THE STATE OF DARK DATA

A Global Survey of 1,300 Business and IT Leaders Reveals the Gap Between AI’s Potential and Today’s Data Reality
What is dark data?

Dark data is all the unknown and untapped data across an organization, generated by systems, devices and interactions.
**METHODOLOGY**

The *State of Dark Data* report is based on a global survey of managers and executives, drawn equally from business and IT roles, who engage with how their organizations collect, manage and use data.

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Dark Data

On average, business and IT decision makers estimate that 55% of their data is dark (unknown or untapped). Yet 81% rate data as “very” or “extremely” valuable to their organization’s overall success.

Artificial Intelligence

Only 12% now use AI to help guide business strategy — but 61% say they’ll do so in five years. 78% say a major impediment to launching successful AI initiatives is understanding their data.

The Future of Jobs

Data skills will become essential to every job, especially leadership roles. While 92% of respondents are “willing” to learn new data skills, only 57% are “extremely” or “very” enthusiastic to work more with data.
"If you want to be ahead or not eliminated in a fierce market, you need the support of intelligence, and the vast majority of this information comes out of this chaotic data."

— Survey Respondent | CIO, Financial Services, China
MISSING IN ACTION

One-third of respondents report that more than 75% of their organization’s data is dark, with only 11% — one in nine — reporting that less than a quarter of their organization’s data is dark.

71% expect data to become more valuable over the next 10 years, and nearly all expect data to become more influential to their decision making.

76% of respondents agree that the organization that has the most data is going to win.

77% of global respondents agreed that finding and capturing dark data should be a top priority.

Obstacles to Recovering Dark Data

<table>
<thead>
<tr>
<th>Obstacle</th>
<th>GLOBAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of dark data</td>
<td>39%</td>
</tr>
<tr>
<td>Lack of necessary skill sets</td>
<td>34%</td>
</tr>
<tr>
<td>Lack of resources</td>
<td>32%</td>
</tr>
<tr>
<td>Difficulty in coordinating across departments</td>
<td>28%</td>
</tr>
<tr>
<td>No one is dedicated to finding data the org possesses</td>
<td>26%</td>
</tr>
<tr>
<td>Difficulty in coordinating with data-generating third parties</td>
<td>23%</td>
</tr>
<tr>
<td>Lack of control over data-generating devices and apps</td>
<td>22%</td>
</tr>
<tr>
<td>Lack of interest from organization leaders</td>
<td>21%</td>
</tr>
<tr>
<td>Lack of creativity</td>
<td>19%</td>
</tr>
</tbody>
</table>
A GLOBAL TREND

The problem of unused and untapped data is prevalent across the globe. By region, China is the only country where respondents say less than half of their data is dark.

<table>
<thead>
<tr>
<th>% of respondents reporting that ...</th>
<th>GLOBAL</th>
<th>UNITED STATES</th>
<th>UNITED KINGDOM</th>
<th>FRANCE</th>
<th>GERMANY</th>
<th>CHINA</th>
<th>JAPAN</th>
<th>AUSTRALIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>75% or more of their organization's data is dark</td>
<td>33%</td>
<td>36%</td>
<td>33%</td>
<td>42%</td>
<td>26%</td>
<td>15%</td>
<td>35%</td>
<td>36%</td>
</tr>
<tr>
<td>Half or more of their organization's data is dark</td>
<td>60%</td>
<td>63%</td>
<td>63%</td>
<td>65%</td>
<td>58%</td>
<td>44%</td>
<td>65%</td>
<td>62%</td>
</tr>
<tr>
<td>Less than half of their organization's data is dark</td>
<td>40%</td>
<td>37%</td>
<td>37%</td>
<td>35%</td>
<td>42%</td>
<td>56%</td>
<td>35%</td>
<td>38%</td>
</tr>
<tr>
<td>Less than 25% of their organization's data is dark</td>
<td>11%</td>
<td>11%</td>
<td>9%</td>
<td>11%</td>
<td>14%</td>
<td>9%</td>
<td>15%</td>
<td>10%</td>
</tr>
</tbody>
</table>
"DATA DRIVEN" CAN’T BE AN EMPTY SLOGAN

Of those surveyed:
Globally, 90% agree that every organization will need to extract value from data to be successful in the future.

