

For: Infrastructure
& Operations
Professionals

The State Of Business Technology Resiliency, Q2 2014

by Stephanie Balaouras, May 12, 2014

KEY TAKEAWAYS

Processes Begin To Improve While Cloud Takes Off

Process maturity is finally improving in business technology resiliency. Without significant funds to spend, one of the best ways to improve resiliency is through process improvement. Meanwhile, cloud services are gaining popularity, especially DRaaS.

Advanced Technology Adoption Trends Up, But Recovery Metrics Stagnate

Firms are using advanced technologies to protect their growing critical systems and are turning to technologies like replication to address increasing business expectations and demands. However, this isn't solving the challenge of increasing recovery times and recovery points.

The Causes Of Downtime Remain The Same While Confidence Erodes

Operational events, not natural disasters, cause most downtime in businesses; loss of power is still the leading downtime cause. Although confidence has decreased, firms are still looking to improve their DR programs, not only because it's a critical priority but also because of regulatory compliance and stakeholder interests.



The State Of Business Technology Resiliency, Q2 2014

by [Stephanie Balaouras](#)
with Rachel A. Dines and Jennie Duong

WHY READ THIS REPORT

Infrastructure and operations (I&O) leaders have a growing number of services and tools to better prepare themselves for any type of event, whether it's natural or manmade; however, that doesn't mean that enterprises are able to recover with the minimal data loss and downtime that the business demands. The benchmarks found in this report are the result of several years of market studies on business continuity and disaster recovery developed in partnership with Forrester and the Disaster Recovery Journal. Specific benchmarks include process maturity, adoption of cloud and colocation disaster recovery sites, adoption of advanced recovery time and recovery point capabilities, top reasons for organizational downtime, and the driving forces behind improved DR capabilities. After reading this report, I&O pros will have a much better understanding of how other organizations are dealing with resiliency and, ultimately, which options to consider before planning future initiatives and investments.

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Forrester conducted a joint research study with Disaster Recovery Journal to gain insight into current trends in DR planning, spending, and preparedness efforts as well as to understand the most common causes of downtime.

Related Research Documents

[Seven Business Technology Resiliency Lessons Learned From Superstorm Sandy](#)
April 12, 2013

[Assess The Maturity Of Your Business Technology Resiliency Program](#)
October 15, 2012

[State Of Enterprise Disaster Recovery Preparedness, Q2 2011](#)
May 18, 2011



SIX TRENDS DESCRIBE THE IDLING STATE OF RESILIENCY TODAY

The demand for always-on, always available services has never been stronger: The business expects to be able to use services at any time, in any location, on any device. Yet at the same time, it is unwilling to increase budgets for business continuity and disaster recovery (BC/DR).¹ In our most recent Forrester Research/Disaster Recovery Journal (DRJ) joint survey on DR practices, we found six overarching business technology resiliency trends that are the result of flat budgets and that explain why we see improvements in some areas, but stagnation in others:²

- 1. Process maturity is finally improving.** Without significant funds to spend, one of the best ways to improve resiliency is to improve the process. For example, there is an increase in the frequency of DR plan testing. In our research, we found that the majority of firms are now testing their plans annually.
- 2. Cloud-based provisioning of DR sites has increased by 9% since 2010.** In recent years, we have seen a rise in cloud and colocation recovery sites; these services have not only become less expensive but a more effective choice for enterprises with limited infrastructure budgets. As the market continues to grow, I&O leaders should look for more robust and customizable solutions.
- 3. Firms are using advanced technologies to protect their growing critical systems.** More than one-third of firms consider their systems as “mission critical,” and, as a result, they are turning to technologies like replication to address increasing business expectations and demands. However, backups and tape still play a big role in the protection of all types of systems.
- 4. Recovery capabilities are stagnating.** Although processes have improved, recovery times and recovery points are stagnating — and, in some cases, getting longer — due to increased complexity, more critical systems, and flat budgets. There is still a lot of room for enterprises to continue their focus on decreasing recovery time and data loss after a disruption.
- 5. Operational events — not disasters — cause the majority of business downtime.** Some things stay the same, such as the top causes of downtime. According to our latest research, operational events — not natural disasters — cause the most downtime in businesses; loss of power is still the leading downtime cause.
- 6. Although confidence has decreased, firms are still looking to improve their DR programs.** I&O professionals see the need to continue improvement in their DR programs not only because it’s a critical priority but also because of regulatory compliance and stakeholder interests.

