then catch up over time. Switching inertia, lack of information, and deep client relationships reduced customer churn. While this is still true for some companies, most face added pressure as new technologically smarter and nimble disrupters grow.

The list of disrupted companies and industries is long. (See chart below.)

Legacy Business	Disrupters
Retail Stores	Amazon
Hotels / Vacation Rentals	Airbnb
Financial Advisers	Robo Advisers
Job Recruiters / Headhunters	LinkedIn / Indeed
Taxis / Limousines	Uber
Bespoke Manufacturing	3D Printers
Cashiers and Clerks	Self Checkout
Colleges / Preschools / Tutoring	Khan Academy
Wire Service Providers	Transfer Wise and Venmo
<i>Your Company</i>	<i>An Intelligent Automation-Enabled Startup</i>

Today, information flows too fast to recover from significant missteps. Consider how quickly bad customer ratings, missed deliveries, or overcharged fees can race worldwide to thousands of new or existing customers.

At one end of disruption are high-frequency stock traders who move their trading computers closer to the trading floor to save milliseconds from processing their buy/sell decisions or cloud-based, work-from-home startups that require minimal infrastructure.

At the other end of the spectrum are high-touch, relationship or experience-based businesses like theme parks and restaurants. Disney is unlikely to lose park customers through a tedious customer support line. Similarly, Michelin-starred restaurants are unlikely to lose diners because they processed their accounts payable late. If you are Mickey Mouse or the owner of a Michelin-starred restaurant, you may be safe, for now. Most companies are in the middle, and like the proverbial frog, perhaps oblivious to the rising heat.

Three Overall Implications:

1. To compete, companies must outperform with better quality, value, and speed.
2. What was enough yesterday may not be enough tomorrow.
3. There's no time for excessive debating, office politics, or fear-based paralysis.

You may say: "What else is new? We've been dealing with technology since the PC and internet." The answer is the potent and highly disruptive combination of Intelligent Automation tools and the speed of global information flows.

What Is Intelligent Automation And What Can Make It Noble?

Definition:

Intelligent Automation combines tools that interpret written, visual, and auditory data, speed up processes, execute rules, and apply increasingly complicated reasoning to solve business problems with little ongoing

human involvement. These tools are often used to bridge or supplement existing systems. We can make Intelligent Automation Noble Automation by implementing it and sharing the benefits we create with all stakeholders.

How Technology Is Typically Used Today With Little Automation:

- Computers and spreadsheets have revolutionized how we handle calculations. The spreadsheets do what humans could do but faster and without errors.
- Through email, we communicate and send information around the world. However, at the beginning and the end of nearly every email is a person and a delay.
- Enterprise resource planning (ERP) systems like Oracle and SAP are the brains of major companies, but they hold the critical information like a nearly inaccessible safe.
- Salesforce and Workday are examples of popular specialty tools companies use to manage sales and HR.
- Humans sit in the middle of these systems, like glamorless airport flight controllers, processing, moving, copying, and entering information and changes (sometimes called swivel chair computing).
- Swivel chair computing is in the bullseye of Intelligent Automation because most systems have not been integrated. System integration projects are a viable solution, but they take years to complete and often destroy profit. So, humans remain the link between various systems.
- Outsourcing companies evolved to save onshore humans from this tedious work. Offshore employees then got the joy of swivel chair computing.
- Some humans are good at this repetitive work, but those who are, are often so consumed in detail that they have little attention available for innovating or seeing new opportunities.

How This Looks With Noble Automation:

Natascha, a knowledge worker, arrives at work and opens her business dashboard.

She sees a list of exceptions, creative pursuits, and daily routines. While she focuses on important tasks, a series of automated human enablers help her work.

