IT trends in Japan for 2017

- IT Spending and Key Technology Trends -
About us.
ITR is an independent IT research and consulting firm. We provide hands-on advice about technology market, partner evaluations and technology deployment to drive your business.

Corporate overview

- **Name**: ITR Corporation
- **Address**: Shintoshin-maruen Bldg.3F, Nishi-Shinjuku 3-8-3, Shinjuku-ku, Tokyo P.C. 160-0023
- **URL**: http://www.itr.co.jp
- **Established**: March 1994
- **CEO**: Satoshi Uchiyama
- **Business Domain**: 
  - Research & advisory service
  - Consulting service
    - Survey on ICT industry
    - Consulting on technology market
  - Publishing
  - Event/Seminar
  - Training and education
- **Our Team**: 14 Analysts of IT and Telecom Industry.
  3 market researchers.

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Recent survey and consulting projects.

- **User company inquiry**
  - SMB survey (HW)
  - Server support program satisfaction survey (HW vendor)
  - Online storage user survey (System Integrator)
  - Credit card aggregator IT survey (SI)
  - System monitoring service survey (SI)
  - Sales planning for securities industry (HW vendor)
  - Financial package survey (SI)
  - System user satisfaction survey (Public Organization)
  - User survey (BI vendor)

- **Group interview**
  - Cloud user group interview (SI)
  - EDI tool group interview (EDI vendor)
  - SOA tool group interview (SI)
  - NGN appliance group interview (SI)
  - Tier2 SI partner group interview (SI)

- **Competitor analysis**
  - UNIX server survey (HW vendor)
  - Server support service survey (HW vendor)
  - West Tokyo district data center survey (SI)
  - NW virtualization survey (SI)
  - Talent management solution survey (TMS vendor)
  - LMS market survey (LMS vendor)
  - BRMS market survey (SI)

- **Sales planning**
  - Business platform service-concept design (SI)
  - Business Platform service-sales planning (SI)
  - System operation business planning (SI)
  - Solution planning for DC business providers (SI)
  - NW virtualization sales plan (SI)

- **Whitepaper and promotion support**
  - Mid range ERP Whitepaper (ERP vendor)
  - Manufacturing package Whitepaper (SI)
  - Cloud ERP Whitepaper (ERP vendor)
  - Self service BI Whitepaper (BI vendor)
  - DaaS Whitepaper (SI)
  - VDI Whitepaper (SI)
  - Operation automation Whitepaper (Tool vendor)
  - Owned media contents curation (SI)
  - Owned media contents editing & writing (BI)

- **Sales training**
  - FinTech training (SI)
  - IoT training (Telecom)
  - IT consultant training (SI)
  - Management training (Securities)

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1. Japanese IT market

- World’s 3rd IT market at steady growth.
- Top companies and major IT vendors
- Well organized sales channels
- Major resellers and distributors
- Market prices
- IT events and trade shows in Tokyo
World’s 3rd IT market at steady growth.
Private sector IT investment reached 16.6 trillion JPY in 2014.

(Unit=billion JPY)

- Software (8.1 trillion JPY)
- Computers and peripheral equipment (5.3 trillion JPY)
- Communications equipment (3.1 trillion JPY)

Source: MIC “Study on Economic analysis of ICT 2015"
Top companies and major IT vendors.

