Integrated Automation: Why we’re doing it all so wrong...

Phil Fersht, CEO and Chief Analyst, HFS Research
KPMG AI Symposium, June 5th 2019
Agenda

• How OneOffice Unifies Digital Business Models
• What’s Driving the “Hyper-Connected Enterprise” of the future?
• The Hard Unavoidable Realities of Integrated Automation
2012 HFS Introduces the Concept of RPA to the World

Rise of the software machines

The attractions of employing robots

ELIZA DOOLITTLE ENTERS the stage unkempt and talking in a strong Cockney accent, but by the end of George Bernard Shaw's play "Pygmalion" she speaks in a much more ladylike fashion. Another Eliza was invented by Joseph Weizenbaum, a scientist from the Massachusetts Institute of Technology, in the early 1960s. His computer program was named after Shaw's character because it learned to speak more clearly over time. It played the role of a psychotherapist, sometimes well enough to convince
RPA is dead. Long live Integrated Automation Platforms 📝

May 02, 2019 | Phil Fersht, Saurabh Gupta, Elena Christopher

The biggest problem with enterprise operations today is the simple fact that most firms still run most of their processes exactly the same way as they did 20/30/40 years ago, with the only "innovation" being models like offshore outsourcing and shared service centers, cloud and digital technologies enabling those same processes to be conducted steadily faster and cheaper. However, fundamental changes have not been made to intrinsic business processes – most companies still operate with their major functions such as customer service, marketing, finance, HR and supply chain operating in individual silos, with IT operating as a non-strategic vehicle to maintain the status quo and keep the lights on.
HYPERCONNECTED FUTURE STATE

- Artificial Intelligence
- Integrated Automation
- Smart Analytics
- Global Sourcing
- Blockchain
- Digital Business Models
How does your enterprise leadership view “Digital”?

Q. Which of the following statements most closely resembles your organizational leadership’s view on the 'Digital Transformation' strategy?

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) “It’s about INVESTING IN &quot;NEW IT&quot; (e.g., get technologies deployed like mobile platform, a cloud platform, infrastructure, etc.)”</td>
<td>35%</td>
</tr>
<tr>
<td>b) “It’s about CREATING NEW CUSTOMER EXPERIENCES” (e.g., having the coolest use of innovative new technologies like social, mobile, interactive, etc.)</td>
<td>32%</td>
</tr>
<tr>
<td>c) “It’s about CREATING NEW REVENUE STREAMS” (e.g., commercial leverage of digital channels, such as mobile, interactive tech, social media, etc.)</td>
<td>20%</td>
</tr>
<tr>
<td>d) “It’s about ALIGNING / HARMONIZING BUSINESS OPERATIONS to customer needs” (i.e., all organizational touchpoints, processes, systems and technologies are driven by the customer experience strategy, from front office to back office)</td>
<td>13%</td>
</tr>
<tr>
<td>e) “We don’t have a digital vision”</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: HFS Research, “Journey to the Digital OneOffice 2019”
Sample: n=395 Enterprise Digital Leaders
Digital disruption is rampant: 29% have already seen their top 2 competitors change in just three years

Are your top 2 competitors the same now as in 2016?

- Yes: 71%
- No: 29%

Do you believe that they (your competitors) will be the same in 2021?

- Yes: 63%
- No: 37%

Source: HFS Research, “Journey to the Digital OneOffice 2019”
Sample: n=395  Enterprise Digital Leaders
Enterprises ooze digital complacency...

How far are you behind or ahead of most of your competitors now? How do you expect to compare over the next two years?

