



Techonomy 2016
Wednesday, November 9 – Friday, November 11, 2016
The Ritz-Carlton Half Moon Bay
Half Moon Bay, California

WEDNESDAY, NOVEMBER 9:

10:00 AM **Registration Opens**

12:00 – 2:15 PM **Social & Networking Activities**
Coastal Bike Tour
Golf Clinic
Purisima Creek Redwood Preserve Hike
Techonomic Tasting

3:00 PM **Welcome to TE16**
Josh Kampel, Techonomy
David Kirkpatrick, Techonomy
Simone Ross, Techonomy

3:15 PM **Fusion**
Techonomists ignite our conversations with their biggest concerns and ideas about tech's potential and perils.
Joshua Browder, DoNotPay
José-Marie Griffiths, Dakota State University
Andrew Lowery, RealWear, Inc.
Marlin Page, Sisters Code
Roger Pilc, Pitney Bowes
Gary Rieschel, Qiming Venture Partners
Shunee Yee, CSOFT International, Ltd.

3:35 PM **We're Not in Kansas Anymore: People, Power and Politics After the Tornado**
Join business and government leaders as they analyze and evaluate the political revolution of 2016 and predict its implications for the future of the United States and the world.
John Chen, Blackberry
Dave Morgan, Simulmedia
Tony Scott, Office of Management and Budget, The White House
Moderator, David Kirkpatrick, Techonomy

4:30 PM **180° Shift Talks - 180 seconds to turn 180 degrees.**

Seeing Tomorrow From Space

We're in an era of agile aerospace, when a satellite the size of a shoebox can show us things we've never seen before. From agriculture and forestry, to business intelligence and defense. How will monitoring everything, every day impact how we live?

Will Marshall, Planet Labs

The SneakerNet: Back to the Future and Back Again

In places with limited connectivity, innovative ways to share information, via CDs, USB, and Bluetooth are changing personal communication, politics, entertainment and commerce.

Eileen Guo, Impassion Afghanistan

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Is the Future of Wearable Health Tech...Tattoos?

What happens when low-cost biosensors embedded in tattoos can detect blood alcohol, sugar, or biomarkers related to diseases like malaria or zika? How will that impact not just the health and wellness of individuals, but the healthcare ecosystem?

Carlos Olguin, LogicINK

4:40 PM

Toward A Sentient Ecosystem

How might humans, machines and the network evolve together? An ecosystem that responds, adapts, adjusts and intuitively moves with us is the promise of an interconnected, intelligent world. It will be stitched together with IoT and monitored by AI. Will the biggest challenge to building this connected and networked world be technologies, industry cooperation, or societal response?

Claire Delaunay, Otto

Babak Hodjat, Sentient Technologies

Ken Washington, Ford

Moderator: Michael Chui, McKinsey

5:25 PM

What Digital Society and Government Looks Like

Marina Kaljurand, former Minister of Foreign Affairs, Estonia

Interviewer: David Kirkpatrick, Techonomy

5:40 PM

In conversation with...

William Ruh, GE Digital

Interviewer: David Kirkpatrick, Techonomy

6:15 PM

OPENING NIGHT RECEPTION Hosted by GE

7:00 – 8:30 PM

DINNER Hosted by Accenture

8:45 PM

The Evolution Revolution

Futurist **Ray Kurzweil**, UCSD's **Benjamin H. Bratton** and neuroscientist entrepreneur **Vivienne Ming** discuss where AI, biology and machines that learn by themselves are taking us.

THURSDAY, November 10:

7:00 AM

Registration Opens

7:00 – 8:00 AM

Morning Activities

7:15 – 8:15 AM

Breakfast Roundtable: When Planetary Scale Computation Meets Geopolitics

Scientist philosopher **Benjamin H. Bratton** on the cultural implications of computing and globalization: new forms of sovereignty are emerging as digital and urban infrastructures fuse. How can we meet the challenges these intersections pose to national borders, architectural partitions and deep cosmopolitics?

TE16

Facilitator: Gary Bolles, Charrette LLC

8:30 - 8:40 AM

Welcome to Day Two

8:40 AM

How Vast an Internet of Things?

As the IoT connects more and more, business and industry will reshape products and services to create a more intuitive and efficient world. What are the wildest ideas that may emerge? Where will the benefits appear? Is there anywhere the IoT can't reach?

