



Disaster Recovery As A Service

A Whitepaper for Discussion with Ontario Municipalities

DRaaS and the Concept of Shared DRaaS Service

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SYNOPSIS

This paper is intended to address the need for Disaster Recovery in an effective way by Ontario municipalities. It builds on the results of a survey of the municipalities undertaken by Duologik which clearly indicate a strong desire to seek **affordable solution** either on the cloud or on premise.

DR IN THE CONTEXT OF THE EMERGENCY MANAGEMENT PROCESS

In compliance with the **Emergency Management and Civil Protection Act (EMCPA) of Ontario**, R.S.O. 1990, Duologik has a strategic vision and a solution to meet the need for an affordable, shared, private, secured and managed Cloud disaster recovery service for smaller municipalities and other government agencies.

EMCPA requires municipalities to create an Emergency Management Program adopted by a By-Law of Council. The Program must include:

- An Emergency Plan based on identified risks and hazards
- Annual training programs and exercises
- Public education on risks to public safety and emergency preparedness.

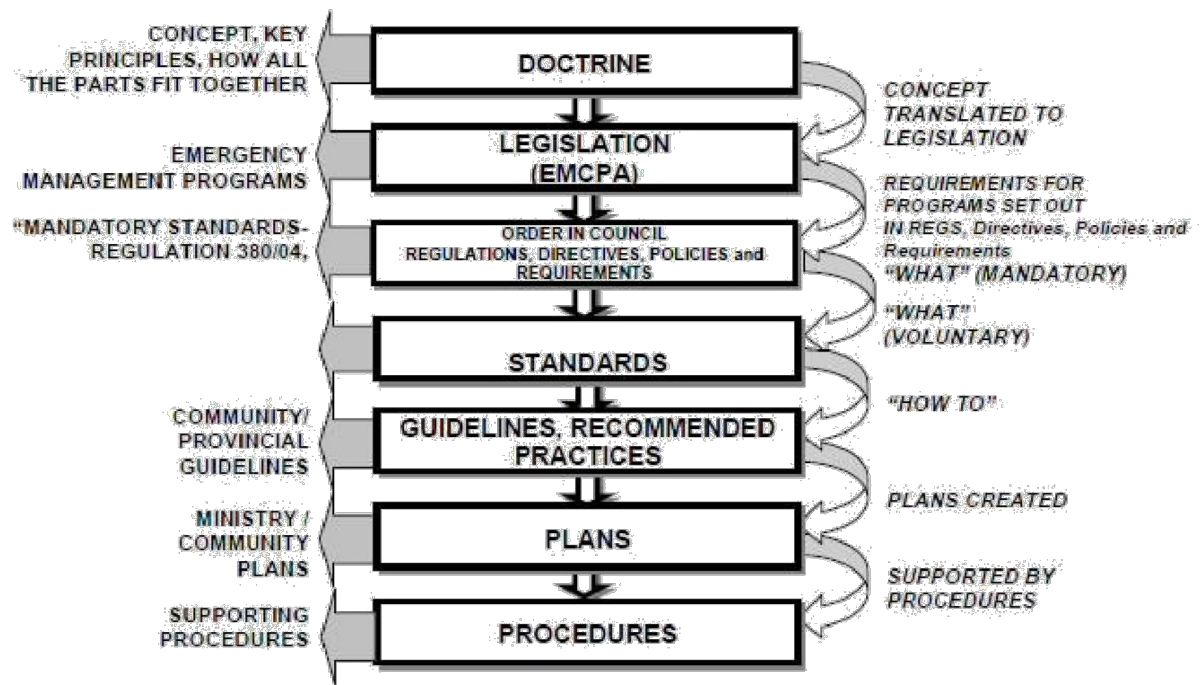
Ontario Regulation 380/04 under the EMCPA requirements includes:

- Trained Emergency Management Program Co-ordinator to develop & implement the program
- Emergency Management Program Committee
- A current by-law adopting the program and plan
- A current community risk profile
- Designated Emergency Operations Centre with appropriate communications systems
- Designated Public Information Officer.