<table>
<thead>
<tr>
<th>Industry</th>
<th>Now</th>
<th>Next 2-3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retail</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly behind</td>
<td>-8%</td>
<td>3%</td>
</tr>
<tr>
<td>Well behind</td>
<td>-13%</td>
<td>-11%</td>
</tr>
<tr>
<td>Slightly ahead</td>
<td>42%</td>
<td>39%</td>
</tr>
<tr>
<td>Well ahead</td>
<td>37%</td>
<td>47%</td>
</tr>
<tr>
<td><strong>Life Sciences</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly behind</td>
<td>-8%</td>
<td>-16%</td>
</tr>
<tr>
<td>Well behind</td>
<td>46%</td>
<td>39%</td>
</tr>
<tr>
<td>Slightly ahead</td>
<td>46%</td>
<td>62%</td>
</tr>
<tr>
<td>Well ahead</td>
<td>46%</td>
<td>55%</td>
</tr>
<tr>
<td><strong>Healthcare, Insurance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly behind</td>
<td>-13%</td>
<td>-19%</td>
</tr>
<tr>
<td>Well behind</td>
<td>35%</td>
<td>29%</td>
</tr>
<tr>
<td>Slightly ahead</td>
<td>32%</td>
<td>45%</td>
</tr>
<tr>
<td>Well ahead</td>
<td>32%</td>
<td>46%</td>
</tr>
<tr>
<td><strong>Banking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly behind</td>
<td>-8%</td>
<td>3%</td>
</tr>
<tr>
<td>Well behind</td>
<td>-10%</td>
<td>-10%</td>
</tr>
<tr>
<td>Slightly ahead</td>
<td>47%</td>
<td>41%</td>
</tr>
<tr>
<td>Well ahead</td>
<td>34%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Sample: n=395 Enterprise Digital Leaders
Highest performers prioritize top-line over bottom-line

Q. What are the primary objectives of your data and advanced analytics activities today?

<table>
<thead>
<tr>
<th>Objective</th>
<th>Leaders</th>
<th>Laggards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed to market, Increased sales, Better product innovation</td>
<td>69%</td>
<td>41%</td>
</tr>
<tr>
<td>Improving customer experiences</td>
<td>69%</td>
<td>54%</td>
</tr>
<tr>
<td>Organizational efficiencies, Reducing operating costs</td>
<td>49%</td>
<td>70%</td>
</tr>
<tr>
<td>Manage business and systemic risk</td>
<td>40%</td>
<td>55%</td>
</tr>
<tr>
<td>Real-time decision making</td>
<td>38%</td>
<td>55%</td>
</tr>
</tbody>
</table>

Source: HFS Research 2019, n= 262 Global 2000 Enterprise Leaders “Smart Analytics Study”
Intelligent automation most dynamic across IT and customer service

What are the key areas where you are implementing Intelligent Automation (IA) technologies? N=590

- IT: 43% (Rank 1), 9% (Rank 2), 8% (Rank 3)
- Customer service: 12% (Rank 3), 18% (Rank 2), 13% (Rank 1)
- Core business / industry-specific: 7% (Rank 3), 11% (Rank 2), 15% (Rank 1)
- Supply chain: 8% (Rank 3), 15% (Rank 2), 9% (Rank 1)
- Sales/marketing: 6% (Rank 3), 13% (Rank 2), 13% (Rank 1)
- Risk/compliance: 4% (Rank 3), 7% (Rank 2), 12% (Rank 1)
- Sourcing/procurement: 7% (Rank 3), 8% (Rank 2), 7% (Rank 1)
- HR: 5% (Rank 3), 8% (Rank 2), 7% (Rank 1)
- Shared svcs and global business svcs: 4% (Rank 3), 4% (Rank 2), 10% (Rank 1)
- F&A: 5% (Rank 3), 7% (Rank 2), 6% (Rank 1)
How it works

1. Receive notification
   Get notified when your home is using energy from unsustainable sources.

2. Save
   Save energy for about 30 minutes.

3. Get Paid
   Receive $100 - $300 per year
Ohmconnect: Paying consumers not to use dirty energy

Connects consumers and electricity firms:
Alerts consumers when there is a spike in demand, which will overload renewable electricity and pull from fossil fuels.

Incentivizes green behaviors: Pays consumers to reduce their electricity consumptions during the spike to stop the grid failing over to inefficient power plants.

Adopted by governments: Currently working with the government of the State of California.

