Developing the New IT Capabilities for Digital Transformation

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IDC
How Businesses are Being Reinvented

Information Transformation

Every machine coming off the Caterpillar line is now “connected”

“..every machine, engine, truck, tablet, light tower, smart device and drone – will eventually share data on one common technology platform and speak the same language”

Former CEO, Doug Oberhelman

BMW i Ventures has invested in 16 car-related start ups in the past several years.

“Now, we aim to become the leading tech company and innovation driver in the field of mobility.”
CEO, Harald Krueger

Why Organizations Are Making Bold Changes

Q: What are the top 3 goals of your Digital Transformation initiative? IDC Line of Business Sentiment Study, Fall, 2016. n=302

Customer Transformation

66%
“Improve our customer’s experiences”

Information Transformation

48%
“Create a competitive advantage in our current business”

Operating Model Transformation

41%
“Create new business models”
Your Business Priorities and Digital Transformation Strategy…
…Drive Your IT Strategy

Drive innovation at scale by innovating, integrating and incorporating digital platforms into existing systems and service capabilities.

- **Customer Transformation**
  - Seamless Customer Engagement

- **Information Transformation**
  - Realize Information Value

- **Operating Model Transformation**
  - Run Digital Offerings at Scale
The CIO has a Critical Role to Play from the IT Chair

- Recommend emerging technologies to transform the business
- Ensure the innovation is integrated with enterprise systems
- Retool the infrastructure to support the digital enterprise

Develop the IT capabilities to support digital transformation
New IT Capabilities Are Needed for DX
The Strategic Priorities of a Digital Strategy Evolve Rapidly

Experiential Engagement
Blending digital and physical in consumer engagement

Data Monetization
Leveraging data to create new digital revenue streams

Digital Business at Scale
Delivering hyper-personalized cost effective digital services
The Strategic Priorities of a Digital Strategy

Experiential Engagement

Blending digital and physical in consumer engagement

Data Monetization

Leveraging data to create new digital revenue streams

Digital Business at Scale

Delivering hyper-personalized cost effective digital services
Omni-Channel is Superseded by Experiential Engagement

Omni-channel

Integrates the different methods of shopping available to consumers (e.g., mobile, physical store, phone)

Experiential Engagement

Blend the digital and physical in consumer engagement
Understand How Technology is Already Being Used

<table>
<thead>
<tr>
<th>Life Activities</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESTING</td>
<td>43%</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>43%</td>
</tr>
<tr>
<td>LEISURE ENTERTAINMENT</td>
<td>12%</td>
</tr>
<tr>
<td>WORKING AND STUDYING</td>
<td>26%</td>
</tr>
<tr>
<td>SOCIAL AND FAMILY</td>
<td>17 Hours</td>
</tr>
<tr>
<td>DINING AND SHOPPING</td>
<td>34%</td>
</tr>
<tr>
<td>HEALTH AND SPORTS</td>
<td>70%</td>
</tr>
</tbody>
</table>

- 43% of health and fitness band users track sleep at night
- 43% of consumers use intelligent assistants for navigation
- 12% of consumers primarily get their TV programming through paid online video streaming services
- 26% of consumers’ time spent on their own personal PC is for work-related activities
- 17 Hours a week. The average amount of time consumers spend in social and messaging sessions.
- 34% of consumers willing to share more personal information to get discounts
- 70% of health and fitness bands consumers use them daily

Source: 2016 Consumer Internet of Things Survey, March 2016, N=889
Monitor Consumer Digital Transformation

Intelligent Assistants

- **DISCOVERED**
  - 2011: Siri introduced on iPhone
  - 2015: Alexa introduced by Amazon

- **ADOPTED**
  - 2019: 110+ million consumer devices with embedded intelligent assistants installed in US home

- **INTEGRATED**
  - 2026: By 2026, 30% of retail revenue is generated by a customer’s digital assistant.

Consumer digital transformation is the process by which IT products and services are discovered, adopted and integrated to augment our lives.
Key Technology Investments for Experiential Engagement

**Consumer Facing Technologies**
Mobile devices, wearables, social and messaging services are reshaping content creation, personalization, and monetization models.