Tom Barton, Planet Labs

Sara Gardner, Hitachi Insight Group

Eric Topol, Scripps

Moderator: Emily Chang, Bloomberg TV

9:25 AM

The United States of Data I: The Economic Impact of Data Convergence

Two different kinds of data are converging—increasingly comprehensive and granular data about people; and vast, data sets about how industry and the economy are functioning. How will these two kinds of knowledge come together to change companies and society?

Marco Annunziata, GE

Diana Farrell, JPMorgan Institute

Moderator: David Kirkpatrick, Techonomy

9:50 AM

New Rules I: Government Engagement

With tech changing business and societal norms, where does that leave government? Will it exist as we know it in 20 years? Can governments become as agile as businesses? What should evidence-based policy and data-driven government look like?

Victoria Espinel, BSA

10:00 AM

180° Shift Talks - 180 seconds to turn 180 degrees.

The Fallacy of Exporting Tech Solutions to the Middle East

Regional innovators are bucking the notion that Western imported tech is the solution to the Middle East's problems. Music, creative ways to bypass censorship, and grassroots literacy are the real paths to change, and are being forged by innovators already in the region. **Esra'a Al Shafei** tells how you can help.

Emotions Are The Future of Chat Conversations

Founders of this digital library of human expressions began by building software to help people choose better words to communicate. They ended up creating a new social network of visual content based on chat expressions.

Stuart Gannes, Hyperkey Inc

10:10 AM

In Conversation with...

James Park, CEO of FitBit

Interviewer: David Kirkpatrick, Techonomy

10:30 - 11:00 AM

BREAK



11:00 – 12:00 PM TECHONOMY LABS

1. Can the Internet of Things be Secured?

When the entire internet can grind nearly to a halt because IoT devices have been harnessed for a denial of service attack, we have a problem. As we move to secure the vast network of connected devices, what are the biggest threats? As humans increasingly work in symbiotic relationships with powerful machines, how do we define security? Should our digital identity be connected to the “things” around us?

- Mark Bartolomeo**, Verizon
- Betsy Cooper**, UC Berkeley Center for Long-Term Cybersecurity
- Nicole Eagan**, Darktrace
- Chris Rill**, Canary
- Moderator: Stacey Higginbotham**, IoT Podcast

2. The United States of Data II: The New Knowledge Trust

Data is transforming not only our institutions, but our relationship to them. It’s also transforming our relationship to each other. Access to data and its interpretation will inform our notions of injustice, inequality, fear, want, need and our perceptions of our abilities to address them. How should we be approaching the issue of access, ownership and value of data? Do we have the institutions we need?

- Eli Broverman**, Betterment
- Brett Hurt**, data.world
- Priya Kumar**, University of Maryland College of Information Studies
- Sarah Telford**, United Nations OCHA
- Moderator: Katie Benner**, The New York Times

3. The Modernization of Currency *(In association with Omidyar Network)*

Crypto currencies like Bitcoin, Litecoin, Peercoin and Ripple generate ever more enthusiasm. Blockchain is said to pose the potential of platforms for nearly all data. Will central banks be able to reassert control? Will a digital fiat currency, backed and minted by those banks, be the future of digital money?

- Asheesh Birla**, Ripple
- Jonathan Dharmapalan**, eCurrency Mint
- Lex Sokolin**, Autonomous
- Moderator: Kabir Kumar**, Omidyar Network

12:00 – 1:15 PM LUNCH Hosted by Verizon

1:30 – 2:30 PM SESSIONS IN PARALLEL

1. New Rules II: Business Engagement

How will the structure and management of businesses, industries and institutions change as technologies and the social landscape shift? No organization will exist in its current form in 20 years. How dramatically will IoT, VR and AI force a reimagining of business models? What kinds of companies, industries and organizational structures will emerge?

- Kevin Bandy**, Cisco
- Lorraine Bolsinger**, GE
- Paul Daugherty**, Accenture
- Blake Irving**, GoDaddy
- Moderator: Josh Kampel**, Techonomy



2. Genetically Modified Everything

Tech allows us to modify everything: our plants, our animals, and our selves. Will hunger become a thing of the past? Will gene editing technology like CRISPR eradicate rare diseases? Will genetically modified mosquitoes wipe out Zika, Malaria and Dengue? Should they? Is GME the solution as we look to reap benefits in everything from agriculture to healthcare or will the public's fear and confusion delay these developments?