Ethics and Community driven: The service leverages a growing community of environmentally conscious consumers and encourages them to save energy and manage their impact without the need to spend on their own home energy solutions.
The HfS Digital OneOffice™ Framework

The Customer Centric Digital Organization

- Mobile & Social Interaction
- Touchless Interaction
- Customer-driven Process Design
- Real-time Personalization

The Empowering Digital OneOffice

- Digital Underbelly
  - Digitization & Automation of Processes
  - Cloudification and Security
  - Unification of Data

- Intelligent Support Functions
  - Autonomous and Agile Working Culture
  - Inclusive Digital Mindset
  - Unification of Outcomes
  - LEAN & Design Thinking

- Predictive Digital Insights
  - Predictive analytics
  - Cognitive AI Processes
  - Machine Learning
  - Blockchain and IoT

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Collaborative, Unified, Dynamic, Intelligent, Responsive, Simple
“Our industry needs to move beyond merely fixing legacy issues and focus on driving our people to rewire business operations to stay ahead of the market”

-- Phil Fersht: 30th April 2019
What’s driving the “Hyper-Connected Enterprise” of the future?
The Hyperconnected Enterprise

Real change must happen

Front Office

Shared Services / Nearshoring
Centralization

Offshoring
Globalization

Outsourcing
Analog

Basic Digital
Responsive

Digital OneOffice
Anticipatory

Hyper-Connected Enterprises
Interactive

Back Office

1990
1995
2000
2005
2010
2015
2020
2020+

The Internet
ERP
Six Sigma
Public Cloud
Basel II
RPA
AI
Autonomous, Hyperconnected Supply Chains

The Internet
The Internet Conversion
Y2K
Euro Currency
Digital
Private Cloud
Enterprise IT
Blockchain
Super-
Intelligent
Supply Chains

Client/ Server
Six Sigma
VOIP
Digital
Open Source
Intelligent
Digital

LEAN
Conversion
Digital
Marketplaces
ASPs
Automation
Networks

3G
Digital
Marketplaces
IOT
Intelligent
Networks

Y2K
Euro Currency
Digital
Marketplaces
IOT
Intelligent
Networks

The Guerrilla
Sharing
Economy
Digital
Workers

Sox
Digital
Business Models
Machine Learning
Digital
Workers

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Instead of 'How do we mine social media?' Banjo looks at it from the mobile phone, which is out in the real world.

How can we know what's going on in a specific place at a specific time?' They're able to mine social media in real time

-- Noam Bardin, co-founder and former CEO of Waze (now part of Google)
Shows only geo-located public posts made from mobile devices. A "world feed" is created by aggregating more than a dozen major social networks - from Twitter to Instagram to Russia's VKontakte to China's Weibo.

"Virtual Global Grid" of more than 35 billion squares programmed as an overlay on the entire globe. Over eight years, the software has documented the baseline state for each square of the global grid to detect abnormalities.

"Event-detection engine". Analyzes data about events and breaking news in real time, powered by a self-learning algorithm to identify abnormalities. Combines location, photo classification, analytics, and the ability to "rewind" each social media network in time. Written in Ruby on Rails running on Heroku hosted by AWS.

Capable of performing two quadrillion-plus calculations on the "hundreds of thousands of geo-tagged mobile posts" flooding in each minute: Simultaneously does linguistic and topic analysis, geo-data analysis, photo and video classification.

Discovered the 2014 Florida State University shooting before major news outlets. Picking up the term ‘scared shitless’ being used on Twitter without a hashtag and notified the local CBS affiliate.

Consumer Impact. Fox, BBC and NBC use Banjo to power live social content to break news before they gather traction on Facebook or Twitter. Banjo’s insights also being used to aid emergency responders and improve driving conditions.

Enterprise potential. Banjo now targets enterprises – clients include Budweiser, Amazon and other retailers. Targeting industries such as financial services, marketing, insurance, public health, and beyond.
2019 Investment intentions: “Humans-plus-Bots” now the norm

Source: HFS Research supported by KPMG, “State of Operations and Outsourcing” 2019
Sample: Global 2000 Enterprise Leaders = 381
“Value levers”, such as offshoring, rapidly embedding into the fabric of Hyperconnectedness