Examples of how automation helps:

- One robot combs the ERP for client account activity and looks for triggers that need human involvement. Another robot applies machine learning to the pattern of transactions.
- A simple report appears on Natascha's screen, suggesting a call for a specific sales opportunity. When the customer is called, he/she experiences personal attention and has an improved opinion of the company. This improved service is possible because a robot analyzed big data and allowed Natascha to be human.
- The phone rings and a client has a billing concern. A robot recognizes the incoming number and prepares a list of the most likely reasons for the call.
- Before Natascha, the agent, has said "hello," she sees the top potential reasons for the call and the information needed to quickly answer the questions.
- Later in the day, a robot handles seventeen of twenty emails waiting for Natascha with machine-learning-enabled responses and flags. The remaining three messages are queued for human intervention. Natascha handles each while relaxed and unhurried, and with professionalism.

By 10 a.m., Natascha is focused on brainstorming new revenue-generating services with her colleagues, combining their insights.

At 3 p.m., Natascha's natural energy level is rising as she completes a thirty-minute training course on communication skills. Meanwhile, the robots work on.

- As the day ends, Natascha shuts off her PC. Before she leaves, she receives a call from an internal robot with an urgent client call. Natascha confirms she can answer a client's question. The robot generates a verbal question, and she responds on her phone.
- The robot confirms Natascha's answer and emails the client within the agreed service window. The robot records the reply, and machine learning begins to build another standard reply to similar questions.

The above example may not fit your industry, but the overall trend and potential for automation and artificial intelligence to change your business is real, and so is the downside risk of job loss.

Unfortunately, media today makes its money pushing clicks and generating hype. Truth is the casualty. Press reporting on the impact of automation is no different.

Earlier Era Press:

"Will machines devour man?"³
New York Times, 1921

*"We are being afflicted with a new disease,
technological unemployment."⁴*
John Maynard Keynes, 1930s

*"Who will have the last laugh in the gadget age—man or machine?
Well, the machine is already giving a preliminary oily chuckle.
For it is gaining...gaining...gaining on mankind."⁵*
Pulitzer Prize-winning AP writer Hal Boyle, 1949

Modern Era Press:

“Robots Will Replace 20 Million Jobs by 2030, Oxford Report Finds.”⁶
Oxford University

“Automation could kill 73 million U.S. jobs by 2030.”⁷
McKinsey & Co.

“There certainly will be job disruption. Because what’s going to happen is robots will be able to do everything better than us... All of us.”⁸
Elon Musk

Which is it? History and informed insiders show that the job loss will range from severe (47 percent)⁹ to modest (9 percent), depending on job functions. The opportunity to “do something” depends on the industry, role, company, and most importantly, the individual.

Who Should Do Something About This?

Some leaders may say: “It’s a free world. People need to take care of themselves and get marketable skills.”

Opposite this, a leader may say: “It is the responsibility of government and the companies to take care of their people.”

Both extremes are fallacies. This is not a policy book; it is an outline for leaders and employees to increase their probabilities of surviving and thriving in this technology revolution.

Noble Automation Now asserts that robots and Intelligent Automation can be applied for noble ends. Specifically, they can be used to bring out the best of us humans by removing drudgery, providing insights, and allowing us the time and energy to feel, think, empathize, connect, and solve problems—be human.

In the words of Laurent Freixe, EVP and CEO Zone Americas of Nestlé:

“When it comes to automation there are many repetitive low value-added jobs that will be lost, but at the same time we are growing and need those people to do higher value jobs. Robots make this possible...Our customers want a personalized experience and robots are the only way to do this at scale.”¹⁰

Automation is essential and will march forward. Therefore, handling it well is important for companies, leaders, and employees. Leading through implementing Noble Automation and business transformations is likely to be life or death, at least at work.

Here are a few examples:

What To Avoid (Case Example #1)

Even during the peak of Jack Welch’s GE success, not everything went well. One such project was named after a predatory cat and was meant to integrate multiple software platforms into a single unified operating system that would drive one of GE’s core businesses.

Over eighteen months, a grotesquely bloated project scope lacking a clear owner or fixed goal became an albatross around a local business leader’s neck. Project meetings with over twenty people sapped team energy and included endless arcane questions that wasted most attendees’ time.

Personal incentives and project success goals were misaligned. Young, expensive consultants flew around the country conducting focus groups. Exploratory sessions only scratched the surface and failed to fully understand the true business processes. Meanwhile, doubters grew more vocal.

