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The automation edge for High Tech

Harnessing the power of automation to transform the High Tech industry

Introduction

Enterprise automation is gaining serious traction in today's business world. In an era where automation capabilities are expanding from mainstream technologies such as robotic process automation (RPA) to advanced innovations like artificial intelligence (AI) and machine learning (ML), businesses should consider the opportunities that advanced automation can offer.

The High Tech industry has always understood the value of advanced automation, particularly when it comes to end-user products. Advanced Driver Assistance Systems (ADAS) is a great example of intelligent automation. These systems are responsible for drastically reducing traffic fatalities. Linked to this, embedded medical devices that use artificial intelligence (AI) monitoring have dramatically improved health outcomes.

And that's just a taste of what it can achieve. High Tech companies have yet to fully leverage automation capabilities across all frontiers and internal business functions. In this point of view, we explore the questions executives are asking as they look to accelerate their automation journey beyond current efforts and drive toward Total Enterprise Reinvention..[1]

The journey toward Total Enterprise Reinvention

A macro environment with unprecedented volatility is putting extreme pressure on High Tech companies to find new growth and competitive advantage. Fortunately, continuous advances in technology enable transformation across every aspect of High Tech businesses. This has helped organizations recognize valuable opportunities to connect work functions and fundamentally reshape their operations. We call this Total Enterprise Reinvention.

Total Enterprise Reinvention is a deliberate strategy that aims to set a new performance frontier for High Tech companies and the overall industry. Centered around a strong digital core, it helps drive growth and optimize operations. This digital core is vital to High Tech companies' ability to capitalize on rapidly growing opportunities for automation, which are significant due to the industry's unique competitive environment, organizational characteristics and labor force composition (which typically includes a significant portion of talent in higher cost locations).

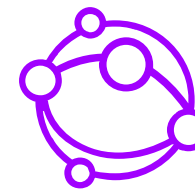# High Tech companies are well prepared for automation

They are uniquely positioned to adopt advances quickly, for three key reasons.
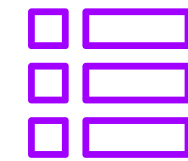
Repetitive operations need extremely low margins of error.
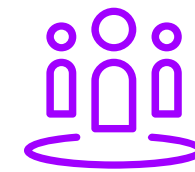
Highly educated and skilled workers are comfortable with automation.

Continuous change has created a strong understanding of complex integration processes.

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Repetitive operations need extremely low margins of error

The High Tech industry is highly competitive, with repetitive processes that must deliver on the lowest margins of error.

It's no surprise then that the semiconductor and electronic component manufacturing sub-sector are already lead adopters, harnessing automation in specific use cases like machine vision in the manufacturing process.[2]

This type of automation helps validate the quality control of physical goods moving through a manufacturing line, while another can be used to validate quality control of business data moving through an enterprise workflow.

Together, they allow fellow industry participants to build on the current level of trust and leverage strides in automation within the sub-sector to increase adoption.

Overall, we estimate, an average of 76% of a US worker's tasks could be reinvented by combining new technologies and ways of working to automate repetitive activities and augment high-value tasks.[3]

76%

of US workers' tasks could be reinvented by combining new technologies and ways of working, on average [3]

Reason #2

Highly educated and skilled workers are comfortable with automation

The High Tech industry is competing for talent like never before, increasing the incentive to embrace scalable solutions that serve as workforce multipliers, simplify operations, and improve employee experiences.

Recent Accenture research in the semiconductor industry talks about the talent gap as an emerging barrier to growth [4] and points to embedded automation as an invaluable tool to help secure scarce engineering talent.

Case in point:

Many engineers in manufacturing spend too much time on manual tasks. With robotics and automatic testing, time and expertise spent on process-oriented work could be redirected to higher-value activities like data science and analytics – creating a more innovative and efficient manufacturing industry.[5]

The good news is that the High Tech industry has a high proportion of educated and skilled workers, many with science, technology, engineering, and mathematics (STEM) specializations, making them more likely to trust and adopt to automation quickly.

94%
of respondents say moving employees to higher-value work is a top priority for the coming year. [7]

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Reason #3

Continuous change has created a strong understanding of integration processes

The pace at which the High Tech industry moves means organizations need robust financials to stay relevant. Mergers and consolidations are commonplace [8] bringing many of the key industry players together to create large and complex conglomerates.