Q. To what extent is your use of offshoring is likely to change in the next 2 years across the following functions?

Sample: Global 2000 Enterprise Leaders = ~400
Global IT and BPO services market 2018–2023 ($B)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional</td>
<td>429</td>
<td>456</td>
<td>482</td>
<td>510</td>
<td>538</td>
</tr>
<tr>
<td>Other IT Services</td>
<td>126</td>
<td>126</td>
<td>127</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td>IT Infrastructure</td>
<td>93</td>
<td>99</td>
<td>105</td>
<td>110</td>
<td>116</td>
</tr>
<tr>
<td>Application</td>
<td>234</td>
<td>245</td>
<td>256</td>
<td>269</td>
<td>283</td>
</tr>
<tr>
<td>Industry Specific BPO</td>
<td>55</td>
<td>59</td>
<td>62</td>
<td>66</td>
<td>70</td>
</tr>
<tr>
<td>F&amp;A BPO</td>
<td>35</td>
<td>37</td>
<td>39</td>
<td>41</td>
<td>44</td>
</tr>
<tr>
<td>Customer Care BPO</td>
<td>63</td>
<td>65</td>
<td>68</td>
<td>71</td>
<td>74</td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
<td>65</td>
<td>68</td>
<td>71</td>
<td>74</td>
</tr>
</tbody>
</table>

Expenditure ($Bn)

CAGR 2018-2023

- Professional Services: 6.1%
- Other IT Services: 0.2%
- IT Infrastructure Management: 2.1%
- Application Services: 5.7%
- Industry Specific BPO: 4.8%
- F&A BPO: 6.3%
- Customer Care BPO: 5.9%
- Total: 4.4%

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It’s no longer how capabilities are “sold”
It’s how enterprises “buy”...

A true partner that proactively innovates and invests with you to find new thresholds of value to achieve co-defined business outcomes

Source: HfS Research in Conjunction with KPMG, 2018
Sample: Global 2000 Enterprise Leaders = 381
Big $ for the big bets. Significant IA investments are on the table

What level of Intelligent Automation-related investment is your enterprise making today?

Over 30% enterprises are already investing over $50M in IA technologies

Source: HFS Research in conjunction with KPMG International, State of Intelligent Automation, 2019
Sample = 590 Business Leaders including 100 C-level executives
Time for for some **hard realities** about automation...

**Buzzy AI software startup UiPath in talks to raise a mega funding round at a possible $7 billion valuation**

Shona Ghosh and Becky Peterson  
Mar. 19, 2019, 12:33 PM  
15,960

... $3 billion Google-backed startup UiPath She added: "UiPath is experiencing tremendous growth and momentum, which is attracting an increased level of attention and interest in the company." UiPath ...

**Leaked numbers reveal massive revenue growth at $3 billion Google-backed startup UiPath**

Becky Peterson  
Jan. 20, 2019, 7:34 PM  
12,014

... in a September funding round. The buzzy and well-funded $3 billion artificial intelligence startup UiPath will soon hit $200 million in annual recurring revenue, sources told Business Insider. UiPath ...
### Reality #1: “RPA” as a terminology has failed and needs to change

<table>
<thead>
<tr>
<th></th>
<th>Robotic Desktop Automation (RDA)</th>
<th>Robotic Process Automation (RPA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary value proposition</strong></td>
<td>Increase agent productivity. Support human operators in completing tasks and activities</td>
<td>Increase process efficiency. Reduce manual labor by automating transaction-intensive activities</td>
</tr>
<tr>
<td><strong>Human involvement / governance</strong></td>
<td>Triggered by humans (humans pass tasks to bots)</td>
<td>Self-triggered (bots pass tasks to humans)</td>
</tr>
<tr>
<td></td>
<td>Requires human intervention for judgment-intensive tasks</td>
<td>Requires robust human governance and to make changes / improvements</td>
</tr>
<tr>
<td><strong>Capabilities</strong></td>
<td>Assisted automation (&quot;Macros-on-steroids&quot;)</td>
<td>Un-assisted automation</td>
</tr>
<tr>
<td></td>
<td><strong>User interface based (code-free), application agnostic, non-disruptive to legacy IT, business user friendly</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Data types</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primarily structured</td>
<td></td>
</tr>
<tr>
<td><strong>Example use case</strong></td>
<td>Automating transfer of data from one system to another</td>
<td>Automating invoice processing across multiple applications handling rule-based exceptions</td>
</tr>
</tbody>
</table>

