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FUTURE OF WORK

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PART ONE

Welcome To The Future

Automation promises to change the nature of what an organization is, what a company does, and how work is done. It will at the same time free humans from mundane tasks and enable more complex, fulfilling, and impactful work. It will also complicate economies, social order, and an individual's ability to make a living. It is the stuff of science fiction and at the same time the pragmatic search for margin expansion and better ways to create value.

Automation is a useful but awkward term, as it includes a family of diverse technologies. It's helpful to organize automation in the following way.

Forrester's Automation Framework
Success With Bots And Virtual Assistants Depends On The Human Element

Automation type	Examples
Decision automation	Digital intelligence platforms, image and video analysis
Design automation	Continuous integration tools, code optimization
Test automation	Functional test automation (FTA) design automation, FTA execution automation
Human/machine automation	Customer service robots, chatbots, intelligent assistants
Industry automation	Inspection and surveillance robots, automated vehicles
Marketing automation	Sales enablement automation, channel marketing automation
Process automation	Robotic process automation (RPA), low-code development platforms
Technology infrastructure automation	Serverless infrastructure management, security automation

Automation is a transformation in waves. This is best seen in the jumps that technology makes due to an innovation chain: the combined impact of technology advancements created by a step function change to what automation is and what it can deliver.

> **This is a fundamental challenge for leaders: How do I prepare for a disruptive future that can evolve in fits and starts?**

Move too slow, and risk acute competitive risk; move too fast, and create operational complexity that weighs down the organization and confuses (or disenfranchises) customers. Regardless, automation gaps will create the next level of technical debt, where companies can't or are slow to reap the expected benefits.

This guide is intended to get beyond the hype and provide a pragmatic view of the future of work; what it means to leaders, employees, customers, and companies; and what you can do now to stay in front of this revolution.

PART TWO

Automation In Strategic Context

Automation is not happening in a silo. In fact, future-of-work scenarios are informed by parallel and large trends such as sweeping organizational change, the gig economy, the increasing desire for privacy or transparency, the long-term journey of shifting to customer-obsessed operations, the destruction of industry lines, and strengthening of "super-platforms." Islands of automation are everywhere. Automation, therefore, synchronizes with parallel trends that inform the different scenarios.

1. Automation must create the adaptive enterprise — with an adaptive workforce — able to disrupt and respond to disruption.
Organizations that exist in the next five years will do so because they were able to leverage digital to adapt to customers, competitors, and disruptors. In 10 years, adaptive enterprises will be table stakes. The question is which companies used technology as the aperture to pursue new opportunities — to act as disruptors as disruption becomes normal.

2. Automation influences and is influenced by the gig economy.
Automation will accelerate the need for and size of the gig economy, as it displaces jobs and sources the talent able to deliver on certain competencies and tasks. Automation will also enable the gig economy to exist by connecting buyers and sellers.

3. Ultimately, automation fuels and is driven by shape-shifting organizations.
The organization of tomorrow is nothing like today's hierarchical and siloed firms with clarity of jobs and boundaries. Instead, it will have a powerful core of purpose and culture with a central control framework for automation — a task- (not job-) driven organization leveraging both the gig economy and digital outsourcing. This shape-shifting organization gives context to the structure and role of automation.

4. Automation should assume the emergence of personal data twins (PDTs) and more transparent and balanced privacy rules.
Customers are becoming increasingly wary of institutions that use their data outside their sight and permission. Expect customers to build PDTs based on zero-party data and governed by a select set of trusted entities able to act as identity stewards. PDTs will be a key currency of tomorrow's enterprises and ecosystems.

5. Automation must create new ways to deliver differentiated experiences and value.
The journey to become customer-obsessed is constant. Customer experience (CX) will remain a central strategy to win hearts, minds, and spend. Automation — AI-led whispers to frontline workers and predictive experiences to customers — will be fundamental in delivering digital and human experiences. Those that ignore these whispers will have their CX suffer as a result.

6. Automation evolves value.
New forms of commerce and social platforms are already placing pressure on the companies between the customer and those platforms. These platforms will become more formidable and place those unprepared or unable to appeal to human emotions and needs farther apart from customers.

Automation is not a singular trend: You can argue that automation will open the aperture to new, previously unthinkable business opportunities as well as be the necessary engine to execute on business strategy.

PART THREE

The Future Of Work

Automation is a force multiplier that will disrupt economic opportunity for many. The global marketplace, labor dynamics, and how work is done shape the future of work. Apart from the apocalyptic scenarios that engender fear, the future of work has a sensible and systemic, yet acute, impact on the opportunities for customers, employees, and company leaders.