Trend No. 1: Business Technology Resiliency Process Maturity Improves Slightly

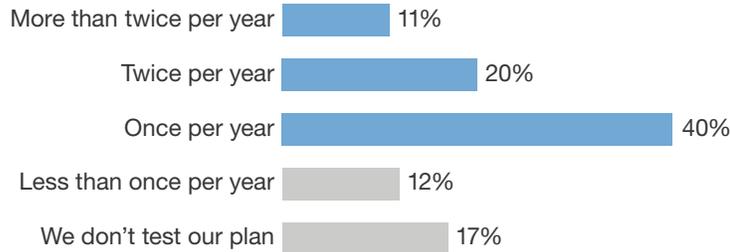
Most experts will agree that running tests and exercises are the best way to ensure preparedness. In the past, surveys have returned disappointing results regarding organizations' testing regimens. However, this iteration reveals good news: 40% of companies are now running a full test once per year, with another 31% running a full test twice per year or more frequently (see Figure 1-1).³ Additionally, plans will often fail when they are not up to date. With the rapid rate of business and technology change today, it's critical that companies update their plans continuously, something that 35% of respondents now do, but which still leaves much room for improvement (see Figure 1-2).⁴

Figure 1 DR Testing Is Trending Upward, But Updates Still Need Improvement

1-1 Annual disaster recovery testing is trending among organizations

71% are updating their disaster recovery plan at least once per year.

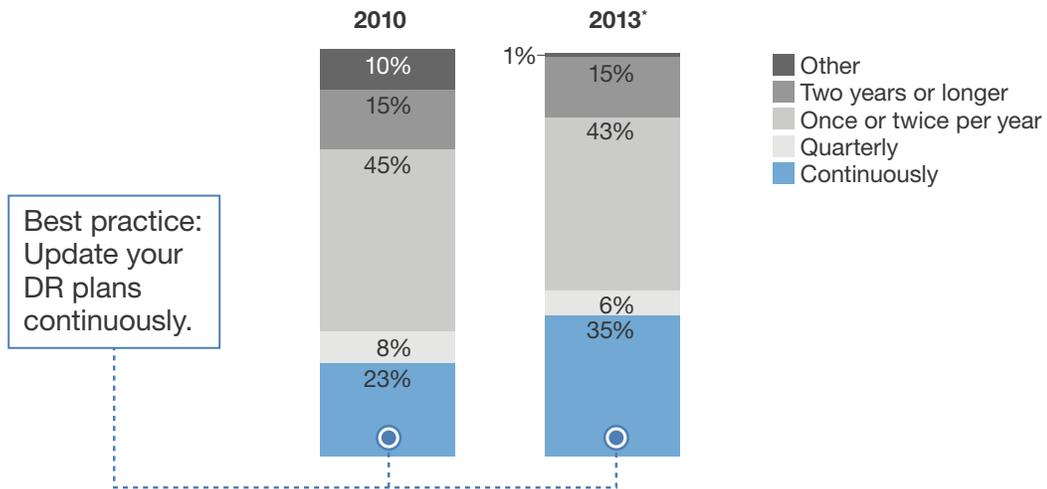
“How many times per year do you conduct a full test (a live or simulated failover of all infrastructure at a given site) of your disaster recovery plan?”*



Base: 93 global disaster recovery decision-makers and influencers (does not include “don't know” responses)

1-2 Disaster recovery plan updates need to change

“How often are disaster recovery plans updated?”