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Company</th>
<th>Revenue (Billiom JPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Toyota Motor</td>
<td>28,403</td>
</tr>
<tr>
<td>2</td>
<td>Honda Motor</td>
<td>14,601</td>
</tr>
<tr>
<td>3</td>
<td>Japan Post Holdings</td>
<td>14,257</td>
</tr>
<tr>
<td>4</td>
<td>Nissan Motor</td>
<td>12,189</td>
</tr>
<tr>
<td>5</td>
<td>Nippon Telegraph&amp;Tel</td>
<td>11,540</td>
</tr>
<tr>
<td>6</td>
<td>Hitachi</td>
<td>10,034</td>
</tr>
<tr>
<td>7</td>
<td>Softbank</td>
<td>9,153</td>
</tr>
<tr>
<td>8</td>
<td>JX Holdings</td>
<td>8,737</td>
</tr>
<tr>
<td>9</td>
<td>Aeon</td>
<td>8,176</td>
</tr>
<tr>
<td>10</td>
<td>Toyota Tsusho</td>
<td>8,170</td>
</tr>
<tr>
<td>11</td>
<td>Sony</td>
<td>8,105</td>
</tr>
<tr>
<td>12</td>
<td>Panasonic</td>
<td>7,553</td>
</tr>
<tr>
<td>13</td>
<td>Marubeni</td>
<td>7,300</td>
</tr>
<tr>
<td>14</td>
<td>Mitsubishi Corporation</td>
<td>6,925</td>
</tr>
<tr>
<td>15</td>
<td>Tokyo Electric Power</td>
<td>6,069</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Company</th>
<th>Revenue (Billiom JPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fujitsu*</td>
<td>3,283</td>
</tr>
<tr>
<td>2</td>
<td>NEC*</td>
<td>2,630</td>
</tr>
<tr>
<td>3</td>
<td>Hitachi*</td>
<td>2,109</td>
</tr>
<tr>
<td>4</td>
<td>NTT Data</td>
<td>1,615</td>
</tr>
<tr>
<td>5</td>
<td>IBM Japan</td>
<td>902</td>
</tr>
<tr>
<td>6</td>
<td>Canon MJ</td>
<td>646</td>
</tr>
<tr>
<td>7</td>
<td>Otsuka Shokai</td>
<td>609</td>
</tr>
<tr>
<td>8</td>
<td>NRI</td>
<td>421</td>
</tr>
<tr>
<td>9</td>
<td>Microsoft Japan</td>
<td>403</td>
</tr>
<tr>
<td>10</td>
<td>CTC</td>
<td>391</td>
</tr>
<tr>
<td>11</td>
<td>TIS Intec Group</td>
<td>382</td>
</tr>
<tr>
<td>12</td>
<td>HP+Hewlett Packard Japan</td>
<td>364</td>
</tr>
<tr>
<td>13</td>
<td>SCSK</td>
<td>324</td>
</tr>
<tr>
<td>14</td>
<td>Nihon Unisys</td>
<td>278</td>
</tr>
<tr>
<td>15</td>
<td>Trans Cosmos</td>
<td>224</td>
</tr>
</tbody>
</table>

* Revenue of ICT segments.

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Well organized sales channels.

**IT Service**
- ERP, web marketing
- Consulting
- SaaS/ASP
- DC//IaaS
- Outsourcing
- Call center
- Help desk
- System operation, surveillance

**NW Carrier**
- MDM, SaaS
- Fixed
- Mobile
- MVNO
- Cloud/IaaS

**Communication equipment**
- security and appliance
- Router
- Switch
- LAN/WAN
- Wifi
- Web/TV MTG
- Smartphone
- Feature phone
- IP phone
- PBX

**PC vendor**
- school, local government
- Desktop PC
- Laptop PC
- Thin client
- Tablet
- Phablet

**HW vendor**
- virtualization
- Server
- Converged infrastructure
- Storage
- Tape
- Mainframe
- HPC
- Cloud

**Application Vendor**
- ISV
- OS
- ERP
- CRM
- SCM
- BI
- DBMS
- Security
- Auth/ID
- Data integration

**OA**
- ECM, Medical
- Printer
- Copy
- Scanner
- Fax
- All-in-one

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**Network Integrator**

**Distributor**

**Reseller**

**System Integrator**

**Regional sales**

**User Company**
Major resellers and distributors.
Market prices.

Average system engineer fees in the Japanese market (2016)