1. Impact on jobs

Human-touch workers, cross-domain knowledge workers, teachers/explainers, and digital elite jobs will grow. Single-domain knowledge workers, physical workers, function-specific knowledge workers, location-based workers, coordinators, and cubicle jobs will shrink.

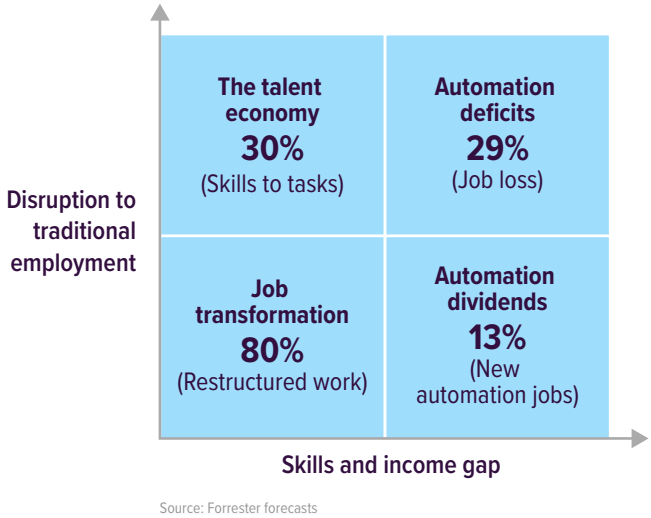
2. Impact on economic opportunity and disparity

Automation will exacerbate income disparity, as dividends shift to digital-savvy leaders and negatively impact non-digital workers unable to skill up fast enough.

3. Impact on global markets

Outsourcing and evolving supply chains have favored low income economies able to match skill level and capacity to global needs. Automation disrupts offshoring: substituting low-cost manufacturing with less expensive localized automated manufacturing that is responsive to customer demand; replacing human outsourcing; and applying additional pressure on economies to build domestic demand that is able to counter-balance changing global demand.

Four Options Are Emerging For The Future Of Work



Source: Forrester forecasts

4. Impact on how work is done

The way we have done work has already changed significantly. The difference in the future is those changes measured in decades will now be measured in years and months. Work will depend on a symbiotic relationship between man and machine. This is not a man-led, machine-do structure; instead, it will match leadership, decisioning, and execution tasks across robots and humans that best deliver the desired outcome.

PART FOUR

Putting The Future Of Work To Work

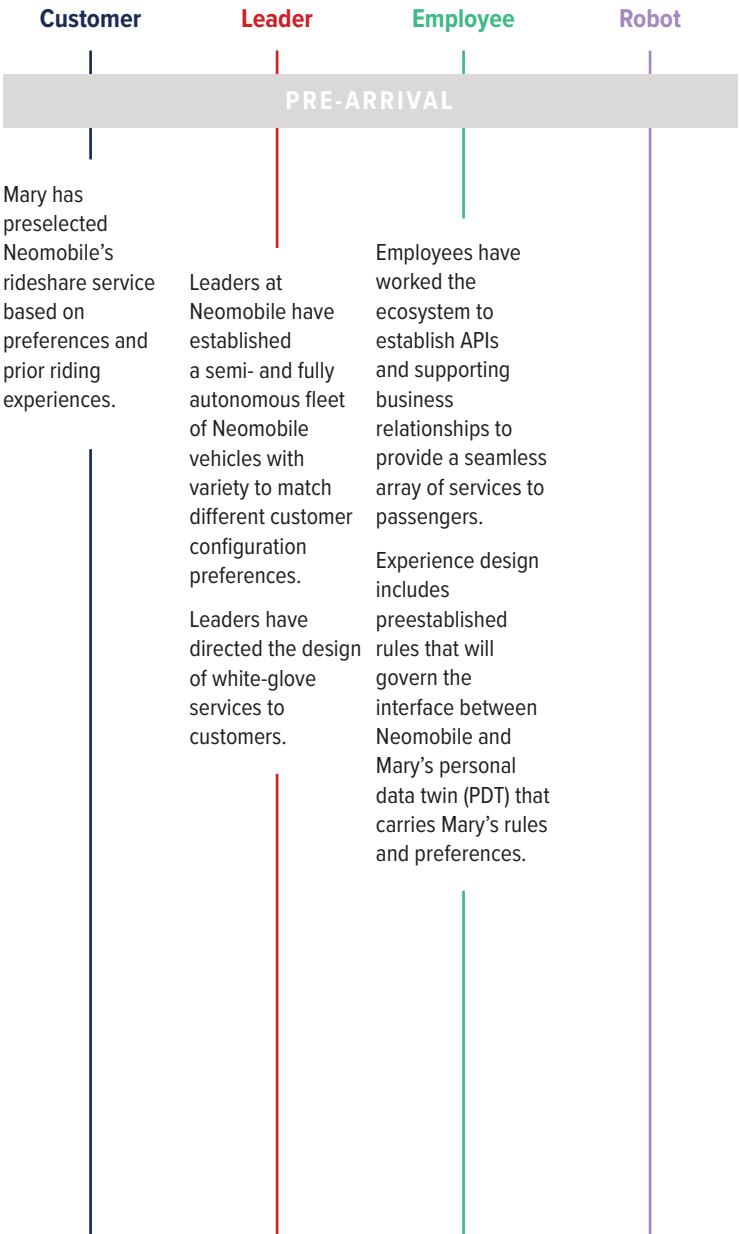
The future of work is often described in dispassionate numerical and structural terms, leaving far too much to the imagination to what it looks like underway. We created a simple scenario that focuses attention on the four players we see as most important in the story: the customer, the leader, the employee, and the robot.