Base: 200 global disaster recovery decision-makers and influencers
 *Base: 94 global disaster recovery decision-makers and influencers
 (does not include “don't know” responses; percentages do not total 100 because of rounding)

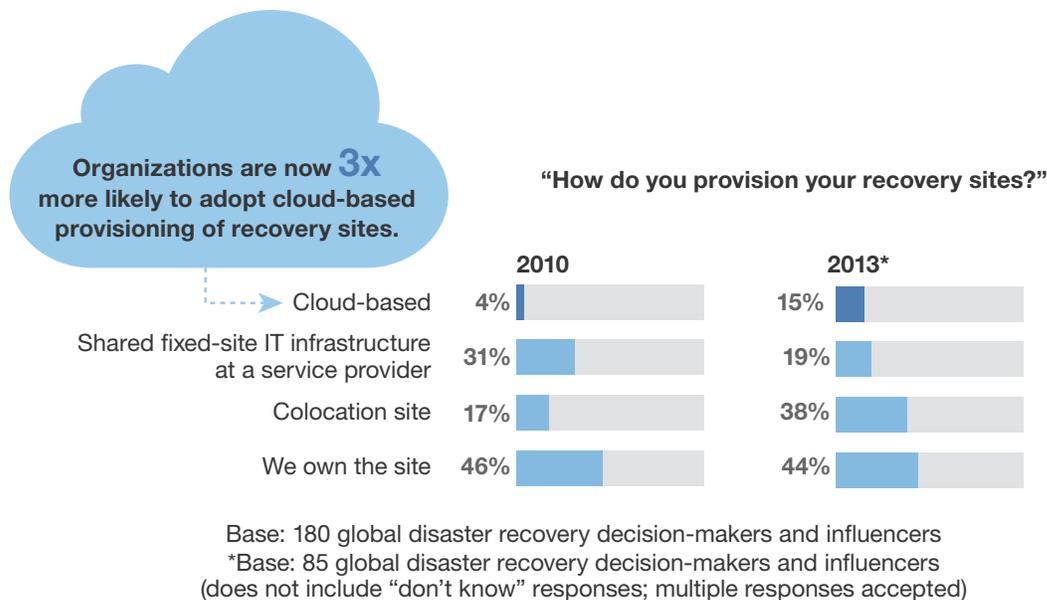
Source: Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey

*Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey

Trend No. 2: Companies Look To Cloud And Colocation For Failover Sites

DR in the cloud has been a hot topic that has garnered a significant amount of attention during the past few years.⁵ However, until 2013, adoption was low, less than 10%.⁶ However, according to our latest Forrester/DRJ survey, 15% of companies are now using the cloud as a recovery site. Use of colocation for recovery sites is significantly higher as well, at 38% (see Figure 2).⁷ However, the most common method of sourcing recovery sites is still in-house, but this is not an “all or nothing” model — 20% responded in the 2013 Forrester/DRJ survey that they use an equal mix of in-house and outsourced models.

Figure 2 Cloud And Colocation Adoption For Recovery Sites Increases



Source: Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey;

*Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey

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Source: Forrester Research, Inc.

Trend No. 3: Firms Turn To Advanced Tech To Protect Growing Critical Systems

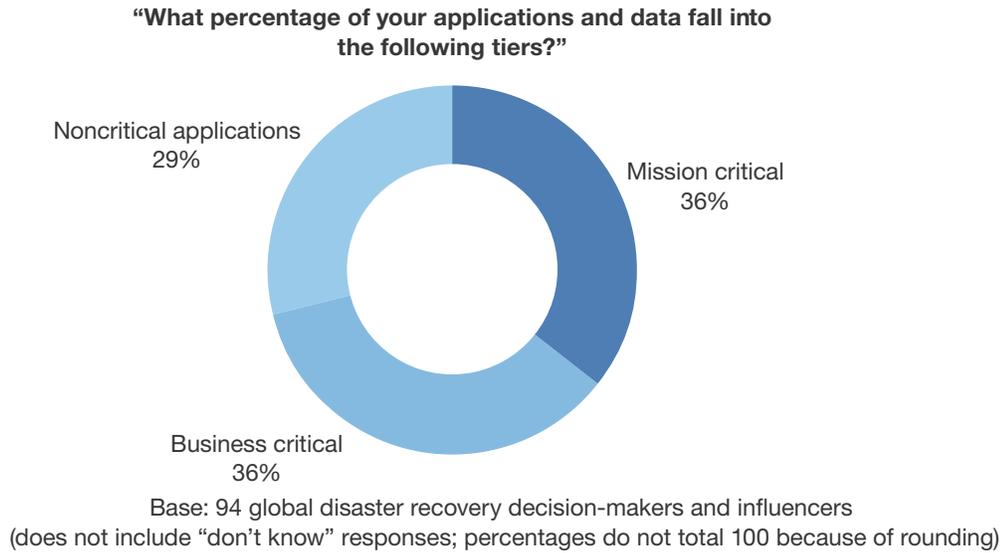
According to the 2010 Forrester/Disaster Recovery Journal survey, the top risk that BC/DR managers face is the increased reliance on technology.⁸ This is further illustrated by the fact that more than one-third of our systems are now considered mission-critical (see Figure 3). Compared to past survey results, the number of noncritical systems continues to shrink. There are several factors that drive this shift:

- **Changing business requirements.** The number of critical systems increases as the business becomes more dependent on technology to perform day-to-day tasks. For example, email for many companies is a mission-critical application, although this was likely not the case five years ago.
- **Changing customer expectations.** Customers, both inside and outside of your organization, expect services to be available at all times. They also expect to be able to access these services from a variety of different devices. This trend, which Forrester calls “the era of now,” means that the availability and resiliency of infrastructure is starting to impact customer retention and satisfaction for both external and internal customers.⁹
- **Increased complexity and dependencies.** Both the business and technology are increasing in complexity. This leads to more interdependencies of systems, which in turn leads to a greater number of critical systems. If application A relies on applications B, C, and D to be functional, all of those applications are now critical.
- **Challenges communicating with the business.** Let’s face it, no one wants to tell someone their application isn’t important, yet this is what I&O pros must do to determine the relative criticality of systems during a business impact analysis effort. At many companies, too many systems are deemed “critical” because the application owner insists on it, not because of true business importance.

To address increasing business expectations and shrinking recovery time objectives (RTOs) and recovery point objectives (RPOs), more firms are turning to technologies such as replication for mission-critical systems, which more than half of companies now use, compared to 35% in 2010.¹⁰ Legacy technologies like tape still play an important role in continuity plans and remain the most popular method for protecting noncritical systems.

Figure 3 More And More Systems Are Considered Critical

3-1 | Mission-critical and business-critical tiers are increasing



3-2 | Data between primary recovery sites



Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey

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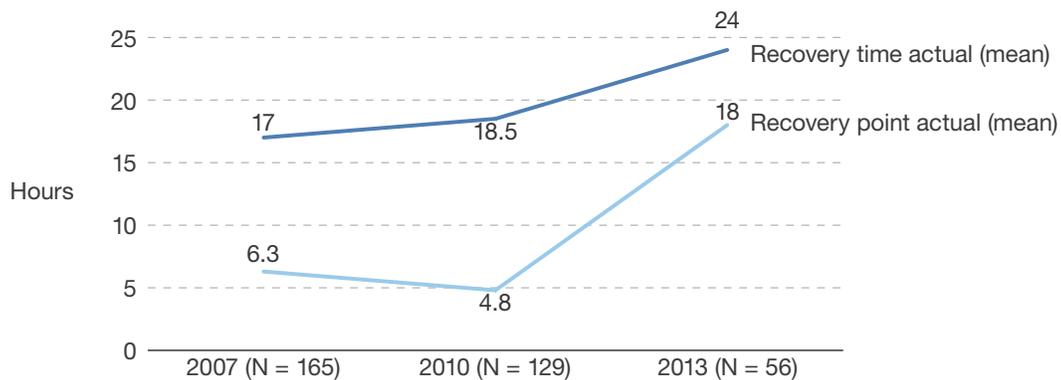
Source: Forrester Research, Inc.