<table>
<thead>
<tr>
<th></th>
<th>Tier3(n=223)</th>
<th></th>
<th></th>
<th>Tier2(n=198)</th>
<th></th>
<th></th>
<th>Tier1(n=282)</th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HW Resell</td>
<td>User</td>
<td>Independent</td>
<td>Ave</td>
<td>HW Resell</td>
<td>User</td>
<td>Independent</td>
<td>Ave</td>
<td>HW Resell</td>
<td>User</td>
</tr>
<tr>
<td>Consultant</td>
<td>1,367</td>
<td>0</td>
<td>1,221</td>
<td>1,250</td>
<td>1,362</td>
<td>1,504</td>
<td>1,560</td>
<td>1,477</td>
<td>1,891</td>
<td>1,800</td>
</tr>
<tr>
<td>Project Manager</td>
<td>1,194</td>
<td>1,250</td>
<td>1,006</td>
<td>1,071</td>
<td>1,600</td>
<td>1,467</td>
<td>1,290</td>
<td>1,436</td>
<td>1,475</td>
<td>1,420</td>
</tr>
<tr>
<td>Senior SE</td>
<td>1,250</td>
<td>1,078</td>
<td>870</td>
<td>903</td>
<td>1,282</td>
<td>1,135</td>
<td>1,082</td>
<td>1,154</td>
<td>1,263</td>
<td>1,186</td>
</tr>
<tr>
<td>Middle SE</td>
<td>810</td>
<td>696</td>
<td>782</td>
<td>771</td>
<td>873</td>
<td>876</td>
<td>899</td>
<td>886</td>
<td>969</td>
<td>912</td>
</tr>
<tr>
<td>Entry SE</td>
<td>708</td>
<td>603</td>
<td>645</td>
<td>646</td>
<td>792</td>
<td>683</td>
<td>747</td>
<td>737</td>
<td>777</td>
<td>775</td>
</tr>
<tr>
<td>Programmer</td>
<td>645</td>
<td>460</td>
<td>615</td>
<td>607</td>
<td>696</td>
<td>576</td>
<td>683</td>
<td>659</td>
<td>731</td>
<td>691</td>
</tr>
<tr>
<td>Help Desk</td>
<td>500</td>
<td>383</td>
<td>520</td>
<td>495</td>
<td>494</td>
<td>475</td>
<td>582</td>
<td>520</td>
<td>590</td>
<td>565</td>
</tr>
<tr>
<td>System Operator</td>
<td>500</td>
<td>390</td>
<td>421</td>
<td>423</td>
<td>460</td>
<td>522</td>
<td>618</td>
<td>536</td>
<td>496</td>
<td>637</td>
</tr>
</tbody>
</table>

Company sizes are based on annual revenue; “Tier3” <5 billion JPY, “Tier2” 5-10 billion JPY, “Tier1” <10 billion JPY

Average SaaS pricing in the Japanese market (2016)

<table>
<thead>
<tr>
<th>Application</th>
<th>Tools</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration</td>
<td>e-mail, schedule, online storage</td>
<td>1user 500JPY/month</td>
</tr>
<tr>
<td>HR</td>
<td>HR, Payroll</td>
<td>1user 1,000JPY/month</td>
</tr>
<tr>
<td>Time and Workforce Management</td>
<td></td>
<td>1user 400JPY/month</td>
</tr>
<tr>
<td>Financial</td>
<td>Financial management, Planning</td>
<td>1user 10,000JPY/month</td>
</tr>
</tbody>
</table>

Source: ITR, 2016
IT events and trade shows in Tokyo.

- Interop Tokyo by NANO OPT media
  [Interop](https://www.interop.jp/2017/exhibitor/info.html)

- Japan IT Week by Reed Exhibitions Japan
  [Japan IT Week](http://www.japan-it.jp/en/)

- ITpro EXPO by Nikkei BP
  [ITpro EXPO](http://expo.nikkeibp.co.jp/itpexpo/2016/english/)

- CEATEC Japan by CIAJ, JEITA, CSAJ
  [CEATEC Japan](http://www.ceatec.com/2017/en/)

- Watson Summit (XCITE) by IBM Japan
  [IBM Watson Summit](http://ibmevent.jp/watsontocummit2016/)

- AWS Summit Tokyo by Amazon Web Service
  [AWS Summit Tokyo](http://www.awssummit.tokyo)

- Developers Summit by Shoeisha
  [Developers Summit](http://event.shoeisha.jp/devsumi/20170216/)

- Gartner Symposium by Gartner Japan
  [Gartner Symposium ITXPO](http://www.gartner.com/events/apac/japan-symposium)

- Directions by IDC Japan
  [Directions](http://www.idcjapan.co.jp/Seminar/directions2016/)

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2. IT spending

- IT Investment Index (FY2001-FY2017)
- IT budget as % of revenue (FY2016, by Industry)
- IT budget allocation (FY2016, by industry)
- IT budget as % of revenue (FY2016, by organization size)
- IT budget allocation (FY2016, by organization size)
IT Investment Index* (FY2001-FY2017)

- The chart shows the secular changes of "IT investment index" in the last 16 years.
- The index count answers of IT investment forecast like "Increased<20%" = +10 points 
  "Same" = ±0 point "Decreased >20%" = -20 points. And divide the sum of all the 
  answers by the respondent number.
- The index is fit for volatile market measurement just like diffusion index.