Rideshare Scenario

In 7–10 years, rideshare via semi- and fully autonomous vehicles will become widespread. This is especially true in cities and countries that have more centralized controls and can therefore shorten the distance between policy development and infrastructure on the ground. Advances in edge computing will ensure safe, efficient rides.

In this scenario, Mary — traveling on business to Singapore — is met by an autonomous vehicle to attend a global leadership meeting. Singapore has put in place infrastructure to support vehicle-to-vehicle and vehicle-to-infrastructure such that traffic management is semiautonomous with central controllers (both bot masters and bots) managing the overall environment, constantly optimizing signals to ease congestion, and intervening on exceptions.

This scenario shows the obvious and less obvious characteristics and impact on automation.



The scenario describes the presence of new jobs and the absence of jobs and tasks that today seem normal.

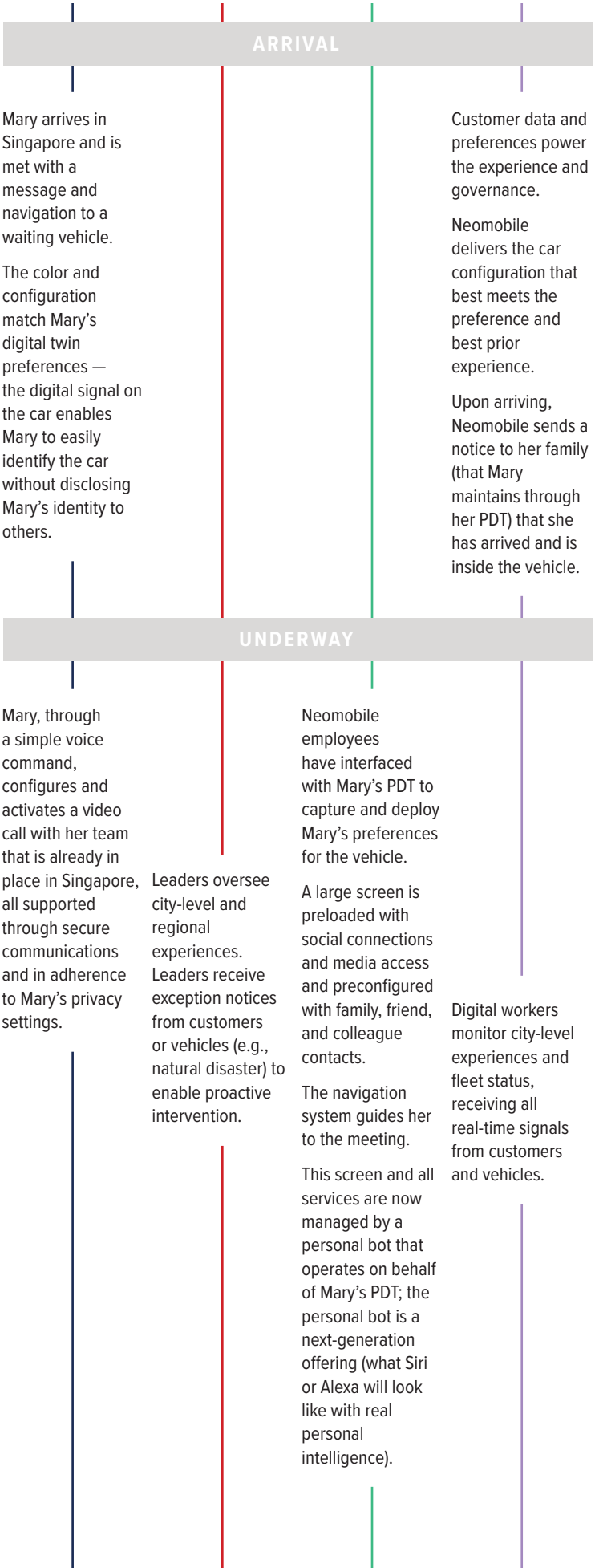
Automation Dividends (Example)

