Keynote: Become a Leader and Not a Casualty in the Digital Age

Mike J. Walker
Opening Video

(Script on Next Slide)
Disrupt or...

be Disrupted
Next Decade Introduces
New Business Landscape
Corporate Vitality Is Plummeting

**Average Lifetime of S&P 500 Companies**

Average decreased from ~60 years to ~15 years

From Creative Destruction by Foster and Kaplan

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Digital Age Success Is Skyrocketing

20-Year Net Returns

U.S. Venture Capital (Early Stage Index)

51.9

SAP 500 Index

7.9

Source: Cambridge Associates 2Q16 VC Benchmark
# Techtronic Shifts

<table>
<thead>
<tr>
<th>Stores</th>
<th>Specialized &amp; Integrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music</td>
<td>Streamed Everywhere</td>
</tr>
<tr>
<td>TV</td>
<td>Smart &amp; Interactive</td>
</tr>
<tr>
<td>Hotels</td>
<td>Robotic Helpers &amp; Cooks</td>
</tr>
<tr>
<td>Transportation</td>
<td>Self-Driving</td>
</tr>
<tr>
<td>Movies</td>
<td>Virtual Reality</td>
</tr>
</tbody>
</table>
# Top 10 Companies With Having the Greatest Market Capitalization

<table>
<thead>
<tr>
<th>Company</th>
<th>Market Capitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple Inc.</td>
<td>868,880</td>
</tr>
<tr>
<td>Alphabet Inc.</td>
<td>727,040</td>
</tr>
<tr>
<td>Microsoft</td>
<td>659,910</td>
</tr>
<tr>
<td>Amazon.com</td>
<td>563,540</td>
</tr>
<tr>
<td>Facebook</td>
<td>512,760</td>
</tr>
<tr>
<td>Tencent</td>
<td>493,340</td>
</tr>
<tr>
<td>Berkshire Hathaway</td>
<td>489,490</td>
</tr>
<tr>
<td>Alibaba Group</td>
<td>440,712</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>375,360</td>
</tr>
<tr>
<td>JPMorgan Chase</td>
<td>371,050</td>
</tr>
</tbody>
</table>
## Top 10 Companies With Having the Greatest Market Capitalization: 2007

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Headquarters</th>
<th>Primary industry</th>
<th>Market value (USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>▲1</td>
<td>Petrochina</td>
<td>China</td>
<td>Oil and gas</td>
<td>▲723,952</td>
</tr>
<tr>
<td>▼2</td>
<td>Exxon Mobil</td>
<td>United States</td>
<td>Oil and gas</td>
<td>▼511,887</td>
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<tr>
<td>▼3</td>
<td>General Electric</td>
<td>United States</td>
<td>Conglomerate</td>
<td>▼374,637</td>
</tr>
<tr>
<td>▼4</td>
<td>China Mobile</td>
<td>Hong Kong</td>
<td>Telecommunications</td>
<td>▼354,120</td>
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<tr>
<td>▼5</td>
<td>Industrial and Commercial Bank of China</td>
<td>China</td>
<td>Banking</td>
<td>▼338,989</td>
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<tr>
<td>▼6</td>
<td>Microsoft</td>
<td>United States</td>
<td>Software industry</td>
<td>▲333,054</td>
</tr>
<tr>
<td>▼7</td>
<td>Gazprom</td>
<td>Russia</td>
<td>Oil and gas</td>
<td>▼329,591</td>
</tr>
<tr>
<td>▼8</td>
<td>Royal Dutch Shell</td>
<td>The Netherlands</td>
<td>Oil and gas</td>
<td>▼269,544</td>
</tr>
<tr>
<td>▼9</td>
<td>AT&amp;T</td>
<td>United States</td>
<td>Telecommunications</td>
<td>▼252,051</td>
</tr>
<tr>
<td>▲10</td>
<td>Sinopec</td>
<td>China</td>
<td>Oil and gas</td>
<td>▲249,645</td>
</tr>
</tbody>
</table>
Will You?

Roll the Dice
With the Status Quo

Take the Leap
to Embrace Change
Top Emerging Technology
MEGA TRENDS
Artificial Intelligence Everywhere
By 2020

Emerging Technologies

80% will have AI foundations

Organizations

50% will lack sufficient AI and data literacy skills to achieve business value
Facial Recognition

1. Within the pupil of the dummy there is a camera that is connected to a special software.

2. The software is a face recognition software, in gathering statistical data of the person who is passing in front of the manikin.

3. The software displays the customer data collection that can be processed and used to understand the reactions of passers-by in front of the windows with the clothes on display.