(n=2,685)

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
IT budget as % of revenue (FY2016, by Industry)

- Average IT Budget against corporate revenue accounts for 2.6%.
- Industry based scores are as below.

<table>
<thead>
<tr>
<th>Industry</th>
<th>IT Budget as % of Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (N=2,408)</td>
<td>2.6%</td>
</tr>
<tr>
<td>Manufacturing (N=620)</td>
<td>1.8%</td>
</tr>
<tr>
<td>Construction &amp; Housing (N=249)</td>
<td>1.5%</td>
</tr>
<tr>
<td>Wholesale &amp; Retail (N=344)</td>
<td>1.5%</td>
</tr>
<tr>
<td>Financial Services (N=235)</td>
<td>6.1%</td>
</tr>
<tr>
<td>Communications &amp; IT (N=293)</td>
<td>3.8%</td>
</tr>
<tr>
<td>Services (N=475)</td>
<td>2.3%</td>
</tr>
<tr>
<td>Public Sector (N=192)</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Source: ITR "IT Budget & Spending Trends 2017” © 2017, ITR Corporation All rights reserved.
## IT budget allocation (FY2016, by industry)

### Total (N=2,685)
- Less than 10 million JPY: 29.1%
- 10-99 million JPY: 23.0%
- 100-999 million JPY: 24.8%
- 1-10 billion JPY: 14.6%
- More than 10 billion JPY: 8.6%

### Manufacturing (N=667)
- Less than 10 million JPY: 24.9%
- 10-99 million JPY: 22.6%
- 100-999 million JPY: 25.5%
- 1-10 billion JPY: 18.4%
- More than 10 billion JPY: 8.5%

### Construction & Housing (N=271)
- Less than 10 million JPY: 39.9%
- 10-99 million JPY: 22.5%
- 100-999 million JPY: 25.1%
- 1-10 billion JPY: 8.1%
- More than 10 billion JPY: 4.4%

### Wholesale & Retail (N=374)
- Less than 10 million JPY: 36.6%
- 10-99 million JPY: 23.8%
- 100-999 million JPY: 21.9%
- 1-10 billion JPY: 12.3%
- More than 10 billion JPY: 5.3%

### Financial Services (N=251)
- Less than 10 million JPY: 8.0%
- 10-99 million JPY: 12.7%
- 100-999 million JPY: 27.9%
- 1-10 billion JPY: 25.9%
- More than 10 billion JPY: 25.5%

### Communications & IT (N=381)
- Less than 10 million JPY: 20.7%
- 10-99 million JPY: 22.3%
- 100-999 million JPY: 28.3%
- 1-10 billion JPY: 17.3%
- More than 10 billion JPY: 11.3%

### Services (N=520)
- Less than 10 million JPY: 41.5%
- 10-99 million JPY: 26.7%
- 100-999 million JPY: 19.8%
- 1-10 billion JPY: 8.5%
- More than 10 billion JPY: 3.5%

### Public Sector (N=221)
- Less than 10 million JPY: 24.4%
- 10-99 million JPY: 27.1%
- 100-999 million JPY: 29.0%
- 1-10 billion JPY: 12.2%
- More than 10 billion JPY: 7.2%

### Source:
ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
IT budget as % of revenue (FY2016, by organization size)

- Organization size based scores are as below.