Typically, larger and older organizations are more likely to adopt advanced business technologies like enterprise automation.[9]

They tend to be more experienced in implementing and using new business technologies and have the capital to invest in enterprise automation with the operational scale and expense base to see marked benefits.
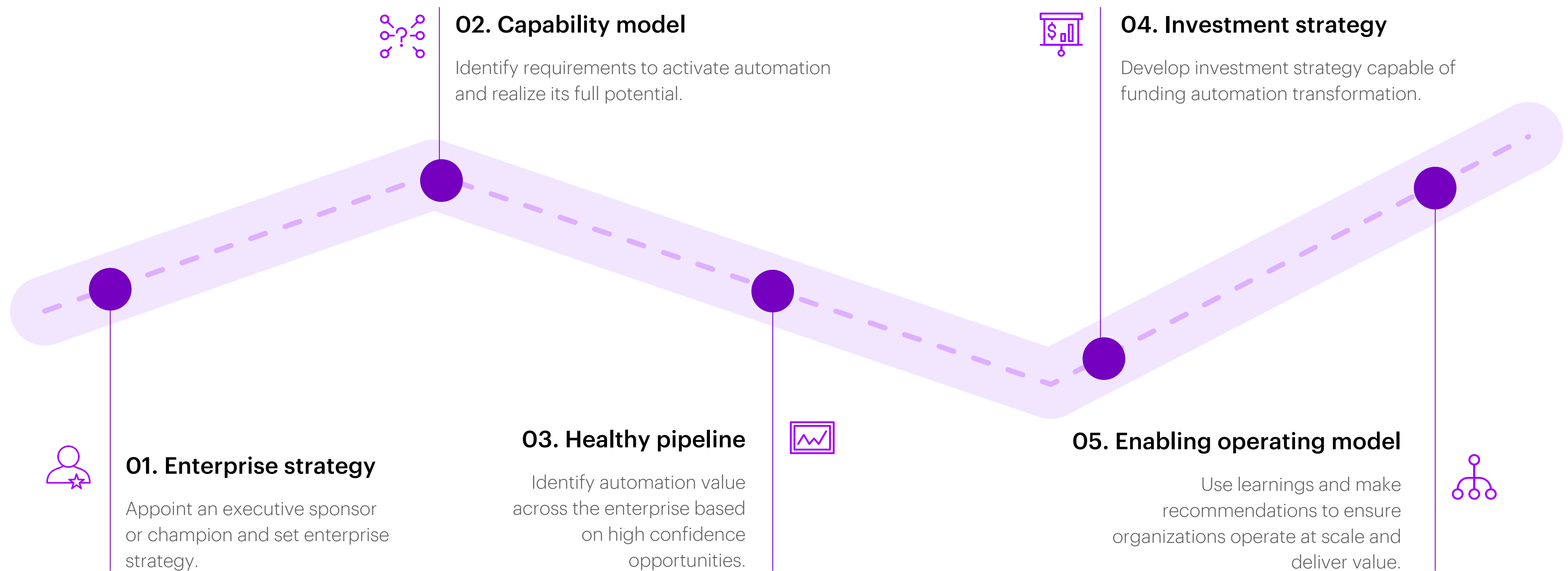
The result?

Industry dynamics, labor force composition, and organizational characteristics make the High Tech industry perfectly positioned to reap the rewards of enterprise automation.

Tech M&A deal value reached almost 841 billion US$ in 2022, with 124 deals valued at 1 billion or more.[10]

Before you begin: Understand the enterprise automation journey

Example of a practical automation journey that is powered by a strong, strategic foundation

02. Capability model

Identify requirements to activate automation and realize its full potential.

04. Investment strategy

Develop investment strategy capable of funding automation transformation.

01. Enterprise strategy

Appoint an executive sponsor or champion and set enterprise strategy.

03. Healthy pipeline

Identify automation value across the enterprise based on high confidence opportunities.

05. Enabling operating model

Use learnings and make recommendations to ensure organizations operate at scale and deliver value.

Accelerating automation

Three insights for streamlining your efforts to reduce risk, save costs, and shorten time-to-value.

Start your journey with Finance and IT.

Gain trust to promote automation adoption.

Accelerate adoption with the help of frameworks.

Start your journey with Finance and IT

Industry executives championing enterprise automation typically build trust within organizations by exploring tech-based solutions for shared functions like IT and finance, before expanding to a wider enterprise model.

Organizations in Finance and IT are primed for automation because of their relative maturity in digitized business processes and cloud infrastructure.

Indeed, the adoption of digitization and cloud services is strongly correlated with the use of more advanced business technologies including automation.[11]

Given this cumulative effect, Finance and IT are logical and low-risk places to start an automation journey before expanding to other business functions.

Unlock trapped value in IT; reduce operating costs

From an IT perspective, improving the automation of end-to-end service management processes and service transition (DevSecOps) have the highest potential. Good sub-processes include incident management, capacity management, identity, access, and request management.

The automation of IT software license provisioning is a great working example because it's capable of reducing licensing and management costs. With this application, software requests are automatically approved, labor costs are reduced, and unused software licenses are automatically canceled, eliminating unnecessary licensing costs and optimizing operating expenses.

Our most recent research reveals 96% of High Tech executives agree software and services powered by AI foundation models will substantially enhance innovation and creativity in their organizations over the next 3 to 5 years.[12]

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Capture financial value through quick and marketable victories

In a survey of senior digital transformation leaders, finance was cited as the area where most of the respondent's companies are leveraging workflow automation.[13]

It makes sense given the processing of payable, invoicing, and payroll often involve a lot of documentation, manual tasks, and data management.

It's estimated that 90% of invoices not attached to a purchase order are processed manually [14] and that's just one of the many, massive opportunities for automation.