Patrick Boyle, Ginko BioWorks
Antony Evans, TAXA Biotechnologies
Paul Knoepfler, UC Davis Health System
Pete Shanks, Center for Genetics and Society
Christina Smolke, Antheia
Moderator: Meredith Salisbury, BioScribe

2:30 – 2:45 PM **Switch Break**

2:45 – 5:30 PM **AFTERNOON SESSIONS**

2:45 PM **Welcome back**

2:55 PM **Toward A Self Aware City**
How smart are “smart” cities? Can they guarantee safety? Carbon neutrality? Resilience? Better services? Democracy?
Assaf Biderman, Superpedestrian & the Senseable City Lab

3:00 PM **Is Data Really the Solution to Better Urban Environments?**
The smart use of data is important to cities and the citizens that reside in them. But what are the pitfalls as we navigate the economic, social and environmental stresses that affect cities? Who decides what data to rely on? What rights will citizens get to that data? Can we arrive at collectively acceptable policies for how data should alter our lives and help run our urban environments?
Assaf Biderman, Superpedestrian
Mrinalini Ingram, Verizon
Martin Powell, Siemens AG
Moderator: Gary Bolles, Charrette LLC

3:45 PM **180° Shift Talks - 180 seconds to turn 180 degrees.**

From Learning to Unlearning

In marketing, the old mental model of targets, funnels, and campaigns has become outdated. In strategy, value is now created with platforms and ecosystems. In organizations, one needs to master new models of networks and communities. Leadership today requires the ability to unlearn, so we can get beyond viewing the new through the lens of the old. It's a shift in mindset from incremental to exponential.

Mark Bonchek, Shift Thinking

Emotional Contagion

Emotions are contagious. With new technologies, could our sentient ecosystem quantify and monitor these shared emotional experiences, allowing us to connect and empathize with people very different

TE16

from ourselves? Washington State University researcher **Sara Waters** imagines a world in which the most vulnerable and voiceless among us grow up safe and secure.

The Change To EVs is Coming Faster Than You Think

The switch from gas guzzlers to electric vehicles will be faster and easier than anyone realizes. The infrastructure is scaling, cars are getting better and more varied, and IoT connects the dots. Fast charging remains a challenge, but that's not the main way to re-fuel. It's not just the fuel that's different; the way we re-fuel will completely change.

Tony Canova, ChargePoint

3:55 PM

Adrift At Sea: When Will Shipping Get Smart?

In a world in which we are drowning in oceans of data, the ocean itself is a data dead zone. Ships carry 90% of global trade, but when they move out to open sea we basically lose them. Now tech and connectivity is transforming the 71% of the planet not covered by land. What does this mean for trade, defense, fishing, piracy, the environment and even human trafficking? Will tech and geospatial intelligence bring transparency to what happens at sea?

Anthony DiMare, Nautilus Labs

Robert Chiswick, BAE Systems

John Kao, Thayer Mahan

Peter Platzer, Spire

Moderator: Simone Ross, Techonomy

4:35 PM

Can These Taboo Techs Solve Climate Change?

What raises hackles as much as "GMOs"? Geo-engineering and nuclear of course! But in one view, these are the exact two technologies that can best address climate change and our growing energy needs. Is it not incumbent on us to fully explore technologies that could most affect climate change mitigation, the economy and global development?

Rachel Pritzker, Pritzker Innovation Fund

Gernot Wagner, Harvard School of Engineering & Applied Science

Moderator: Stratford Sherman, Accompli

5:00 PM

Circuits of the Mind: Biology is the Model for The Ecorithm Era

Neural interfaces between human and digital worlds will soon allow machines to learn through an evolutionary process similar to but more efficient than nature's. Neuroscientist **Dr. Justin Sanchez** (head of DARPA's Biological Technologies office) and Harvard Computer Scientist **Leslie Valiant** explore the complex mechanisms that will enable humans and machines to learn to communicate.

Moderator: Daniela Hernandez, Wall Street Journal

5:30 PM

In Conversation with...Mark Zuckerberg, Facebook

Interviewer: David Kirkpatrick, Techonomy

6:15 PM

RECEPTION Hosted by McKinsey

7:00 PM

DINNER Hosted by Philips

9:00 PM

A performance and conversation with singer-songwriter Lolo

Interviewer: Josh Kampel, Techonomy

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FRIDAY, November 11:

7:00 AM **Registration Opens**

7:00 – 8:00 AM **Morning Activities**

7:45 – 8:45 PM **The AI Breakfast Roundtable**

Our homes, industries, livelihood, toys, robots, and even our wars are being shaped by rapid advances in AI. How do we ensure that the resulting systems connect these advances equitably to the benefit not just of business, but also of society?