85% of “RPA” Deals are attended automations

80% of “RPA” Deals are not process-focused
The Evolution to Integrated Automation Platforms

System Integrators
orchestrating AI, analytics & automation
- Accenture SynQops
- Wipro Holmes
- TCS ignio
- Genpact CORA
- KPMG IGNITE

Robotic Transformation Software Products
seeking to underpin AI and data management capabilities
- Automation Anywhere
- BluePrism
- UiPath
- AntWorks
- Kofax
- Catalytic
- Nice
- Kryon
- Workfusion

Integrated Automation Platforms

AI and Analytics Products
starting to embrace RTS instead of undermining it
- Arago
- IPsoft
- Exceptor
- Haystac

Enterprise Software Products
integrating analytics, automation & AI into their platforms
- SAP Leonardo
- Salesforce Einstein
- Oracle adaptive labs
- Pega (OpenSpan)

Source: HFS Research 2019
Reality #2: Enterprises are looking at IA to drive top line growth and delight customers

What are the key strategic objectives/goals for your company's Intelligent Automation (IA) strategy?

- Drive revenue growth: 24%
- Accelerate ability to leverage data analysis: 18%
- Improve business and operational insights: 18%
- Create a new business / operating model: 12%
- Respond to what the competition is doing: 7%
- Improve product and service innovation: 7%
- Attract/retain talent: 5%
- Improve product/service speed to market: 5%
- Improve customer experience: 3%
- Develop new market opportunities (segmentation/growth): 1%

What are the key operational objectives for your company's Intelligent Automation (IA) strategy?

- Improve customer service quality and quality of interactions: 30%
- Streamline customer service delivery model front office effectiveness: 23%
- Improve back-office and middle office efficiencies: 17%
- Improve employee morale and efficiency: 12%
- Improve data security: 10%
- Cope with the regulatory/risk environment: 8%
- Eliminate headcount: <1%

Source: HFS Research in conjunction with KPMG International, State of Intelligent Automation, 2019
Sample = 590 Business Leaders including 100 C-level executives
Reality #3: Enterprises Bracing for Major Changes in Internal Roles

What proportion of your current workforce do you expect to be significantly impacted (i.e., partial or complete job automation) in the next 2 years?

<table>
<thead>
<tr>
<th>Country</th>
<th>Less than 10%</th>
<th>11-20%</th>
<th>21-50%</th>
<th>More than 50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>18%</td>
<td>40%</td>
<td>28%</td>
<td>15%</td>
</tr>
<tr>
<td>China</td>
<td>15%</td>
<td>35%</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>India</td>
<td>25%</td>
<td>40%</td>
<td>13%</td>
<td>3%</td>
</tr>
<tr>
<td>Japan</td>
<td>8%</td>
<td>35%</td>
<td>3%</td>
<td>13%</td>
</tr>
<tr>
<td>UK</td>
<td>13%</td>
<td>38%</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>US</td>
<td>25%</td>
<td>46%</td>
<td>15%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: HFS Research in conjunction with KPMG International, State of Intelligent Automation, 2019
Sample = 590 Business Leaders including 100 C-level executives
But if we’re honest, most of us don’t have a decent talent strategy...

- Don’t know yet, and won’t know for a while: 40%
- Retrain them to do more data intensive work: 21%
- Retrain them to use new technologies: 16%
- Let them go: 16%
- Retrain them to take on more right-brained activities: 7%

Source: HFS Research New York Summit 2018 (200 Enterprise Leaders)
Reality #4: "Scaling Automation" is 90% about People, 10% about Technology

What is the current state of adoption of the following Intelligent Automation (IA) technologies in your organization?