<table>
<thead>
<tr>
<th>Organization Size</th>
<th>% of IT Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 billion JPY (N=201)</td>
<td>4.7%</td>
</tr>
<tr>
<td>1-9 billion JPY (N=752)</td>
<td>2.4%</td>
</tr>
<tr>
<td>10-49 billion JPY(N=584)</td>
<td>2.0%</td>
</tr>
<tr>
<td>50-99 billion JPY (N=242)</td>
<td>2.2%</td>
</tr>
<tr>
<td>100-499 billion JPY (N=297)</td>
<td>2.0%</td>
</tr>
<tr>
<td>More than 500 billion JPY(N=332)</td>
<td>3.3%</td>
</tr>
<tr>
<td>Total (N=2,408)</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
<table>
<thead>
<tr>
<th>Organization Size</th>
<th>Total (N=2,685)</th>
<th>More than 500 billion JPY (N=373)</th>
<th>100-499 billion JPY (N=321)</th>
<th>50-99 billion JPY (N=264)</th>
<th>10-49 billion JPY (N=624)</th>
<th>1-9 billion JPY (N=813)</th>
<th>Less than 1 billion JPY (N=290)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>ITR &quot;IT Budget &amp; Spending Trends 2017&quot; © 2017, ITR Corporation All rights reserved.</td>
<td>Source</td>
<td>Source</td>
<td>Source</td>
<td>Source</td>
<td>Source</td>
<td>Source</td>
</tr>
</tbody>
</table>

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
3. Key topics

- Key topics (FY2016 → FY2017)
- Major Technology trends and rate of progression
- Share of risk related expenditure against all IT Budget
- IT Unit control over organization IT spending
- Global IT budget allocation
Key topics (FY2016 → FY2017)

- In addition to “Cyber attack protection”, “Business innovation” and “Work style innovation” raised the rank.

- No changes in the Top6 topics.

<table>
<thead>
<tr>
<th>FY2016</th>
<th>FY2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution to Top-line growth</td>
<td>Contribution to Top-line growth</td>
</tr>
<tr>
<td>Operation cost reduction</td>
<td>Operation cost reduction</td>
</tr>
<tr>
<td>Improvement of customer service quality</td>
<td>Improvement of customer service quality</td>
</tr>
<tr>
<td>IT cost reduction</td>
<td>IT cost reduction</td>
</tr>
<tr>
<td>Improvement of system performance and reliability</td>
<td>Improvement of system performance and reliability</td>
</tr>
<tr>
<td>Data integration of legacy systems</td>
<td>Data integration of legacy systems</td>
</tr>
<tr>
<td>Protection of confidential data and personal information</td>
<td>Protection of confidential data and personal information</td>
</tr>
<tr>
<td>Strategic data utilization</td>
<td>Strategic data utilization</td>
</tr>
<tr>
<td>Cyber attack protection</td>
<td>Cyber attack protection</td>
</tr>
<tr>
<td>BCP &amp; DR</td>
<td>Business innovation</td>
</tr>
<tr>
<td>Business innovation</td>
<td>BCP &amp; DR</td>
</tr>
<tr>
<td>Speed-up of management decision makings</td>
<td>Work style innovation</td>
</tr>
<tr>
<td>Global business support</td>
<td>Speed-up of management decision makings</td>
</tr>
<tr>
<td>Work style innovation</td>
<td>Global business support</td>
</tr>
<tr>
<td>R&amp;D of cutting-edge technologies</td>
<td>Support for Internal control and compliance</td>
</tr>
<tr>
<td>Support for Internal control and compliance</td>
<td>R&amp;D of cutting-edge technologies</td>
</tr>
<tr>
<td>HR development &amp; training of IT staff</td>
<td>HR development &amp; training of IT staff</td>
</tr>
<tr>
<td>Restructuring of IT organization/subsidiary</td>
<td>Restructuring of IT organization/subsidiary</td>
</tr>
</tbody>
</table>

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
Major Technology trends and rate of progression.

- Top trend was “Integration and restructuring of IT Platform” (7 years in a row).
- “Introduction of My number (national ID) system” lowered the priority from the 3rd to 7th position.
- Cloud related topics stay at high positions.
Share of risk related expenditure against all IT Budget.

- All risk related expenditures exceeded FY2015 budget.
- “Information Security” and “Disaster Recovery “ recorded the highest in this survey.
IT Unit control over organization IT spending.

- IT Unit control over organization IT spending bounced back in FY2016.
- In 2016, IT Unit controls less than 50% of total IT spending.

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
Global IT budget allocation (Manufacturing/Non-manufacturing).