- Remote piloting
- Autonomous vehicle experience design
- City transportation infrastructure design and implementation
- Planning and logistics science
- Bot master
- PDT design and governance
- PDT/personal ecosystem design
- Real-time CX design and management

Automation Deficits (Example)

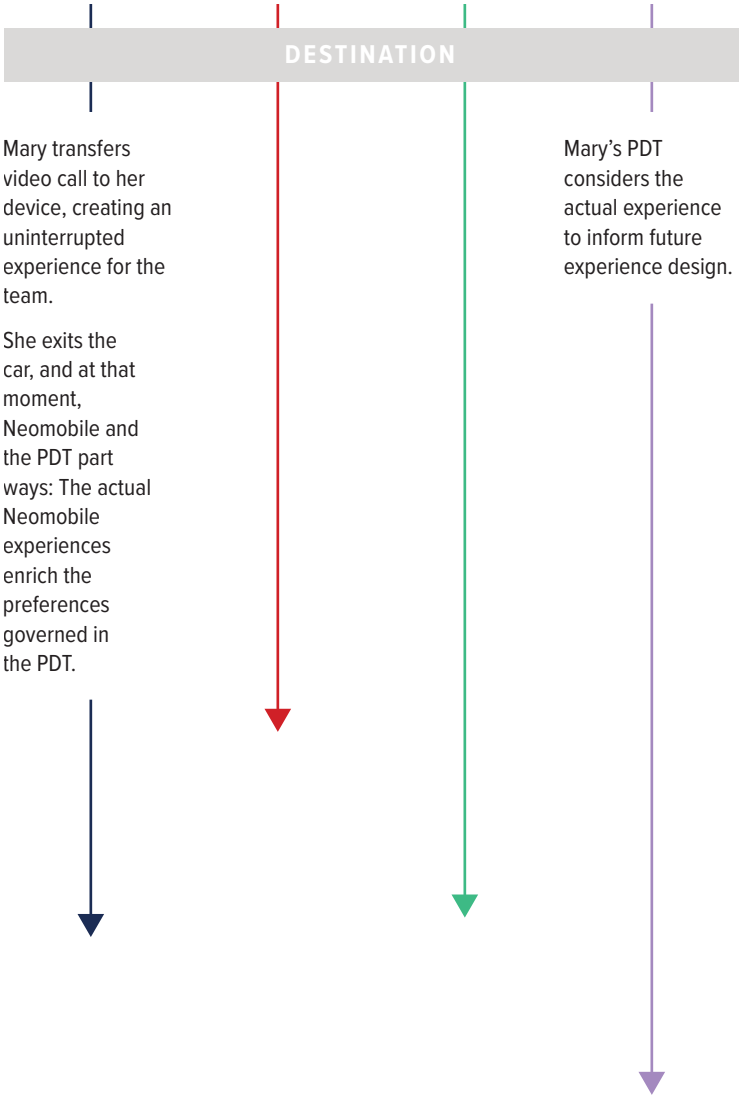
- Taxi/rideshare queue coordination
- Scheduler/logistics manager
- Taxi drivers/rideshare drivers
- Coordination/travel management

This example highlights automation creating a more efficient work market, removing areas where humans needed to intervene to support interfaces or just to make things work.



As another example, one can imagine a time when financing a mortgage will no longer require human workers, as leadership and regulators trust the consistency, predictability, fairness, and efficiency of bots' complex processes that span functions or institutions. These traditional and robust back-office and mid-office roles are critical now due to the imperfection and fragility of processes that flow across people, functions, technologies, and institutions — but not in the future.

The front end is not spared, but the impact is different. In this example and within the context of the individual's PDT and associated preferences, automation can be trusted to make daily financial transactions to maximize personal benefit, no longer requiring those that recommend or execute those transactions.



PART FIVE

What It Means

Intelligent technologies and the future of work will have far-reaching implications: some we can imagine now and some we cannot. This is not a future-only narrative that allows leaders to wait until it clearly arrives at your doorstep; this is a dynamic already underway that will pick up substantial speed and scope and requires attention now.

