

## Who Will Be the Worker of the Future?

Kate O'Keeffe, CHILL Senior Director

For decades, we have imagined the future through the eyes of comic book heroes – from boy-next-door Peter Parker's Spider-Man to Amazon princess Wonder Woman. As we approach our next Cisco Hyperinnovation Living Lab, focused on the Future of Work, I thought we might explore that part of our future in the same way.

The Future of Work is a huge topic. How will we attract and retain the worker of the future? How can we leverage the latest technology to augment the worker of the future? What will the workplaces of the future be like? It's the subject of conferences, white papers, speculation, pontificating, and hand-wringing. Yet with all the talk, most of us have a hard time picturing the future in a way that brings the all high-flying ideas down to earth. We're not wired to imagine what the world might be like in ten or twenty years time... maybe such a long-term view wasn't helpful for us back when we were cavemen...

That's why we've chosen to literally paint a picture of what the future will be like.

In my work with Cisco's Hyperinnovation Living Labs (CHILL), I've found science fiction prototypes to be a useful tool. In this case, it's a story based on extensive research of trends, technologies, economics, and cultural change. These prototypes make it easier to visualize the future in a concrete way so that we can more easily identify areas that are ripe for innovation.

That is what this comic book is about. It's a way to imagine the future so we can then create the future we want. My team is currently designing a cohort of corporations who will come together to design the future of work–a Future of Work Living Lab - where we will design and jointly invest in innovation we feel will create this future. But first... let's meet Gail our Superhero and come to understand some of the challenges that face us in the Future of Work.

Additional Reading: World Economic Forum: Technology and Innovation for the Future of Production HBR: Who Can Fix the "Middle-Skills" Gap? Forbes: Pros And Cons Of Having A Distributed Workforce



### The Promise and Peril of the Augmented Worker

From iRobot to R2D2 to Star Trek's Data, the concept of robots and humans working together has always been part of the science-fiction world. Philip the co-bot carries on this tradition as we continue our comic-book vision of the Future of Work.

For years, robots have taken on repetitive, dangerous, or heavy jobs in auto assembly plants and other manufacturing settings – but always fenced off from humans for safety reasons. Now collaborative robots – or co-bots – are working side-by-side with human workers. They may do anything from flipping burgers to moving goods around a warehouse. But one thing is certain: human-robot collaboration is here to stay.

Will there be uncertainties as humans and machines evolve together? Of course. In fact, one reason we're doing this comic book series is to help us think in a concrete way about potential pitfalls. By envisioning various versions of the future, we can help create the future we want.

How technology can augment human workers is just one of the concepts we'll be exploring in our living lab on the Future of Work. The CHILL team, Cisco's innovation catalyst, is currently assembling visionary companies to join us for two days of rapid innovation to help design the Future of Work.

Now let's rejoin our heroine Gail, as she deals with her own set of uncertainties....

Additional Reading:

NYT: Meet the People Who Train the Robots (to Do Their Own Jobs) Fast Company: How The Rising Gig Economy Is Reshaping Businesses



# The Evolving Workplace

Office workers of the mid-20th century would not recognize how we work today. They banged out documents in triplicate using manual typewriters and carbon paper. They had to wait for a live operator to connect their phone calls manually. Their hours were fixed and non-negotiable. How could they have imagined word processors, printers, and powerful hand-held computers delivering live video as a part of their daily lives?

Where we work has evolved in some unexpected directions as well, reflecting the transformation of who we are in the workplace. It began with factory workers moving off the factory floor as knowledge work and services grew out of the first industrial age. We designed cubicle farms, with office workers lined up almost like production lines. Then, as collaboration became more important, we moved to open office environments with the aim of becoming better communicators. And now, we are entering the era of the borderless office, a flexible work space not constrained by geography or organizational structure. Virtual teams work together seamlessly all over the world, brought together by video and conferencing technology that is so ubiquitous we don't even think about it. We have become a more diverse and inclusive workforce, and our workplace reflects that, enabling greater collaboration and creativity. My own team stretches from the Bay Area to Dubai to Singapore, working together across the globe without a hitch.