Trend No. 4: Recovery Capabilities Are Stagnating

One of the biggest challenges in DR today is the pressure between business expectations for recovery objectives and technology management’s ability to deliver on them. In fact, 35% of companies in the 2013 Forrester/DRJ survey responded that mismatched business expectations with technology capabilities was one of the biggest challenges they faced when recovering from their most recent disaster or major business disruption. While the business is demanding shorter and shorter recovery times and points, recovery time actuals are lengthening — in 2013, average actual recovery times were 24 hours, up from 18.5 hours in 2010. This trend of increasing recovery time actuals is not new; for example, in 2007, a notable 30% of companies reported that they were able to recover from their most recent disruption in under an hour.¹¹ In 2010, this percentage shrunk to 13%, and today, only 2% of companies said they were able to recover in less than one hour from their most recent disruption (see Figure 4).¹²

Recovery points increased as well. In 2013, the mean recovery point actual was 18 hours, up from 4.8 hours in 2010.¹³ Unlike the trend of increasing recovery time actuals, the average trending in increasing data loss was not true from 2007 to 2010, when data losses improved slightly.¹⁴ However, one positive sign is that the percentage of companies that are able to recover with relatively little data loss — between one and five hours — continues to increase, from 19% in 2007 to 21% in 2010 and to 27% in 2013, while those companies that can recover with less than one hour of data loss remained effectively flat.¹⁵

Figure 4 Recovery Time And Recovery Point Actuals Lengthen In 2013



Base: global disaster recovery decision-makers and influencers who have declared a disaster or had a major business disruption (does not include “don’t know” responses)

Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey, Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey, and Forrester/Disaster Recovery Journal October 2007 Global Disaster Recovery Preparedness Online Survey

Trend No. 5: Firms More Likely To Experience Downtime; Power Remains Top Culprit

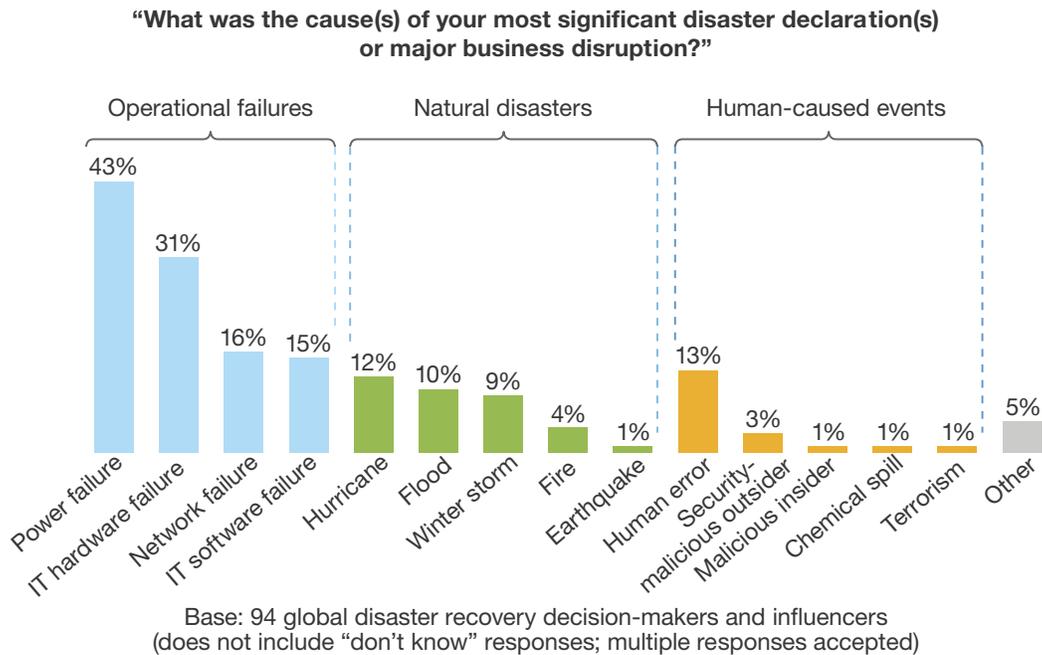
For those who think, “It won’t happen to me” — think again. According to the latest Forrester/DRJ survey, one in three companies has declared a disaster during the past five years. In 2010, the statistic was one in five.¹⁶ And overall, only 31% of firms say they have never declared a disaster, down from 36% in 2010.

While it may be tempting to blame some of the large-scale disasters that have occurred in the past few years on natural disasters such as hurricane Sandy or the Japanese tsunami, it’s still the mundane events such as power failures, IT failures, and human error that top the list of causes (see Figure 5).