<table>
<thead>
<tr>
<th>Year</th>
<th>Manufacturing</th>
<th>Non-manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012 (N=91)</td>
<td>73.4%</td>
<td>77.9%</td>
</tr>
<tr>
<td>FY2013 (N=147)</td>
<td>62.3%</td>
<td>71.8%</td>
</tr>
<tr>
<td>FY2014 (N=254)</td>
<td>59.2%</td>
<td>75.9%</td>
</tr>
<tr>
<td>FY2015 (N=536)</td>
<td>66.3%</td>
<td>74.4%</td>
</tr>
<tr>
<td>FY2016 (N=223)</td>
<td>62.9%</td>
<td>70.6%</td>
</tr>
</tbody>
</table>

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
4. Products and services

- Most focused Technology 2017: by Industry
- IT platform and Device
- OS and Middleware
- Application
- Security and IT Service
- Top 4 categories
Most focused Technology 2017 : by Industry

Most focused IT product / service areas differ in each industry.

<table>
<thead>
<tr>
<th>Industry</th>
<th>IT platform &amp; Device</th>
<th>OS &amp; Middleware</th>
<th>Application</th>
<th>Security &amp; IT Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>• IoT / M2M</td>
<td>• AI / Machine learning</td>
<td>• BI / Data Analysis</td>
<td>• Vulnerability Scanner</td>
</tr>
<tr>
<td>Construction &amp; Housing</td>
<td>• NW Virtualization / SDN</td>
<td>• Mobile OS (Windows)</td>
<td>• Enterprise Management</td>
<td>• Miss sending Prevention</td>
</tr>
<tr>
<td>Wholesale &amp; Retail</td>
<td>• Server Virtualization</td>
<td>• AI / Machine learning</td>
<td>• SCM</td>
<td>• Network Quarantine</td>
</tr>
<tr>
<td>Financial Services</td>
<td>• Private Cloud</td>
<td>• Enterprise Mobile Management</td>
<td>• ECM</td>
<td>• Network Quarantine</td>
</tr>
<tr>
<td>Communications &amp; IT</td>
<td>• IoT / M2M</td>
<td>• AI / Machine learning</td>
<td>• Unified Communication</td>
<td>• Biometric Authentication</td>
</tr>
<tr>
<td>Services</td>
<td>• NW Virtualization / SDN</td>
<td>• Mobile OS (Windows)</td>
<td>• BI / Data Analysis</td>
<td>• Network Quarantine</td>
</tr>
<tr>
<td>Public Sector</td>
<td>• LTE / 4G</td>
<td>• NoSQL</td>
<td>• Mobile Apps for Smart Device</td>
<td>• DLP</td>
</tr>
<tr>
<td></td>
<td>• Storage Virtualization</td>
<td></td>
<td>• File Sharing/File Transfer</td>
<td>• IRM</td>
</tr>
</tbody>
</table>

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
Most focused Technology 2017: IT platform and Device

- “IoT” jumps up to the most focused technology in FY2017. “Tablet” and “Smartphone” keep high growth.
- Cloud related investment (IaaS/ PaaS/SaaS/ DaaS/Private) are in growth trends.

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
Most focused Technology 2017 : OS and Middleware

• Sign of revitalization in the middleware market.
• “AI / Machine Learning” is listed in the technology-to-invest position by Japanese companies.

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
Most focused Technology 2017 : Application

- “Marketing Automation” scored the highest investment index in apps category.
- The number of organizations to invest in “BI / Data Analysis” keeps on growing. Strong needs for analytic platform to analyze miscellaneous data.

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
Most focused Technology 2017: Security and IT Service

- “Targeted Attack Protection” and “SOC/Managed Security Service” expect continuous investment in the Japanese market.
- “Vulnerability Scanner” draws attention of IT security managers.

Source: ITR "IT Budget & Spending Trends 2017" © 2017, ITR Corporation All rights reserved.
Most focused Technology 2016 → 2017 : Top 4 categories

- In FY 2016, adoption of new technologies accelerated in censor and marketing related products.
5. Technologies at a glance

- IoT
- AI
- Marketing Automation
- Cloud
- Cyber Security
- Japanese IT startups - Service platforms
- Japanese IT startups - New UI, New UX
IoT – User survey result

State of IoT deployments

2015 Survey (N=218)
- Deployed and will expand: 16%
- Deployed but will not expand: 8%
- Planned to deploy within 1 year: 17%
- Planned to deploy: 27%
- Have no plans: 32%

2014 Survey (N=220)
- Deployed and will expand: 13%
- Deployed but will not expand: 12%
- Planned to deploy within 1 year: 14%
- Planned to deploy: 27%
- Have no plans: 34%