Images: Almax SpA, all rights reserved.
Detecting Cancer with Machine Learning
Smart Robots Delivering Your Next Pizza

Domino’s Group CEO and Managing Director, Don Meij, said the successful DRU Drone by Flirtey delivery came just three months after the companies announced their partnership, but followed a number of operational and product trials, including food temperature testing, and liaison with government.
Autonomous Deliveries in San Francisco
Increasing Retail Service Bots

Lowe’s autonomous retail service robot that scans and audits store inventory
Hospitality Transformed
Your Robotic Chef
Banks Are Getting Smarter With Intelligent Apps

Bank of America's New Voice AI Banking System

Erica, Bank of America's machine learning intelligent application is able to scan and understand the 950 million mobile logins and over 240b payments a quarter to provide customers with proactive and high value advise.

"Michelle, I found a great opportunity for you to reduce your debt and save you $300."
Technologies of AI Everywhere

- Deep Learning
- Deep Reinforcement Learning
- Artificial General Intelligence
- Enterprise Taxonomy & Ontology Management
- Cognitive Computing
- Smart Dust
- Virtual Assistants
- Conversational UI
- Smart Workspace
- Conversational User Interfaces
- Machine Learning
- Autonomous Vehicles
- Smart Robots
- Commercial UAVs (Drones)
2

Transparently Immersive Experiences
By 2020

The market for head-mounted display devices will exceed 35M devices and generate $75B in revenue.
The Context Switch

Humans Learn and Adapt to Technology

Technology Learns and Adapts to Humans

System

Human

Human

System
US Navy Reimagines Training with Augmented Reality
Product Design Got Much More Interactive
Nanodrops Correcting Human Vision
AR on Every Phone
Technologies of Transparently Immersive Experiences

- 4D Printing
- Augmented Reality
- Connected Home
- Brain-Computer Interface
- Human Augmentation
- Nanotube Electronics
- Virtual Reality
- Volumetric Displays
3 Digital Platforms
By 2022

The Internet of Things (IoT) will **save** consumers and businesses **$1 Trillion/Year** in maintenance, services and consumables.
It All Starts With the Digital Business Platform

- Customers
- Ecosystems
- Intelligence
- Things
- IT Systems
Autonomous Vehicles operates on the Edge

- Lidar
- Vehicle Cameras
- Domain Controller(s)
- Radar
- Proximity Sensors
- Digital Maps
- Location Technologies
- Analytics
- In-Vehicle Comms
- Backhaul and V2X
- Infrastructure
- Cloud
- Data Centre
- Other Vehicles
Blockchain for Auto
Blockchain A Tool To Combat Counterfeit Pharmaceuticals

10%-30% of drugs sold in developing countries are counterfeits.

80% of the counterfeit drugs consumed in the US come from overseas.

The global market for counterfeit drugs is $200 billion dollars.
3M DoubleTrust Blockchain Solution

Transactions sent to blockchain network

Shipper

Carrier

Recipient

The First Blockchain Enabled Voting Machine
Smart Cities Driving Digital Twin Innovation
Technologies of Digital Platforms

- 5G
- Digital Twin
- Edge Computing
- Blockchain

- IoT Platform
- Neuromorphic Hardware
- Quantum Computing
- Serverless PaaS

- Software-Defined Security
1 Artificial Intelligence Everywhere
By 2030

80% of today’s intensive PPM work will be eliminated by Human and AI/smart machine partnerships in 2030
PPM Action Item:

Be **bold enough** to test the advantages of re-thinking PPM.
Transparently Immersive Experiences
By 2021

30% of large enterprises will evaluate and adopt virtual reality immersive solutions as part of their digital transformation strategy.
PPM Action Item:

Provide immersive experiences at every opportunity to drive quality, engagement, and more-predictable and higher levels of customer satisfaction.

Training & Education  
Collaboration  
Stakeholder Engagement & Experience
3 Digital Platforms
The metrics used to determine the success of digital platform-based programs will focus on the platform’s ability to enable value exchanges between the providers and the consumers.
PPM Action Item:

**Build** a metrics framework using leading indicators of future platform value and effectiveness.

Liquidity  
Matching  
Trust
Gartner Recommended Research

- **Hype Cycle for Emerging Technologies, 2017**
  Mike J. Walker (G00314560)

- **How Leading Enterprise Architects Prepare Business Leaders for Business Transformation Through Ideation Workshops**
  Derek Miers and Mike J. Walker (G00345229)

- **Toolkit: An Enterprise Architect's Guide to Ideation**
  Mike J. Walker (G00326184)

- **Maximize Digital Business Value Creation Through AI Algorithms**
  Mike J. Walker (G00344426)
Gartner Recommended Research

- **Top 10 Strategic Technology Trends for 2018: AI Foundation**
  Mike J. Walker, Whit Andrews and David W. Cearley (G00345512)

- **Top 10 Strategic Technology Trends for 2018: Intelligent Things**
  Mike J. Walker, Whit Andrews and David W. Cearley (G00345514)

- **Top 10 Strategic Technology Trends for 2018: Intelligent Apps and Analytics**
  Mike J. Walker, Whit Andrews and David W. Cearley (G00345513)