**Augmented Reality**
Will transform the way consumers interface with organizations as immersive video dominates.

**Intelligent Assistants**
Have the potential to accelerate the use of consumer IoT applications by improving accessibility and implementation.
## Develop a Customer Engagement Capability

### Processes
- Customer Journey Mapping
- Consumer DX
- Continuous Feedback Loop
- CX Orchestration
- Identity Management

### Platforms
- Consumer-facing technologies
  - AI/Cognitive
  - API Design
  - Real time, Always Connected Systems
  - Digital Assistants

### Governance
- Chief CX Officer
- Customer Data Steward
- Net Promoter Score
- Outside In Organization

### Talent
- Recommendation Oriented
- Innovation Acumen
- UX Design
- Customer Analytics

### ORCHESTRATING
- SENSING
- INNOVATING
- ORCHESTRATING
The Strategic Priorities of a Digital Strategy

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Blending digital and physical in consumer engagement

Data Monetization
Leveraging data to create new digital revenue streams

Digital Business at Scale
Delivering hyper-personalized cost effective digital services

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Moving from Data as a Competitive Advantage to Data Monetization

Data as a Competitive Advantage

Leverage data to enable the business to respond to opportunities swiftly and with superior intelligence

Data Monetization

Leverage data to create new revenue streams
You Will Be a Participant in the Data Economy

The Data Economy
Where raw data and various forms of value added content will be bought and sold through bilateral transactions or though data brokers

Upstream
Locate, identify and acquire continuous streams of information assets in your enterprise

Refinement
Refine internal information assets and enhance value of information by aggregating external information

Downstream
Distribute info assets through real time control systems and channels such as industry clouds

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A Two Step Approach to Monetizing Data

Digital Service Platform Improves Business Operations

Digital Service Platform Creates New Revenue Streams
Key Technology Investments for Data Monetization

IoT and Next Generation Network Technologies
Connected sensors and systems allow for the collection of data; while next generation networking becomes the mechanism to deliver the data.

Cognitive and AI Software Platforms
Facilitate the development of advisory-enabled applications that automatically learn based on past experiences.

Industry Clouds Platforms
Serve as distribution channel for digital services. 75% of F500 will be suppliers of digital services through industry collaboration clouds.
Develop an Information Monetization Capability

**Processes**
- Ecosystem Engagement
- Data Partner Assessment
- Data Packaging and Pricing
- Self Service Processes
- Information Management
- Data Orchestration

**Platforms**
- Data Integration
- Cloud Infrastructure
- Open Source & Collaboration
- IT Security
- API Management

**Governance**
- Central Analytics Function
- PMO
- Data Value
- Privacy

**Talent**
- Data Scientist & Data Engineer
- Information Architect
- Manipulating Unstructured Data
- Institutional Knowledge

**DATA DISTRIBUTION**
The Strategic Priorities of a Digital Strategy

**Experiential Engagement**
- Blending digital and physical in consumer engagement

**Data Monetization**
- Leveraging data to create new digital revenue streams

**Digital Business at Scale**
- Delivering hyper-personalized cost effective digital services
Digital Business is Superseded by Digital Business at Scale

Digital Business

The ability to make business operations more responsive by leveraging digitally connected products/services, assets, people and partners.

Digital Business at Scale

Delivering hyper-personalized cost effective digital services
Speed, Scale and Scope will be Achieved with Digital Businesses Operations through Autonomic Processes

**Reduce Costs**
Reduce costs of operations with self healing, self optimized, and self organizing systems

**Improve Quality**
Improve quality with automated assistance technologies that augment and support workers in all aspects of their jobs

**Speed of Innovation**
Speed of innovation processes with democratized processes such as ideation campaigns, expert networks, and Kickstarter-like funding
Key Technology Investments for Digital Business at Scale

**Blockchain Technology**
Enables secure execution of contracts among ecosystem partners

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**Cloud and Mobile Connectivity**
Supports autonomic capabilities by providing visibility into globally-dispersed operations

**Automated Assistance Technologies**
Robotics, AI, 3D printing, and AR support workers in all aspects of their jobs
Develop an At Scale Digital Business Capability

Democratized Innovation
Automated & Agile Processes
Process Orchestration
Analytic Models of Operations

Processes

Chief Operations Officer
Scale, Scope and Speed
Operational SLAs
Adaptive Organization

Governance

SPEED

Cloud Platforming
API Run Time Services
Embedded Intelligence
Self-Aware Infrastructure
Ubiquitous Connectivity

Platforms

Continuous Learning
Transformation Mastery
DevOps
Cloud Management
Vendor Management
Digital Assistant Management

Talent
Three Platforms You Need to Begin Developing

1. Customer Engagement Platform
2. Information Monetization Platform
3. Digital Business Platform