As the program struggled, project sponsors looked for scalps to take rather than heroes to make. A once career-making project became a deathtrap.

Three types of people emerged:

- Peacocks, who wanted fame but not dirty hands
- Naysayers, who wanted to maintain the status quo
- Tiggers (from Winnie the Pooh), who naively expected to “change the world”

Without belaboring the details or assigning blame, it was a mess and a train waiting to derail. Over time, enthusiasm waned as imminent disaster loomed.

Ultimately, the project failed its grand vision. Some components were kept, and through the largesse of corporate accounting, the \$100+ million project was written off against an otherwise profitable business.

“Success has many fathers while failure is an orphan.”
Tacitus, Agricola 27:1 (98 AD)

Even the greatest company in the world, which GE was at the time, could screw up a major IT transformation project. Only because GE was so otherwise successful could it swallow that scale of the mistake. This pattern was rare for GE but not for the industry at large. Can your company or career survive a similar disaster?

What To Avoid (Case Example #2)

A more recent example involving Intelligent Automation occurred in a large European technology company. The details differ from those of GE, but the project and career results were similar.

The client was excited by the automation opportunity, specifically Robotic Process Automation (RPA), after a consulting firm briefed them on the technology. The proposal process began.

As the consultants began creating a proposal and client negotiations progressed, the process got ugly and pointed to disaster. Key issues included misaligned incentives, role ambiguity, and mismanaged expectations. Hope became the strategy.

Lucrative consulting contracts attract internal volunteers to “help.” One group understood Intelligent Automation as having great potential if rolled out gradually across the various parts of the client’s business. Their gradual approach would require leadership, communication, change management, aligned incentives, and a long-term focus on achieving value. The other group wanted a huge contract and massive rapid change for the client.

What transpired was a political battle over power, control, and, of course, rewards. The prevailing voice, or “courtier,” was a consulting partner of questionable ethics and unquestionable ambition.

The consulting team divided internally as the project careened toward a doomed self-serving approach.

Immediately after contract signing, an implementation team arrived on the client site, saying: “We are here to help you eliminate 50 percent of your jobs.”

The local manager rewarded for managing a large team naturally felt threatened, became recalcitrant, and the project was soon dead. The project was unrecoverable, and the consulting firm wrote off the entire \$20 million contract.

The primary reason for failure was that the incentives and ambitions of a reckless partner were to sell big deals. Working on smaller deals that grew over time did not serve his goals. He was blind to the misalignment in technology, client, circumstances, and timing. Ultimately, this project cost careers and millions of dollars, and sadly could have been avoided.

Lesson From Space



On February 21, 1967, Apollo 1 burned on the launch pad in a horrific loss of life, money, and US prestige.

Failure was caused by hubris and a program recklessly moving forward without effectively evaluating key risks.

This tragedy shook up the system and led to the 1969 success of Apollo 11.

What We Can Learn

These two stories, a large-scale systems integration and Intelligent Automation project, differ in scope but share outcomes. Both are warnings about what can go wrong, yet like NASA's failed early rocket tests, we must press forward to succeed.

What We Want To Emulate

Fortunately, there are wonderful examples of Intelligent Automation success. A simple business we all know something about, fast food, shows a brilliant example of the careful escalation of Intelligent Automation, likely to evolve for many years.

Driving with my wife from Amsterdam to The Hague in 2015, we stopped for lunch. Back then, iPads were new to businesses, yet when we walked into McDonald's, that is what we thought we saw, only bigger. I posted a photo of the touchscreens to US friends labeled as: "the Euro answer to high labor costs and language challenges."

As you likely have experienced, ordering from a touchscreen means you can proceed at your own pace, see what you are ordering, avoid the upsell pressure, and not worry about any language barrier between you and the staff. If you don't want to talk to anyone for any reason, the touchpad is for you.

Roll forward five years, and McDonald's has introduced the screens to 2,500 locations and changed its workforce for good. Think about the benefits and the costs. First, McDonald's can pay a reduced staff more money, and second, it can hire people who don't speak the local language.