Most organizations still struggle to understand their cost of downtime — 57% said their organizations had not calculated this, and another 30% said it had been calculated, but they didn’t know what it was.¹⁷ Those who did know their hourly cost of downtime gave answers in the range of \$10,000 to \$3.5 million. One area organizations did understand, however, was the impact of downtime on their organization. The biggest impact to organizations was loss of productivity, followed by lost business opportunities and drop in employee morale.

Figure 5 Top Causes Of Business Downtime And Impact Of Disruption

5-1 | Top causes of downtime are mundane events, not disasters



5-2 | Disaster recovery plan updates need to change



Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey

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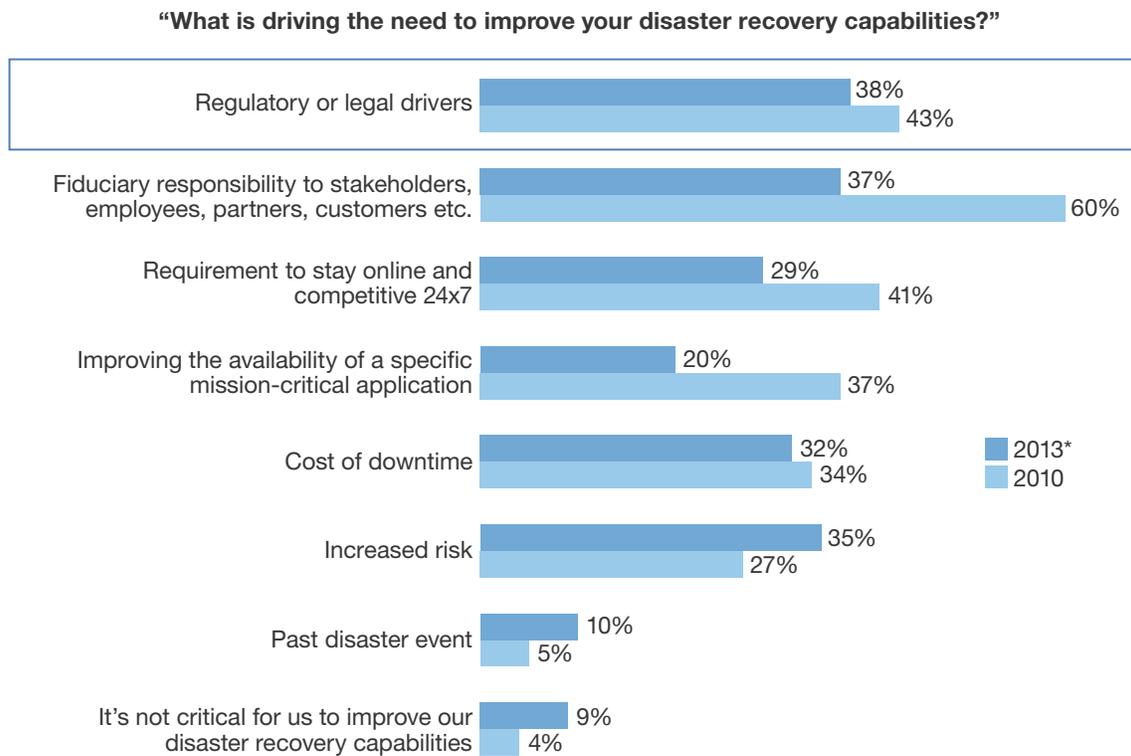
Source: Forrester Research, Inc.

Trend No. 6: Confidence Erodes; Regulatory Compliance Drives Future Improvements

Given longer recovery times, more critical systems, and increased complexity, it's no surprise that confidence in our DR preparedness has fallen during the past few years. Today, our confidence in our ability to meet recovery objectives is lower than it was in 2010, with 16% of respondents in the 2013 Forrester/DRJ survey saying they felt very prepared, down from 23% in 2010, but this most likely represents a more balanced and realistic viewpoint.

