



WHEN EVERYTHING IS MEDIA THE FUTURE OF COMMUNICATION AND TECHNOLOGY

TECHNOLOGY HORIZONS

In the 1960s, Paul Baran, one of the founders of the Institute for the Future, envisioned a move from centralized communications to a distributed system, where nodes would automatically route packets of information to final destinations distributed across the globe—a network architecture, that over the last several decades, has formed the backbone for today's Internet and the emerging Internet of Things. This move from centralized to distributed systems is transforming institutions, economies, and how we coordinate to get things done. Looking out to 2026, we can see the outlines of a transformation in communications that will be equally profound: Where we will be marketing to machines, receiving messages from our bodies, and reinventing how we communicate, collaborate, persuade and build relationships in a hyperconnected and distributed world where everything is becoming media. In 2016, Institute for the Future's Technology Horizons program will map this transformation and highlight the emerging technologies and strategies we'll use to amplify and connect with the world around us and to each other.

From always-on smartphones to networked teddy bears to digital interfaces integrated into our own bodies, we are becoming immersed in a cloud of communications. Over the next decade, the ways we collaborate, connect, and communicate will multiply and decouple from the limits of place, time, and even language. Fragmentation will accelerate as we struggle to communicate meaningful data in glanceable forms, amidst constant competition for our time and attention. Meanwhile, collaboration has never been more important as we're increasingly called to work across generations, geographies, scales, and even with bots and machines.

Join Institute for the Future's Technology Horizons program as we embark on a year-long exploration of the tools, interfaces and technologies that will bring coherence and precision to the ways we use media and share information and knowledge across seven strategic activities in communication:

- **PRODUCTIVITY** | How we get things done and optimize systems
- **PERSUASION** | How we motivate and shape individual or collective behavior change
- **ENGAGEMENT** | How we harness participation and attention
- **COLLABORATION** | How we innovate and generate value
- **INTIMACY** | How we enhance physical or emotional connection
- **EMPATHY** | How we experience and see the world through other people's eyes
- **CONTROL** | How we secure our identities and privacy in an interconnected and transparent world



2016 RESEARCH AGENDA

The emerging communications landscape—where everything from our bodies to our cars is a node in a complex, interconnected media landscape—signals a future of deep personalization, super-charged entertainment and learning experiences, and unprecedented collaborative capabilities. From adaptive interfaces that analyze a pilot's brainwaves to adjust data formats to meet underlying biometrics to smart clothing that can deliver tactile, visceral experiences directly to the wearer's body, we are seeing an explosion of early experiments that will transform how we communicate.

In the first half of 2016, we will map these early signals and experiments that point toward breakthrough opportunities to bring coherence and precision to our communications. During the Spring, you'll have several opportunities to explore the technologies that will reshape the media landscape, engage with experts, media makers, and innovators.

DELIVERABLES

➤ WINTER 2016 | REGIONAL EXPERT WORKSHOPS

We'll start the year by hosting a series of workshops with communications experts and technologists in San Francisco, New York, and London. Designed to engage some of the leading thinkers—and makers—of new media and communication, these sessions will give sponsors opportunities to meet the innovators making the future of communications and share early insights and take-aways.

➤ SPRING 2016 | FUTURE OF COMMUNICATIONS AND TECHNOLOGY

At our Spring Map of the Decade conference, we will share our Map of the Decade exploring the future of communication and technology. Designed as a research exchange and working session, you'll get to meet some of the technologists and media makers who are defining the new communications landscape. You'll leave with new connections to early innovators, a visual executive summary—in the form of our map of the decade—and a set of rich, annotated slide decks that you can use to share key innovations and insights with colleagues.





Rafael Wegiel

Even as we create new tools to communicate with each other, leading edge innovators are using the Internet of Things to remake how machines collaborate and connect with each other. During the summer and fall of 2016, we will take deep dives into two of these areas to highlight the myriad possibilities and pitfalls of machine driven communication. In the fall, we'll reconvene with an immersive experience and insight retreat that will provide a robust set of tools to drive strategic insights that you can begin working with in the present.

In the summer, we'll release deep dives into two areas of communication set to undergo profound transformation catalyzed by technical innovation. These strategic forecasts will introduce the technical innovations and also explore the long-range transformations they create and will be shared through virtual presentations.