As we continue to imagine the future, we see a blending of face-to-face and remote work flowing together seamlessly. We see technology releasing the physical limitations of disabled workers, opening up a vast pool of talent and providing new opportunities for workers and employers alike. We see communications becoming more immersive and more mobile. And we see a fluid blending of human and artificial capabilities that enables the best of both, elevating every worker into a knowledge worker. Indeed, our workplace both reflects who we are, and enables who we can and will become.

Meanwhile, let's follow our future worker Gail as she continues to struggle with a personal crisis of conscience...

Additional Reading

MIT: This \$40,000 Robotic Exoskeleton Lets the Paralyzed Walk NBS: Five Ways the American Workforce Can Prepare for Automation - NOW atd: Blended Learning Is Better than Instructor-led or Online Learning Alone



### It's about Transformation and Choice

Whatever you think the future might bring, one thing is certain—it will bring transformation and choice. The transformation is certain—it's already here and accelerating. But how that transformation takes shape is still our choice.

This comic book prototype of the Future of Work has been one way to imagine some possible scenarios: How can we shape a future that is human-centered, inclusive, and diverse? Can we design artificial intelligence and robotics solutions that augment human workers, rather than replace them? How can we use technology in a thoughtful, humane, and ethical way? What would it mean to empower "gig" workers to create their own flexible, portable jobs, with a reasonable expectation of steady wage growth, stability, and affordable benefits?

We'll be diving deeper into these questions and developing real solutions to help shape the Future of Work at our next Cisco Hyperinnovation Living Lab event in February. I have a growing sense of excitement as I see the cohort of innovation partners for this lab begin to take shape. They are leading companies with the power to influence the transformation of their industries.

Meanwhile, let's rejoin our comic book hero Gail, as she faces her own choice-and transformation.

Additional Reading CNBC: Elon Musk: 'Robots will be able to do everything better than us' Guardian: The Next Generation of Work Huffpost: Why Stephen Hawking and Bill Gates Are Terrified of Artificial Intelligence



#### The Future of Work Is Ours To Create

I began this series with the idea that creating a science fiction prototype would be a useful tool in imagining, and planning for, the Future of Work. I have found it helpful to envision future scenarios where a mobile, flexible work force collaborates seamlessly with each other and with intelligent robots – whether in person at the office, or via holograms and immersive video from a remote field location. It's been good to explore how the future might make meaningful work more accessible to more people – whether through assistive technology or alternative training programs.

And it's also been valuable to explore the darker possibilities, where automation destroys our jobs, blackmail opens the door to a security breach, and (as Elon Musk fears) artificial intelligence becomes an existential threat.

The truth is, we don't know what the future will bring. Because we haven't finished creating it yet. It's a work in progress, and many people are asking, what kind of future will it be?

This comic book has been a call for a reasoned approach to the Future of Work, grounded in human values and enabled by technology. More than anything, it's a reminder that we have choices, and we should make them wisely.

Envisioning various future scenarios has also been a valuable exercise as we prepare for our Future of Work Living Lab in February. We are assembling an exciting cohort of industry leaders to innovate together around some of the future's most challenging issues—another step in creating a future we'll want our children to live in.

Meanwhile, let's check in one more time with Gail, who is making her own choices about the future of work – and the world.

Additional Reading NYT: The Real Threat of Artificial Intelligence Forbes: Can Artificial Intelligence Unlock Our Full Potential At Work? MIT: Building better trust between humans and machines



Cisco Hyper Innovation Living Labs, or CHILL for short, is a capability that brings together an entire ecosystem of companies to drive co-innovation through Living Lab experiences. These 48-hour pop-up labs create new market changing opportunities for our businesses to explore and capture. Labs include the use of human-centered design and rapid prototyping with dozens of end users testing to create and validate new solutions. The labs culminate in direct investment in new opportunities with each other, driving significant leaps in co-innovation. From previous labs, Cisco continued numerous projects with our collaborators which has strengthened our relationships with them and created exciting new market opportunities.

> Our next lab is Feb 27-28 on The Future of Work. Are you in?

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