Nevertheless, overall, firms agree that there is room for improvement, and 40% say improving DR capabilities is a critical priority.¹⁸ The drivers behind this motivation, however, have changed significantly since 2010. Regulatory and legal drivers, which ranked fifth overall in drivers in 2010, are now top of the list (see Figure 6).¹⁹ Other top drivers include many of the usual suspects, including fiduciary responsibility to stakeholders and increased overall risk.

Figure 6 Regulatory And Legal Pressures Are Driving Improvement In DR Capabilities



Base: 200 global disaster recovery decision-makers and influencers
 *Base: 94 global disaster recovery decision-makers and influencers
 (does not include “don’t know” responses; multiple responses accepted)

Source: *Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey
 Source: Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey

RECOMMENDATIONS

EVOLVE YOUR RESILIENCY CAPABILITIES OR FACE THE CONSEQUENCES

Our research shows that there is a higher maturity in business technology resiliency today — especially around testing and updating plans — and increased adoption of advanced technologies. However, this is not enough to stop the rising tide of complexity: Recoveries are longer with more data loss despite these advancements. It's time to step up the game. I&O leaders need to focus on the following to take their business technology resiliency to the next level:

- **Get proactive: Monitor for and manage through preventable outages.** The top causes of downtime haven't changed in years; they remain the familiar power outages, IT hardware failure, network failure, and other mundane operational failures. If we know what is likely to cause failure, why don't we work on preparing more for these specific events? While no one can predict the future, new analytic capabilities are coming to market that can help recognize patterns and forecast failures and provide suggested remediation to prevent downtime.
- **Automate, automate, automate.** The complexity we face today in technology is beyond what humans can manage. To improve RTOs and RPOs, the best approach for most organizations is to automate as much as possible. This also helps mitigate the risk of key individuals not being available in your time of need.
- **Understand your costs of downtime.** Most I&O professionals haven't taken the time to understand their organization's cost of downtime, even though this can be one of the most powerful leverage points when asking for additional budget.

SUPPLEMENTAL MATERIAL

Methodology

Forrester conducted a joint survey called the Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey. In the fall of 2013, Forrester Research and the Disaster Recovery Journal (DRJ) conducted an online survey of 96 DRJ members. In this survey:

- Thirty-seven percent of respondents were from companies that had 0 to 999 employees; 26% had 1,000 to 4,999 employees; 17% had 5,000 to 19,999 employees; and 20% had 20,000 or more employees.
- All respondents were decision-makers or influencers in regard to planning and purchasing technology and services related to disaster recovery.
- Respondents were from a variety of industries.

This survey used a self-selected group of respondents (DRJ members) and is therefore not random. These respondents are more sophisticated than the average. They read and participate in business continuity (BC) and disaster recovery publications, online discussions, etc. They have above-average knowledge of best practices and technology in BC/DR. While nonrandom, the survey is still a valuable tool in understanding where advanced users are today and where the industry is headed.

Forrester conducted a joint survey called the Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey. In the fall of 2010, Forrester Research and the Disaster Recovery Journal (DRJ) conducted an online survey of 200 DRJ members. In this survey:

- Forty-three percent of respondents were from companies that had 0 to 999 employees; 25% had 1,000 to 4,999 employees; 19% had 5,000 to 19,999 employees; and 14% had 20,000 or more employees.
- Ninety-one percent of respondents were from North America; 2% were from South America; 6% were from Europe, the Middle East, and Africa; and 2% were from Asia.
- All respondents were decision-makers or influencers in regard to planning and purchasing technology and services related to disaster recovery.
- Respondents were from a variety of industries.

Forrester conducted a joint survey called the Forrester/Disaster Recovery Journal October 2007 Global Disaster Recovery Preparedness Online Survey. In October 2007, Forrester Research and the Disaster Recovery Journal (DRJ) conducted an online survey of 250 DRJ members. In this survey:

- Thirty-three percent of respondents were from companies that had 0 to 999 employees; 25% had 1,000 to 4,999 employees; 20% had 5,000 to 19,999 employees; and 22% had 20,000 or more employees.
- Eighty-three percent of respondents were from North America; 3% were from South America; 8% were from Europe, the Middle East, and Africa; and 6% were from Asia.
- All respondents were decision-makers or influencers in regard to planning and purchasing technology and services related to disaster recovery.
- Respondents were from a variety of industries.

