14th Annual Edition

2021 Tech Trends Report

Strategic trends that will influence business, government, education, media and society in the coming year.
Overview

Macro Forces and Emerging Trends

Summary

Recognition

Faceprints

Facial Recognition for Animation

Voiceprints

Accent Recognition

Automatic Voice Transcription

Voice Cloning

Emotion Recognition

Personality Recognition

Bone Recognition

Gesture Recognition and Natural User Interfaces

Touch Recognition

Bioacoustic Recognition

Wi-Fi Recognition

Proximity Recognition

Two-Factor Biometric Authentication

Object Recognition in Computational Photography

Biometric Camouflage

Responsive Recognition Technology

Affective Computing

Genetic Recognition

Universal Genetic Databases

Surveilling Vulnerable Communities

Persistent Workplace and School Surveillance

Efforts to Ban Facial Recognition

Food Recognition Systems

Wrongful Recognition

Scenario: Your Body Is a Dataland

Scoring

Biometric Scoring

Genetic Scoring

Anonymous By Design

Scoring Agencies On the Rise

Verification System Asymmetry

Scoring Vulnerable Populations

Surveillance Scoring-as-a-Service (SSaaS)

Bias in Scoring Systems

Conflicting Norms, Standards, and Regulations in Scoring

Intentionally Opaque Methodologies

Algorithmic Determinism

Scoring in China

Scoring Companies

Scoring Uighurs

Scenario: Micro-Policing

Application

Key Questions

Sources

Authors

Why FTI

About FTI

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The 1920s began in chaos. Cataclysmic disruption resulting from the first world war and the Spanish flu shuttered businesses and provoked xenophobia. Technological marvels like the radio, refrigerator, vacuum cleaner, moving assembly line and electronic power transmission generated new growth, even as the wealth gap widened. More than two-thirds of Americans survived on wages too low to sustain everyday living. The pace of scientific innovation—the discovery of insulin, the first modern antibiotics, and insights into theoretical physics and the structure of atoms—forced people to reconsider their cherished beliefs.

The sheer scale of change, and the great uncertainty that came with it, produced two factions: those who wanted to reverse time and return the world to normal, and those who embraced the chaos, faced forward, and got busy building the future.

It’s difficult not to see striking parallels to our modern world. A tumultuous U.S. election, extreme weather events and Covid-19 continue to test our resolve and our resilience. Exponential technologies—artificial intelligence, synthetic biology, exascale computing, autonomous robots, and off-planet missions to space—are challenging our assumptions about human potential. Under lockdown, we’ve learned how to work from our kitchen tables, lead from our spare rooms, and support each other from afar. But this disruption has only just begun.

With the benefit of both hindsight and strategic foresight, we can choose a path of reinvention. Our 2021 Tech Trends Report is designed to help you confront deep uncertainty, adapt and thrive. For this year’s edition, the magnitude of new signals required us to create 12 separate volumes, and each report focuses on a cluster of related trends. In total, we’ve analyzed nearly 500 technology and science trends across multiple industry sectors. In each volume, we discuss the disruptive forces, opportunities and strategies that will drive your organization in the near future.

Now, more than ever, your organization should examine the potential near and long-term impact of tech trends. You must factor the trends in this report into your strategic thinking for the coming year, and adjust your planning, operations and business models accordingly. But we hope you will make time for creative exploration. From chaos, a new world will come.

Amy Webb
Founder
The Future Today Institute
Macro Forces and Emerging Trends

For nearly two decades, the Future Today Institute has meticulously researched macro forces of change and the emerging trends that result. Our focus: understanding how these forces and trends will shape our futures. Our 14th annual Tech Trends Report identifies new opportunities for growth and potential collaborations in and adjacent to your business. We also highlight emerging or atypical threats across most industries, including all levels of government. For those in creative fields, you will find a wealth of new ideas that will spark your imagination.

Within those categories are specific use cases and recommendations for key roles in many organizations: strategy, innovation, R&D, and risk.

Each trend offers six important insights.

1. **Years on the List**
   We track longitudinal tech and science trends. This measurement indicates how long we have followed the trend and its progression.

2. **Key Insight**
   Concise description of this trend that can be easily understood and repeated to others.

3. **Examples**
   Real-world use cases, some of which should be familiar to you.

4. **Disruptive Impact**
   The implications of this trend on your business, government, or society.

5. **Emerging Players**
   Individuals, research teams, startups, and other organizations emerging in this space.

6. **Action Scale**
   FTI’s analysis of what action your organization should take. Fields include:
   - **Watch Closely**
     Mounting evidence and data, but more maturity is needed. Use it to inform your vision, planning, and research.
   - **Informs Strategy**
     Strong evidence and data. Longer-term uncertainties remain. Use it to inform your strategic planning.
   - **Act Now**
     Ample evidence and data. This trend is already mature and requires action.
Macro Forces and Emerging Trends

Scenarios Describe Plausible Outcomes

You will find scenarios imagining future worlds as trends evolve and converge. Scenarios offer a fresh perspective on trends and often challenge your deeply held beliefs. They prompt you to consider high-impact, high-uncertainty situations using signals available today.

1. Headline
   A short description offering you a glimpse into future changes.

2. Temporal and Emotive Tags
   A label explaining both when in the future this scenario is set and whether it is optimistic, neutral, pessimistic, or catastrophic.

3. Narrative
   The descriptive elements of our imagined world, including the developments leading us to this point in our future history.

Scenario sources: The Future Today Institute uses a wide array of qualitative and quantitative data to create our scenarios. Some of our typical sources include patent filings, academic preprint servers, archival research, policy briefings, conference papers, data sets, structured interviews with experts, conversations with kids, critical design, and speculative fiction.
Anonymity is dead.
Voice assistants can guess what people are typing on nearby devices.
Facial recognition systems now automatically identify people, pets, and even Disney characters.
It’s becoming easier for machines to “see” an object without a camera.
New fabrics and compounds are being developed to help people fool recognition algorithms and, somewhat paradoxically, help them be seen more clearly.

COVID-19 accelerated the adoption of universal genetic databases.
Everyone alive today is being scored.
A piecemeal approach to regulation will challenge businesses this year.