9 in 10 CFOs said their companies were either already investing in payments automation and transformation or plan to do so in the future.[15]

Quick, marketable wins for organizations can often be found in this area, so it's a great place to start, gain stakeholders' trust and capture financial value that can be reinvested in additional enterprise-wide automation initiatives.

Accenture clients have successfully leveraged this model to self-fund their automation efforts and sustainably mature their capabilities.

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Insight #2

Gain trust to promote automation adoption

Adopting automation requires trust, and winning the level of trust needed to move the dial isn't always easy. Trust is a multifaceted and relative concept based on enterprise circumstances, individual interpretations and preferences, and the automation solution under consideration.

Perhaps, then, it's not surprising that 54% of companies seeking Total Enterprise Reinvention (including High Tech) cited people and culture as the factors most critical to success.[16]

Trust can be influenced by dependability, comprehensibility and perception.

- Dependability can be measured by tracking functional consistency. The more reliable a system is, the more likely it is to be adopted. Reliability testing can include trials around predictability and other features. It can be demonstrated by predictive testing and should also ensure consistently every time.

- Comprehensibility can be measured through human intervention and additional testing to ensure AI and ML accuracy. Practitioners with a clear understanding of automation's purpose and the benefits of implementation can play a pivotal role - providing explanations, overcoming hesitations, and increasing adoption rates.

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The power of purpose

- Perception can be measured by understanding the extent to which practitioners would like to use automation. As dependability and comprehensibility rise, perception increases too, resulting in a higher level of adoption .

The value potential of automation is determined by the level of trust and adoption among the decision-makers and investors of a company.

While automation has many benefits, research indicates that employees consistently mistrust it. For the most part, it's a fundamental misunderstanding around the machine-human feedback loops that continuously improve decision-making.[17]

And, because automation and trust go hand in hand, leaders must understand the drivers and measure trust closely to ensure the success of every automation.

Fortunately, there are proven methodologies to improve trust in automation and AI.

Generative AI has created a revolutionary way for organizations to optimize IT investments while reducing operating costs - the ultimate win-win.

> ❝ Automation represents the next era of digital transformation. When applied effectively, it has the power to magnify opportunities that put High Tech enterprises at the edge of competitiveness. ❞
>
> *Alex Olea*
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Accelerate adoption with the help of frameworks

The US government released two publications in 2022 to:

- establish a framework for developing trustworthy and responsible AI solutions
- promote AI adoption standards and
- support greater market transparency and competitiveness.[18] [19]

Private organizations have also received guidelines from other government bodies, including the European Union, on how to implement automation in ways that promote employee and public trust.

An example is the European AI Strategy, which encourages human intervention and oversight. This is in addition to advocating for technological robustness and safety, privacy and data security, transparency, accountability, and mechanisms to protect diversity, fairness, and societal wellbeing.[20]

Bridging the gap

Business leaders can bridge the gap between opportunity and reality by competing against industry participants and benchmarking levels of trust achieved in advanced automation, to give an industry view of adoption rates and the innovations employed.

Ultimately, 'what gets measured, gets fixed', as the saying goes.

Conclusion

Enterprise automation technology is rapidly evolving into a new frontier, that includes advanced artificial intelligence. This presents exciting new opportunities for High Tech companies in pursuit of Total Enterprise Reinvention, 90% of which - according to Accenture research - are accelerating their reinvention because of the pace of technical innovation. [21]

Many of the more mature organizations have already started their automation journey, but they will need to do more if they want to maximize the benefits.

Advanced automation has proven to reduce risks, increase consistency and accuracy of results, and save time and resources.

- High Tech companies should consider their Finance and IT functions as a prime starting point for quick-win automation.

- Industry leaders must also understand and measure the levels of trust around automation in their organizations to drive greater adoption and value capture.

- Business leaders in High Tech organizations manage continuous challenges and disruptions in their industry. They should benefit from advanced automation in the same way drivers get to enjoy Driver Assistance Systems in busy cities.

90% of companies are accelerating their reinvention because of the pace of technology innovation.[21]

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About Accenture

Accenture is a leading **global professional services company** that helps the world's leading businesses, governments, and other organizations build their **digital core**, **optimize their operations**, **accelerate revenue growth**, and **enhance citizen services**—creating tangible value at speed and scale. We are a talent and innovation-led company with **738,000 people** serving clients in more than 120 countries. Technology is at the core of change today, and we are one of the world's leaders in helping drive that change, with strong ecosystem relationships. We combine our **strength in technology** with unmatched **industry experience**, **functional expertise**, and **global delivery capability**. We are uniquely able to deliver tangible outcomes because of our broad range of services, solutions, and assets across Strategy & Consulting, Technology, Operations, Industry X, and Accenture Song. These capabilities, together with our culture of shared success and commitment to creating 360° value, enable us to help our clients succeed and build trusted, lasting relationships. We measure our success by the **360° value** we create for our clients, each other, our shareholders, partners, and communities. Visit us at accenture.com.

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