As well as reduced cost, there has been a 5 percent sales increase per store in year one with 2 percent each year after that. Going further with Intelligent Automation, McDonald's is rolling out virtual drive-through robots to take your order. Initial tests have been positive for service and cost.^{11,12}

Full rollout of Intelligent Automation may include facial recognition and suggested orders based on your prior visits. The system can make you feel special by saying: "Chris, you usually like Dr Pepper; is that what you want today?" or after recognizing two people in the car: "Would you like fries for two?"

This Intelligent Automation implementation is a no-brainer, which explains why many other food outlets have followed suit. Bonus: Somebody's career benefited from this decision, along with the improved service for customers.

The downside for employment means fewer people are hired per store and those who work there get fewer chances to improve their local language, if non-native, reducing future promotion opportunities.

Intelligent Automation can be a career breaker or a career maker, and in many cases, is changing the makeup of workforces in ways like what happened at McDonald's.

However, leading successful automation won't save your career if you fail in other leadership imperatives like ethics, which is exactly what later happened to the CEO of McDonald's when he was publicly fired.¹³

A Cautionary Tale: The Grocer And The Robot

Marianne was a truly wonderful executive assistant who kept our fellow consulting partners on track and organized. She was in her forties and had been doing this type of role for much of her career. She had also graduated from a good college and kept her skills fresh. She was a valuable member of our team and stayed that way. Her husband, I later learned, was in a different situation.

I asked Marianne to join my wife and me for dinner but was disappointed when she declined. She said her husband was "not social" and in a "very dark period" after losing his job. I empathetically asked about his chosen field. He had surprisingly been a grocery clerk working the checkout at a major chain for most of his twenty-five-year career. He had recently been laid off, partly because his union wages continued to grow while his value to the company had flatlined years before.

The grocery store chain had no doubt faced a choice between raising prices on the food it sold to cover rising union wages or ever so gently showing the older employees the door and introducing self-checkout machines. We could debate the policy for hours, including the role of unions, but that's not the point.

The key is that my colleague's husband, like the proverbial frog put into a pot before the heat is turned on, could see and feel the change coming. He saw his younger colleagues with more energy and the ability to scan faster. He saw the one self-checkout machine become two, then three, then six. Still, he failed to act.

If proactive, he would also have seen the rising need for specialists in grocery stores who know unique produce and cheese types, for example, and could have suggested new products being requested by the younger customers. In short, he could have found ways to add more value to the store, but instead, like the frog, he failed to move until it was too late.

My friend's husband likely knew part of the problem was his hesitancy to act. He likely spent months blaming other people, outside events, or the world for his plight. We never did have dinner with my colleague and her husband because he never did get over his state of mind.

The Solution Is Noble Automation

It doesn't have to be this way; our colleagues do not need to sit in water like a frog waiting for something to happen. We can lead the way to ever-improving businesses with jobs that require more and more of our innately human skills, feelings, insights, and energy. We can do this by looking for and chasing down ways to increase value for others while improving our own lives. The grocer could have been proactive about his career and value to the company, and his leader could have helped. The solution is not just Intelligent Automation; the solution is Noble Automation.

Noble Automation Realized

Noble Automation, as used in this book, is the combination of applying Intelligent Automation and inspired leadership that focuses on maximizing the positive outcomes for all stakeholders. These include the shareholder, the employee, the leaders, and the community. Noble Automation actively seeks to make work an adventure that grows both people and profits.

The benefits of implementing Noble Automation include freeing people to be more human by removing drudgery, providing insights, and allowing

us the time and energy to feel, think, empathize, and connect. It means profitably putting the full value of human ingenuity to work.

The next chapter is a quick run-through of how.

Noble Automation Means Keeping Technology Beneficial

“Everything we love about civilization is a product of intelligence, so amplifying our human intelligence with artificial intelligence has the potential of helping civilization flourish like never before—as long as we manage to keep the technology beneficial.”¹⁴

Max Tegmark, President of the Future of Life Institute