The Top 10 Strategic Technology Trends for 2017
Intelligent Digital Mesh

AI will be a primary battleground for service providers through 2020.

By 2020, 20% of enterprises will employ dedicated people to train neural networks.
### Advanced Machine Learning and Artificial Intelligence

<table>
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<tr>
<th>Well-Scoped Purpose</th>
<th>Evolution of Data Science</th>
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<tr>
<td>Deal With Complexity</td>
<td>Model-Driven, Content as Code</td>
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<tr>
<td>Understand, Learn, Predict, Adapt</td>
<td>Supervised, Unsupervised, Reinforcement … and Deep Learning</td>
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<tr>
<td>Act Autonomously</td>
<td>Context- and Event-Driven</td>
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Intelligent Apps and Intelligent Things: Intelligence Anywhere and Everywhere

<table>
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<th>Physical</th>
<th>Virtual</th>
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<td>Robots</td>
<td>Advanced Chatbots</td>
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<td>Drones</td>
<td>Virtual Assistants</td>
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<td>Autonomous Vehicles</td>
<td>Smart Advisors</td>
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<th>Inconspicuous</th>
<th>Obvious</th>
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<td>Operational Applications</td>
<td>Smart Security and Operations</td>
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<td>Smart Medical Devices</td>
<td>Smart Enterprise Apps</td>
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Intelligent Digital Mesh

CEOs expect that, by 2020, 46% of the customer-perceived value proposition of their products and services will be digital.

Blending the digital and physical domains is the primary driver of digital business value.
Virtual and Augmented Reality: It Creates an Immersive Digital World

Explore Your Trip
- Cinema
- Gaming
- Music and Sports
- Journalism

Plan Your Project
- Education
- Healthcare
- Surgical Training

Game Your Reality
- Real Estate
- Retail
- Legal
- Hospitality
Virtual and Augmented Reality: Enabling Digital Business Moments and Models

- Simulated Experiences
- Molecular Modeling
- Healthcare Therapies
- Maintenance and Repair
Digital Twin: An Evolving and Expanding Digital Universe

Disconnected Static Metadata
- Connected Digital Service
  - Intelligently Digital Service

Disconnected Digital Twin
- Connected Digital Twin
  - Intelligent Digital Twin

Program-Driven
- Model-Driven

Digital Entity

Human Persona
- Digital Asset
- Digital Process
- Digital Place
- Company Persona
- City/Country Doppelganger

#GartnerSYM

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- Mechanism for adding trust in an untrusted environment and reducing business friction
- An irrevocable record of significant data and events, such as monetary transactions, property records or other valued assets
- Not just a passive data record, but can optionally add dynamic programmed behavior to events
Blockchain and Distributed Ledger: Trillion-Dollar Opportunity in Supply Chain

[Diagram showing network of connected entities including CMOs/CPOs, Wholesale Distributors, 3PLs, Dispersers, Life Sciences Companies, Raw Materials Suppliers, Repackers, patients, and various financial and logistics icons.]
Intelligent Digital Mesh

>26B connected IoT sensors and endpoints deployed by 2020

25 or more conversational AI systems by 2018
Conversational Systems: The Mesh Is Dynamic and Pervasive

A Shifting Set

of Endpoints

Home  Work  Car

At the Game

Desk  Person  Environment

With Customer

Restaurant

Away

Retail

Away

Car
Multichannel Expanded Sensory Channels

Conversational

Collaborative

Immersive

Ambient

Contextual Apps and Services

Personalized for Each Task and Behavior

Across the Dynamic Device Mesh

Multichannel

Stateful

Contextual

Conversational Systems: One Part of the Future User Experience
Mesh App and Service Architecture: Agility and Flexibility Drive the Design

- Cloud-Based
- Microservices
- Containers
- Serverless
- Software-Defined (APIs)
- Event-Driven
Digital Technology Platforms: IoT Platforms Are Necessary for Solution Success

IoT Solution

IoT Platform

- Analytics
- Orchestration
- Data

APIs/Integration/MOM

Aggregated Device Management

Gateways

Agents

Things

Communications

Endpoints

Holistic

Cloud

Mobile

Business Outcomes

Customers

Partners

IT Apps

OT Apps

(ERP, CRM, …) (MES, BMS, …)

Microsoft Azure

Oracle

Google

SAP

GE

#GartnerSYM
Adaptive Security: Continuously Analyze User and Entity Behavior

1. Review; Rules/Score
2. Continuous Profiling
3. Continually Analyze and Authenticate

External Identity and Threat Intelligence

Transaction Context
Device, Location, Behavior
Transactions, Attributes