1. Government policy

Automation will have far-reaching implications to societies and economies, pressuring some to alter their social contract with citizens displaced by automation, creating infrastructure, cities, and economic zones that differentiate based on the best-laid policies and strategies. We already see many in power who don't understand today's digital world. Governments will need to move faster than most to catch up to a digital-automation dynamic that can threaten or empower their jurisdictions.

2. Economic planning

Automation will disrupt global, national, and local economies, from where goods are made and sold to the emergence of more complex ecosystems and changes in the labor markets. Governments and companies need to join together to create economic policy to maximize commercial opportunity while minimizing the impact to local jobs.

3. Business planning

Changes in organizational structure, new market models, more aggressive action on disruptive technology, and new ways of working are just a shortlist of items in board and executive rooms. External changes will come in fits and starts, virtually precluding graceful planning cycles. Instead, this is about anticipating disruptive forces and sufficiently bending them to create competitive advantage.

4. Leadership planning

Leading in tomorrow's environment will not be like leading today. Harnessing the combined power of human capital and robots, leading organizations will adapt and shift to market demands, be able to source talent rapidly, and be able to participate in ecosystems without getting devalued and disintermediated by them. Leaders will need to anticipate and act on automation dividends while addressing the deficits.

5. Individual planning

From one person's perspective, automation is a game of winning and losing — and winning and losing big. Employees already struggle with change and the constant need to reassess and build new skills to keep apace with the market. As much as companies must become learning institutions, so must employees become learners — learning core skills, adapting to new working models, and understanding what it means to be ready and fit for the future, maximizing their Robotics Quotient.

PART 6

The Automation Playbook: What You Can Do Today

Independent of whether the future of work is alien, elusive, and seemingly far away, leaders must gain clarity where they can and embrace a far-reaching and disruptive operational force. Automation will make sweeping, sensible, and sometimes cruel changes that can place the unprepared on their heels or in peril.
But there are steps you can take in the near future to play offense and come out the other side better off.

1. Manage the automation portfolio: Most firms are already managing a portfolio of intelligent technologies that affect the way the enterprise works, albeit in small, surgical ways. Automation will be placed in different parts of the operation with different risk/reward profiles. Those in the back office will pay margin expansion dividends with moderate market risk; those in the front end can pay significant customer experience gains but with acute risk. Leaders must manage the expanding portfolio holistically so that risk and reward is balanced — with special attention to automation that touches customers and can cause unintentional and uncontrollable customer and brand risk. Forrester's automation framework guides decision makers on how to build out that holistic strategy while rationalizing their automation portfolio.

2. Prepare and hone leadership: Leading organizations and teams will be markedly different than today. The future enterprise will be a shape-shifting one with adaptive workforces that flex as needs evolve. Maintaining a purpose, culture, and brand that establishes distinction and power, managing talent across the gig economy to align to tasks as they come and go, determining the best fit and purpose for robots, and ensuring that employees are empowered and outfitted to navigate this more complex work environment is no easy task. Forrester's Future Fit allows leaders to assess where they stand to take on this challenge, creating a baseline and development path to advance leadership.

3. Maximize employees' value: Employees don't become less valuable — the opposite is true: They are the critical cultural glue and internal force in the future of work. With fewer employees, they are self-initiating, adaptable brand and culture ambassadors. They keep the core organization whole and maintain the soul of the company's front-and-center gig economy workers, who come and go while robots make more and more decisions. The question is not simply how well they are engaged — it needs to be broader: Forrester's Employee Experience Index assesses how empowered, outfitted, willing, and able they are to take the mantle, catalyze change when needed, and be ambassadors — to be purpose workers.

4. Build Robotics Quotient (RQ): Emotional quotient (EQ) became an important measure to go beyond how innately smart someone is to how emotionally capable they are in engaging, influencing, and working with other humans. RQ is the critical next step: how well can humans work with and sometimes for, robots that will play a more sizable impact in day-to-day work life. Forrester's RQ assessment creates a critical talent acquisition, management, and development measure to maximize the value of the human-machine relationship that will be the bedrock of future organizations and the future of work.

5. Build a learning enterprise: We are past the days of classic change management where the goal was to move a human or team from point A to point B. Going forward, change will be constant, meaning there is no point B. An employee's ability (and, in some ways, desire) to learn will be a differentiating competency for firms — moving learning from a tactical hygiene to an economic engine. Forrester offers learning products designed to build fundamental skills and competencies in burgeoning areas such as customer experience.

Automation will drive significant change, but it will not change what a company is and how it works. The basic meaning and purpose of the company remains intact — to prosper by creating differentiated value for customers. In other words, leaders must guide change and performance in a remarkably different context, mastering the obvious and nuanced in the future of work.

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