90% agree that the smartest business leaders recognize data as a financial asset.

And yet ...
Globally, only 56% rate their organization as extremely or very good at asking the right questions of data, even though 75% rate that skill as extremely or very important.

More than half of their organization’s data is not captured, and much of it is not even understood to exist.
ARTIFICIAL INTELLIGENCE

“There’s almost more data than currently can be properly handled. The key is to use the human component plus data plus AI to truly get a foot up on your competition.”

— Survey Respondent | CIO, Retail, United States
Globally, 61%–67% saw value in AI for their organizations. 60%–70% of respondents believe that they will be using AI across IT, operations and talent management in the future.

And yet ...

Only 10%–15% say their organizations are deploying AI for use cases today.

While only 12% say that AI is currently guiding their business strategy, 61% expect it to do so in the next five years.

61% of respondents say they expect AI to guide business strategy in the next five years.

Organizations admit they’re not ready for AI. Their top four concerns:

1. Lack of trained AI experts 81%
2. Lack of understanding of AI 80%
3. Not knowing what can be automated 78%
4. Difficulty successfully wrangling the data 78%
Despite strong opinions about the potential of AI, most of our respondents admitted they’re not experts, though many claim to understand AI at least “very well.”

Across the board, these business and IT leaders believe they understand AI better than most in their organization, and in their respective industries.

<table>
<thead>
<tr>
<th>How well do each of the following understand AI?</th>
<th>GLOBAL</th>
<th>UNITED STATES</th>
<th>UNITED KINGDOM</th>
<th>FRANCE</th>
<th>GERMANY</th>
<th>CHINA</th>
<th>JAPAN</th>
<th>AUSTRALIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yourself</td>
<td>48%</td>
<td>42%</td>
<td>61%</td>
<td>45%</td>
<td>43%</td>
<td>77%</td>
<td>38%</td>
<td>39%</td>
</tr>
<tr>
<td>Your organization as a whole</td>
<td>41%</td>
<td>40%</td>
<td>56%</td>
<td>35%</td>
<td>36%</td>
<td>61%</td>
<td>23%</td>
<td>32%</td>
</tr>
<tr>
<td>Your industry in general</td>
<td>39%</td>
<td>40%</td>
<td>53%</td>
<td>31%</td>
<td>31%</td>
<td>53%</td>
<td>25%</td>
<td>33%</td>
</tr>
<tr>
<td>Your colleagues</td>
<td>39%</td>
<td>36%</td>
<td>53%</td>
<td>33%</td>
<td>31%</td>
<td>58%</td>
<td>31%</td>
<td>35%</td>
</tr>
</tbody>
</table>
ARTIFICIAL INTELLIGENCE

NOT BELIEVING THE HYPE

Globally, those surveyed believe that AI will generally augment, rather than replace, humans.

More than half (65%) say that the threat of AI has been exaggerated, but 60% agree that the promise has been overstated, too.

82% of respondents say that humans are and will always be at the heart of AI.

72% of respondents agree that AI is just a tool to solve business problems.

<table>
<thead>
<tr>
<th>Showing % of total agree</th>
<th>GLOBAL</th>
<th>UNITED STATES</th>
<th>UNITED KINGDOM</th>
<th>FRANCE</th>
<th>GERMANY</th>
<th>CHINA</th>
<th>JAPAN</th>
<th>AUSTRALIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>The threat of AI has been overstated</td>
<td>65%</td>
<td>62%</td>
<td>79%</td>
<td>59%</td>
<td>51%</td>
<td>73%</td>
<td>78%</td>
<td>63%</td>
</tr>
<tr>
<td>The promise of AI has been overstated</td>
<td>60%</td>
<td>59%</td>
<td>79%</td>
<td>57%</td>
<td>57%</td>
<td>37%</td>
<td>77%</td>
<td>59%</td>
</tr>
</tbody>
</table>
"Simply having data isn't enough. Workers need to have the business analytics skills to use the data in such a way that it leads to profitable action. Business analytics training needs to be mandatory for all personnel in decision-making positions."