Paul Daugherty, Accenture

Babak Hodjat, Sentient Technologies

Mark Patel, McKinsey & Company

Francesca Rossi, IBM T.J. Watson Research Center

Shivon Zilis, Bloomberg Beta

Moderator: Strat Sherman, Accompli

9:00 AM **Welcome back**

9:10 AM **In conversation with...**

Jeroen Tas, Philips

Bernard J. Tyson, Kaiser Permanente

Moderator: David Kirkpatrick, Techonomy

9:45 AM **New Rules III: Social Engagement**

As an increasingly interconnected sentient ecosystem evolves and grows, what new rules of social interaction may evolve with it? How will these new rules, standards, codes and manners affect life, trust, respect and societal “norms”?

9:45 AM **In Pursuit of the Ethical AI**

Given the inevitable, growing impact of AI on all aspects of society, how do we facilitate responsible AI? How do we even define it?

Francesca Rossi, IBM Research

Interviewer: Jennifer Schenker, The Innovator

10:00 AM **What Hello Barbie said to Alexa and Siri**

Talk, talk, talk. Not only are our devices talking back, but using AI and cloud-based systems, they remember, record, transcribe and even email. And they are doing that as much with children as with adults. Animated and “cognitized” objects are increasingly entering our homes. When combined with personal assistants such as Echo and Siri, interactions, inquisitiveness and simple play are being transformed. What are the safety, security and privacy issues? And what will all this digital stimulation do to our brains and the development of our children? (Cont...)

Oren Jacob, Pullstring

Genevieve Bell, Intel Corporation

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Stephen Balkam, Family Online Safety Institute
Moderator: Jennifer Schenker, The Innovator

10:35 AM

Why the US Government needs an IoT Strategy

The economic potential of IoT is unquestionable. But what priorities, policies, and implementation structures are required? Why does the US only have “recommendations” while the UK has a national IoT strategy and other countries are making it a priority? What are the implications for national competitiveness and business?

Murthy Renduchintala, Intel Corporation

10:45 AM

Why Starting Companies is Great Foreign Policy

A growing job crisis in oil-producing lands rocked by lower prices risks creating more disenfranchised young men. A group of institutions has come together with a plan to create 10 millions jobs in those countries by fostering entrepreneurship and a tech-centric mindset. It could play a big role in reducing terrorism. Meanwhile, many countries in the Middle East and Africa are already welcoming to startups.

Kamran Elahian, Global Catalyst Partners

Moderator: David Kirkpatrick, Techonomy

11:05 AM

Is Combating Climate Change IoT's Killer App?

Monitoring, metering, measuring, and controlling the world with the Internet of Things may mark a tipping point in combating climate change. Sensors monitor fugitive emissions of methane and other pollutants, smart grids help manage energy demand, and connected electric vehicles not only mean less-polluting transportation, but can double as energy storage on demand – facilitating a faster switch to variable renewable energy sources like wind and solar.

Robert Gaudette, NRG Business Solutions

Diane Regas, Environmental Defense Fund

Moderator: David Kirkpatrick, Techonomy

11:30 AM

In conversation with...

Padmasree Warrior, NextEV USA

Interviewer: David Kirkpatrick, Techonomy

11:50 AM

Internet Giants and The World

An unprecedented new kind of company is gaining a new breadth of influence. Facebook has data on two billion and its algorithms guide what those people see. Google's impact is similarly vast. And companies in all sorts of industries entrust their most precious systems and data to Amazon's AWS. Commerce, communication, and to a good extent our economy now depends on these companies. We trust them, more or less, but as they command so much data, many wonder about oversight. The EU is already seeking restrictions on how a person's data can be used. How should society best balance this great power against the public welfare?

Bill Gurley, Benchmark Capital

Marc Rotenberg, Electronic Privacy Information Center (EPIC)

Hemant Taneja, General Catalyst Partners

Moderator: David Kirkpatrick, Techonomy

12:30 PM

CONFERENCE CONCLUDES