Source: HFS Research in conjunction with KPMG International, State of Intelligent Automation, 2019
Sample = 590 Business Leaders including 100 C-level executives

<table>
<thead>
<tr>
<th>Technology</th>
<th>Unsure</th>
<th>No plans</th>
<th>Piloting right now</th>
<th>Moving to production</th>
<th>Scaled-up and industrialized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Analytics (incl. predictive &amp; prescriptive analytics)</td>
<td>5%</td>
<td>14%</td>
<td>28%</td>
<td>30%</td>
<td>23%</td>
</tr>
<tr>
<td>Computer Vision</td>
<td>5%</td>
<td>23%</td>
<td>25%</td>
<td>28%</td>
<td>19%</td>
</tr>
<tr>
<td>Machine Learning (ML)</td>
<td>5%</td>
<td>17%</td>
<td>31%</td>
<td>30%</td>
<td>17%</td>
</tr>
<tr>
<td>NLP (Extract &amp; Interpret, Compare &amp; Comply, Retrieve &amp; Recommend)</td>
<td>6%</td>
<td>23%</td>
<td>31%</td>
<td>24%</td>
<td>15%</td>
</tr>
<tr>
<td>Artificial Intelligence (AI) e.g. IBM Watson-type reasoning apps</td>
<td>4%</td>
<td>16%</td>
<td>36%</td>
<td>28%</td>
<td>15%</td>
</tr>
<tr>
<td>Cognitive/Smart Virtual Assistants (Chatbots++)</td>
<td>6%</td>
<td>20%</td>
<td>30%</td>
<td>29%</td>
<td>15%</td>
</tr>
<tr>
<td>Robotic Process Automation (RPA)</td>
<td>5%</td>
<td>20%</td>
<td>34%</td>
<td>27%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Only 20-30% enterprises are not considering or are unsure about IA
Adoption patterns across the IA technology spectrum is similar
“RPA” still in the tinkering stage across the board

<table>
<thead>
<tr>
<th>Industry</th>
<th>Piloting right now</th>
<th>Moving into production</th>
<th>Scaled-up and industrialized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking and financial services</td>
<td>31%</td>
<td>22%</td>
<td>20%</td>
</tr>
<tr>
<td>Government</td>
<td>33%</td>
<td>23%</td>
<td>6%</td>
</tr>
<tr>
<td>Insurance</td>
<td>47%</td>
<td>17%</td>
<td>14%</td>
</tr>
<tr>
<td>Retail</td>
<td>26%</td>
<td>36%</td>
<td>13%</td>
</tr>
<tr>
<td>Energy &amp; Utilities</td>
<td>38%</td>
<td>28%</td>
<td>14%</td>
</tr>
<tr>
<td>Healthcare &amp; Life Science</td>
<td>35%</td>
<td>30%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Source: HFS Research in conjunction with KPMG International, State of Intelligent Automation, 2019
Sample = 590 Business Leaders including 100 C-level executives
IT Lacks Talent, Business Lacks Mindset...

Q. What are your greatest challenges holding back your journey to achieve the Digital OneOffice Framework?

- Legacy thinking / lack of a “digital mindset” from biz functions: 25% (IT Rank 1), 13% (Business Rank 1)
- Legacy thinking / lack of a “digital mindset” from IT: 23% (IT Rank 1), 6% (Business Rank 1)
- Lack of talent internally: 21% (IT Rank 1), 6% (Business Rank 1)
- We’re held hostage by legacy technology: 21% (IT Rank 1), 6% (Business Rank 1)

Source: HfS Research 2018
Sample: C-Level Enterprise Executives = 100
Many companies are stumbling like the walking dead...

Source: Future of Jobs Survey, World Economic Forum, 2019

Note: Names of barriers have been abbreviated to ensure legibility.

### Significance of barriers to change, industries overall

**Share of respondents reporting barrier, %**

<table>
<thead>
<tr>
<th>barrier</th>
<th>share of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient understanding of disruptive changes</td>
<td>51%</td>
</tr>
<tr>
<td>Resource constraints</td>
<td>50%</td>
</tr>
<tr>
<td>Pressure from shareholders, short-terms profitability</td>
<td>42%</td>
</tr>
<tr>
<td>Workforce strategy not aligned to innovation strategy</td>
<td>37%</td>
</tr>
<tr>
<td>Insufficient priority by top management</td>
<td>21%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>18%</td>
</tr>
<tr>
<td>Insufficient priority by line management</td>
<td>18%</td>
</tr>
<tr>
<td>No barriers</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: Future of Jobs Survey, World Economic Forum, 2019

Note: Names of barriers have been abbreviated to ensure legibility.
Creativity and orthogonal thinking, understanding systems and outcomes, and self-evaluation are the keys to relevance