Areas of IoT deployment

Source: ITR “User View: IoT 2015"
AI – User survey result

State of AI deployments

<table>
<thead>
<tr>
<th>State of AI deployments</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have no plans</td>
<td>2.2%</td>
</tr>
<tr>
<td>Investigating</td>
<td>0.4%</td>
</tr>
<tr>
<td>Estimating effectiveness</td>
<td>2.9%</td>
</tr>
<tr>
<td>Assigned dedicated staff for testing</td>
<td>10.9%</td>
</tr>
<tr>
<td>Testing for specific problems</td>
<td>9.4%</td>
</tr>
<tr>
<td>Pilot project</td>
<td>9.4%</td>
</tr>
<tr>
<td>Deployed partly</td>
<td>17.8%</td>
</tr>
<tr>
<td>Deployed and utilized</td>
<td>37.0%</td>
</tr>
<tr>
<td>Testing or deployed</td>
<td>(N=276)</td>
</tr>
</tbody>
</table>

Areas of AI deployment

- **Data analysis**: 38.6%
- **R&D**: 28.6%
- **Customer support**: 22.9%
- **Test/Product design**: 20.0%
- **Merchandising**: 20.0%
- **Marketing**: 17.1%
- **Infrastructure management**: 17.1%
- **Manufacturing**: 15.7%
- **Quality Control**: 15.7%
- **CRM**: 12.9%
- **WCM**: 10.0%
- **HRM**: 10.0%
- **Enterprise Management**: 11.6%
- **IT Security**: 10.0%
- **Order management**: 8.6%
- **GRC**: 8.6%
- **Procurement**: 7.1%
- **SCM**: 7.1%
- **Miscellaneous**: 0.4%

Source: ITR “User View: AI 2016”
Marketing Automation

- B2C market grows at **CAGR19.6%**. Top3: Shanon, Marketo, Oracle
- B2B market grows at **CAGR28.3%**. Top3: SFDC, SAS, From Scratch

Japanese Marketing Automation market forecasts.

(Unit=billion JPY)

Source: ITR “Market View: Marketing Automation 2017”
Cloud (IaaS/PaaS/SaaS)

- IaaS/PaaS market grows at CAGR 19.2%. Top3: AWS, NTTCom, Fujitsu.
- SaaS market grows at CAGR 12.5%. Top3: SFDC, Softbank, Experian.
- DaaS market grows at CAGR 15.9%. Top3: Fujitsu, NTT Data, NSSOL.

Japanese IaaS & PaaS market forecasts.

Japanese enterprise SaaS market forecasts.

Source: ITR “Market View: Cloud Computing 2016” © 2017, ITR Corporation  All rights reserved.
Cyber Security

- Cyber Security market grows at **CAGR 11.4%**.
- Sandbox-based Gateway Security (22.7%) and DDoS Protection (22.4%) grows fastest.
Japanese IT startups- Service platforms

“Money Forward” is a personal money account aggregation platform started in December 2012. It connects bank account, credit card account and shopping receipt scan data via API links. Now it has 3.5 million users and OEM the service platform for various banks.

“airCloset” is a fashion rental platform started in December 2014. The service had grown up to 200 brands and 75,000 users in 15 months. Funded 1 billion JPY from laundry shop FC, warehouse company and credit card VC in 2016.

“Soracom” is an AWS based IoT platform started in September 2015. The service (SIM card and APIs dashboard) has signed over 2,000 companies and raised 2.4 billion JPY for US (World Innovation Lab, Infinity Venture Partners) and more for ASEAN (Mitsui Corp, Pavilion Capital).
“Live shell” is an online streaming appliance released in 2012. The mix-up of consumer electronics (embedded system) and online service enables gradual UI and service improvement. The product of 11 employee company is sold in 21 countries.

“Moverio” is a see-through type smart glasses released in Nov 2011. User can download apps (entertainment, games, business etc.) from Apps Market. It can be used as a drone monitor, video player and educational tool.

“WHILL Model M” is a personal mobility released in 2014. Its powerful front omni-wheels enables users to drive over steep inclines, rough terrain and tight turns. The startup of 40 employees won CES 2017 Innovation Award in “Best Accessibility Tech” Category.