Both the 2010 and 2007 surveys used a self-selected group of respondents (DRJ members) and are therefore not random. These respondents are more sophisticated than the average. They read and participate in business continuity (BC) and disaster recovery publications, online discussions, etc. They have above-average knowledge of best practices and technology in BC/DR. While nonrandom, the surveys are still a valuable tool in understanding where advanced users are today and where the industry is headed.

ENDNOTES

- ¹ While I&O leaders consistently list resiliency in their top five priorities for IT infrastructure, CIOs fail to significantly increase budgets. It almost seems to be an impossible conundrum, as there are more critical systems than ever before, extremely aggressive business requirements, and complexity invading from all sides, yet there's no more money to spend. This is why cloud-based resiliency services — especially DRaaS — holds such great promise for weary resiliency managers. See the January 17, 2014, "[The Forrester Wave™: Disaster-Recovery-As-A-Service Providers, Q1 2014](#)" report.
- ² Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey.
- ³ Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey.
- ⁴ Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey.
- ⁵ "The Forrester Wave™: Disaster-Recovery-As-A-Service Providers, Q1 2014" identified 12 significant service providers in the DRaaS landscape. This evaluation helps provide I&O professionals with insight as to how to select the right partner for your firm's resiliency and recovery needs. See the January 17, 2014, "[The Forrester Wave™: Disaster-Recovery-As-A-Service Providers, Q1 2014](#)" report.
- ⁶ In recent years, there has been a steady increase for cloud service providers in disaster recovery programs. For more information, see the May 18, 2011, "[State Of Enterprise Disaster Recovery Preparedness, Q2 2011](#)" report.
- ⁷ Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey.
- ⁸ In 2011, Forrester recommended that I&O professionals maximize DR efforts by rigorously categorizing their applications, prioritizing only those that are truly critical. For more information, see the May 18, 2011, "[State Of Enterprise Disaster Recovery Preparedness, Q2 2011](#)" report.
- ⁹ We live in the era of now. If a website takes too long to load, or doesn't load at all, we will move on in a matter of milliseconds. If an ATM can't dispense cash — unacceptable. Our favorite online store is unavailable — unheard of. Not only have our expectations risen to astronomical heights, but our increasing dependence on technology means we can't cope without it. If our electronic medical records are unavailable, lives are at stake. If the utility's critical IT systems go down, millions are left without power.

We also live in the age of the customer. The most forward-looking companies are orienting themselves around delivering the best possible customer experience. For many, this means redesigning web interfaces, integrating more technology into storefronts, developing mobile applications, and streamlining processes. But what about improving uptime, availability, and resiliency? Isn't this the baseline that everything else depends upon to have any type of customer experience? Source: Rachel Dines, "The Era Of Now And The Age Of The Customer — Why Resiliency Is More Critical Than Ever," Rachel Dines' Blog, April 4, 2013 (http://blogs.forrester.com/rachel_dines/13-04-04-the_era_of_now_and_the_age_of_the_customer_why_resiliency_is_more_critical_than_ever#node-9090).

¹⁰ Source: Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey.

¹¹ Source: Forrester/Disaster Recovery Journal October 2007 Global Disaster Recovery Preparedness Online Survey.

¹² Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey and Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey.

¹³ Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey and Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey.

¹⁴ According to our 2007 research, Forrester stated that in prior years, the recovery time capability of two days was no longer sufficient in 2008. In 2007, there was a notable trend of DR service providers working on new services that would leverage software-based replication to a virtual infrastructure in order to decrease overall recovery time. For more information, see the January 7, 2009, "[State Of Enterprise Disaster Recovery Preparedness: Q3 2008](#)" report.

¹⁵ Source: Forrester/Disaster Recovery Journal October 2007 Global Disaster Recovery Preparedness Online Survey.

¹⁶ Source: Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey.

¹⁷ Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey.

¹⁸ Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey.

¹⁹ Source: Forrester/Disaster Recovery Journal November 2013 Global Disaster Recovery Preparedness Online Survey and Forrester/Disaster Recovery Journal November 2010 Global Disaster Recovery Preparedness Online Survey.

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