Change in demand for core work-related skills, 2015-2020, all industries

<table>
<thead>
<tr>
<th>Skill Bundle</th>
<th>Current</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Abilities</td>
<td>15%</td>
<td>52%</td>
</tr>
<tr>
<td>Systems Skills</td>
<td>17%</td>
<td>42%</td>
</tr>
<tr>
<td>Complex Problem Solving</td>
<td>36%</td>
<td>40%</td>
</tr>
<tr>
<td>Content Skills</td>
<td>10%</td>
<td>40%</td>
</tr>
<tr>
<td>Process Skills</td>
<td>18%</td>
<td>39%</td>
</tr>
<tr>
<td>Social Skills</td>
<td>19%</td>
<td>37%</td>
</tr>
<tr>
<td>Resource Management Skills</td>
<td>13%</td>
<td>36%</td>
</tr>
<tr>
<td>Technical Skills</td>
<td>12%</td>
<td>33%</td>
</tr>
<tr>
<td>Physical Abilities</td>
<td>4%</td>
<td>31%</td>
</tr>
</tbody>
</table>

Source: Future of Jobs Survey, World Economic Forum, 2019
10 things that require ZERO talent:

1. Being on time.
2. Work Ethic.
3. Effort.
5. Energy.
6. Attitude.
7. Passion.
Reality #5: Intelligent automation solutions remains siloed. Integrating automation is critical

How well are you able to develop integrated solutions leveraging multiple Intelligent Automation technologies to solve business problems?

- 38%: We are primarily focusing on one Intelligent Automation technology right now.
- 35%: We are using multiple Intelligent Automation technologies, but most of the implementations are piecemeal.
- 16%: There is emerging alignment between different Intelligent Automation solution elements.
- 11%: We are leveraging integrated solutions that combine the power of automation, analytics, and AI.

While 60%+ enterprises are leveraging multiple IA technologies, only 11% are leveraging an integrated solution approach.

Source: HFS Research in conjunction with KPMG International, State of Intelligent Automation, 2019
Sample = 590 Business Leaders including 100 C-level executives
Reality #5: Scale, uncertainty, and lack of change management holds us back

What are the top three inhibitors that are holding you back from achieving strategic AND operational goals?

1. Need more scale with IA to achieve objectives
2. Uncertainty about the financial investment needed in IA
3. Lack of organizational clarity and accountability for driving IA
4. Change management concerns over the effect on employees
5. Concerns about changes in governance and risk management
6. Lack of quantifiable benefits/inability to build strong business case
7. Understanding the need and resources to train cognitive systems
8. Non-standard or incomplete end-to-end processes
9. Lack of in-house talent to support IA
10. Deficiency in overall data quality
11. Lack of current of as-a-service options for RPA and Cognitive/AI
12. Lack of senior management mandate and vision to deploy IA
13. Lack of end-to-end processes

Source: HFS Research in conjunction with KPMG International, State of Intelligent Automation, 2019
Sample = 590 Business Leaders including 100 C-level executives
The best performers are scaling automation faster

When will your adoption of Intelligent Automation (IA) be scaled-up and industrialized?

Best Performing Financial Quartile

- 22% already there
- 42% within next year
- 14% within next 2 years
- 16% within next 5 years
- 6% more than 5 years
- 1% unsure

Poorest Performing Financial Quartile

- 37% we are already there
- 22% within next year
- 6% within next 2 years
- 21% within next 5 years
- 6% more than 5 years
- 3% unsure

64% of the best performing companies will be scaled by 2020

59% of poorly performing companies need 2 – 5 years to achieve IA scale

Source: HFS Research in conjunction with KPMG International, State of Intelligent Automation, 2019
Sample = 590 Business Leaders including 100 C-level executives
How enterprises can achieve their State of Hyper-connectness

• Cost reduction is not a strategy.
• Stop kicking the intelligent technology can down the road.
• Weed out the people unprepared to change.
• Build co-innovation relationships and shed legacy relationships.
• Ensure Business teams lead process-led innovations in AI and Automation supported by IT.
• Stop thinking about the *Future of Work*. It’s already here... act now!
Then there’s always Plan B...

Instead of risking anything new, let’s play it safe by continuing our slow decline into obsolescence.