— Survey Respondent | Owner, Retail, United States
DATA SKILLS MATTER ...

Of those surveyed:

Globally, 98% believe that data skills are important to the jobs of tomorrow.

85% believe that data skills will continue to become more important for workers in all roles, not just IT.

83% agree that workers who continue to rely on others to explain what data means will fall behind in their careers.

81% agree that becoming a senior leader in their organization requires being data literate, and 84% think that being a decision maker in their organization will require strong data skills.

<table>
<thead>
<tr>
<th>Do you agree or disagree with the following?</th>
<th>GLOBAL</th>
<th>UNITED STATES</th>
<th>UNITED KINGDOM</th>
<th>FRANCE</th>
<th>GERMANY</th>
<th>CHINA</th>
<th>JAPAN</th>
<th>AUSTRALIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I'll need to learn more data skills if I'm going to get promoted in my organization</td>
<td>76%</td>
<td>74%</td>
<td>83%</td>
<td>65%</td>
<td>67%</td>
<td>91%</td>
<td>75%</td>
<td>79%</td>
</tr>
<tr>
<td>I'll need to learn more data skills if I’m going to have a job in my organization in 10 years</td>
<td>78%</td>
<td>76%</td>
<td>81%</td>
<td>69%</td>
<td>71%</td>
<td>93%</td>
<td>79%</td>
<td>83%</td>
</tr>
<tr>
<td>Data jobs are future-proof</td>
<td>72%</td>
<td>60%</td>
<td>78%</td>
<td>75%</td>
<td>76%</td>
<td>90%</td>
<td>81%</td>
<td>71%</td>
</tr>
</tbody>
</table>
Globally, just under one-third of respondents rate themselves as highly skilled in translating data into business solutions or action, or at data management skills.

More than half of U.S. and Chinese respondents said employees with both technical data skills and business acumen will be most in demand over the next decade, but they predict these same employees will also be the most difficult to hire.

69% are content to keep doing what they’re doing, even if it means they don’t get promoted again.

73% say that data skills are harder for them than business skills.
CONCLUSIONS & RECOMMENDATIONS

"I love data. It has all the secrets, if you know where to look and how to study it. It’s just a matter of getting the right people and the right tools to leverage it."

— Survey Respondent | Owner, Healthcare, United States
DATA ANXIETY IS GLOBAL

United States
More likely than its counterparts to rate data skills as extremely or very important to jobs of the future.

United Kingdom
Often comes second (to China) in its enthusiasm for data and AI, and its belief in the importance of data skills.

France
Less likely than the global average to consider data extremely or very valuable to overall success; shows less enthusiasm for workplace changes.

Germany
Strongly agrees on the value of data to an organization’s success, despite estimating that more than half of their data has not been captured or put to use.

China
Takes the most aggressive stance toward the increasing value of data, the potential of AI and the growing importance of data skills.

Japan
Below the global average on how valuable data is to an organization’s success, but similar to the global average on how much of their data they estimate is not captured.

Australia
Fewer understand AI extremely or very well. Australian respondents lag slightly behind the global average in saying that AI will be important to their organizations.
1 Embrace the transformative power of AI and machine learning.

Stay on top of this potentially transformative group of technologies, and find the use cases that make sense for your industry and organization.

2 Build an infrastructure and culture of data.

Make “data-driven” a reality, and make sure your approach to data helps organize and surface it in ways that will let you tap all of its potential faster. Dark data provides an enormous, untapped resource of information that AI can analyze.

3 Recruit for the skill sets you’ll need.

Look for technology skills around today’s data, but also the curiosity, self-motivation and collaborative skills needed in a data culture and a transformative enterprise.

4 Provide opportunities for training.

There’s not enough talent out there. Encourage your existing workers to grow, to transform as your business transforms and as new technologies arrive.
DOWNLOAD
the full State of Dark Data report at
splunk.com/darkdatareport