DELIVERABLES

› SUMMER 2016 | FORECASTS

Machines as the New Consumer Class

The communications landscape is not simply being transformed by new ways that we create connections with each other, but by the rise of interconnected machines that can negotiate transactions and exchanges of energy and information, move markets, make purchases and even navigate physical spaces. To explore this landscape, IFTF will produce a forecast report highlighting the technologies of communicating machines as well as a set of Alternative Future Scenarios depicting how a world of communicating machines will reshape our world.

Machines as Managers: Software Defined Organizations

In recent years, algorithms have begun to define or influence virtually every domain of business from how we market products to how we manage people. At the edges of these efforts, we're seeing the emergence of an entirely new kind of enterprise level innovation: software that can organize and manage entire organizations. To make sense of this frontier, we will produce a forecast report highlighting the possibilities of Software Defined Organizations as well as the communications and work flow implications of this future.

› FALL 2016 | RESEARCH IMMERSION & INSIGHT RETREAT

During the fall, we will reconvene in Palo Alto for a research immersion and insight retreat, where IFTF will synthesize and share research from across the year's activities. At the retreat, you'll have the opportunity to focus on future proofing your organizational strategies to meet one of three critical goals: 1) expanding market reach, 2) creating new tools for collaboration and work, or 3) amplifying product and communications design in a world where everything is media. Designed to immerse you in the emerging technologies shaping the future of communications, the retreat will feature engaging and collaborative processes to enable you to distill critical insights and roadmap how you and your organization can thrive in this new landscape.



PROGRAM BENEFITS

For more than 30 years, IFTF's Technology Horizons program has combined a deep understanding of technology and societal forces to identify and evaluate the discontinuities and innovations in the next three to ten years. Our approach to technology forecasting is unique—we put people at the center of our forecasts. Understanding humans as consumers, workers, householders, and community members allows IFTF to help companies look beyond technical feasibility to identify the value in new technologies, forecast adoption and diffusion patterns, and discover new market opportunities and threats.

Technology Horizons is an ongoing cost-shared research initiative with quarterly touchpoints to deliver new forecasts and research. Participation in the 2016 research includes:

- **ONBOARDING CONVERSATION** to identify strategies for maximizing membership benefit
- **ATTENDANCE** at our regional expert workshops and summaries of early findings
- **PARTICIPATION** in Spring and Fall conferences
- **MAP OF THE DECADE** on Future of Communication & Technology
- **FORECAST REPORTS** on Machines as Consumers and Machine as Managers
- **ANNOTATED SLIDE PRESENTATION** decks from conference presentations
- **PROCESS TOOLS AND SUPPORT** from IFTF researchers on jumpstarting your long-term communications strategy

PROGRAM MEMBERS (partial list)

3M	North Atlantic Treaty Organization (NATO)
armasuisse	Siemens
Big Heart Pet Brands	SRG SSR
Deloitte	Swisscom
Intel	Tekes
Lego Systems	The Hershey Company

BECOME A MEMBER TODAY

For more information about the Technology Horizons program, please contact:

Sean Ness | sness@iftf.org | 650-233-9517

THE TECHNOLOGY HORIZONS TEAM

Rod Falcon Program Director rfalcon@iftf.org	Devin Fidler Research Director dfidler@iftf.org	Ben Hamamoto Research Manager bhamamoto@iftf.org	Mike Liebhold IFTF Distinguished Fellow mliebhold@iftf.org	Sarah Smith Research+Design Manager ssmith@iftf.org
Bradley Kreit Research Director bkreit@iftf.org	Eri Gentry Research Manager egentry@iftf.org	Lyn Jeffery Research Director ljeffery@iftf.org	David Pescovitz Research Director dpescovitz@iftf.org	Andrew Trabulsi Research Manager atrabulsi@iftf.org
Miriam Lueck Avery Research Director mavery@iftf.org	Alex Goldman Research Manager agoldman@iftf.org	Meagan Jensen Program Manager mjensen@iftf.org		

ABOUT THE INSTITUTE FOR THE FUTURE

The Institute for the Future is an independent, nonprofit strategic research group with over 46 years of forecasting experience. The core of our work is identifying emerging trends and discontinuities that will transform global society and the global marketplace. We provide our members with insights into business strategy, design process, innovation, and social dilemmas. Our research generates the foresight needed to create insights that lead to action. Our research spans a broad territory of deeply transformative trends, from health and health care to technology, the workplace, and human identity. Institute for the Future is based in Palo Alto, CA.