The Hierarchy of Emergency Management Documents in Ontario (and thus its municipalities) is illustrated below replicated from the province web site.

IT Disaster Recovery (DR) Planning is an important part of the Emergency Management process.

A successful DR strategy requires expertise in Business Impact Analysis (BIA), operational policies and procedures, data back-up, data replication, networking, DR testing and recovery services for successful execution. A Shared Managed Service would enable smaller government agencies and municipalities to access the service cost effectively, without the required technical skills for set-up, ongoing maintenance and capital investments for the private Cloud DR platform.



THE DR SERVICE/SOLUTION

Leveraging Duologik's current infrastructure, planning the solution to a scalable functional structure for the market would take approximately 6 months. The company's senior management team has over 20 years of experience both servicing government and private sector, and running profitable companies. In addition, the technical team has over 10 years' experience in DR and private cloud services.

THE MUNICIPAL NEED

Most CIOs and senior managers in the public sector know that the core businesses of their organization may be in jeopardy in the case of a disaster. Most municipalities and agencies have created small organizational units to "manage and plan" for emergencies. They also know that the survival of their organization is tied to having a Business Resumption program and a Disaster Recovery Plan (DRP). Nevertheless, many public sector organizations have no DRP mainly because such a plan requires significant investment of time and resources as well as developing staff skills and expertise in technical areas that are not easily available.

The Emergency Management function in particular tends to go from one extreme to another. The job of the executive in charge of the Emergency Management function oscillates between a non-existent function to a primary front executive function that is highly tied to the executive boardroom. Furthermore, whenever municipal organizational reviews are undertaken, the role of the emergency management group is especially vulnerable in environment of cuts and cost containment.

Municipal managers witness the daily occurrence of disasters in Canada and throughout the globe and realize that **having an executable DR plan is a prudent if not a fundamental need**. The imperative for such a plan stems from a number of sources:

- Stakeholder expectations from both the public and politicians
- Regulatory concerns and Legislated requirements
- Critical infrastructure
- Brand/Reputation protection.

It is worth noting that politicians and senior public sector executives realize that when a serious “disastrous” situation happens, the media is bound to ask: Is there a plan in place to deal with it? Clearly, no executive in his/her right mind would say they have no such plan, but, most municipalities in Canada have neither an IT Business Resumption plan nor an actual implementable DR plan to deal with IT disasters. And, while IT is just one activity in municipal government, the impacts of a disaster may affect the IT data center which is the heart beat of the municipal organization. It is the place where IT places most mission critical and non-mission critical applications.

Needless to say, municipal executives are aware of this and heedless to the fact that this could be reality for them and the cost of DRP is insignificant compared to their ability to survive a disaster. In fact, the majority do not have an actual DR plan and a long way off from having available equipment, implementation of the plan and necessary testing for proper recovery. The Appendix to this paper provides a graphic presentation of the responses to a Duologik survey that was sent to Ontario municipalities. Clearly there is a market for a Managed Shared Service for DR particularly for those smaller organizations that cannot afford the investment of people and resources in DR and would rather focus their internal resources on their own core services.

THE PREMISE: A SHARED DR IN THE CLOUD

Very few technological innovations would have as much advantage as Cloud Computing, not only for Disaster Recovery but across many of the non-core competencies of public sector organizations. Cloud Computing has the potential to simplify IT management, reduce the overall cost of ownership and facilitate data accessibility to organizations’ web services. That is the main premise of Cloud Computing because it removes organizational stress with concerns about mission critical applications and allows full concentration on core mission and purpose.

It is not difficult to suggest that a Managed Shared Service for DR Implementation using a DR Service Provider would cost significantly less than for those organizations that implement their own DR and associated infrastructure.

To have a true verifiable DR plan (by audit) in place requires careful attention to details and as expected, it involves three things: People, Process and Technology. While **People** and **Processes** vary greatly from one public sector organization to the next, depending on their function and core mandates, the **Technology** required to deal with the consequences of disaster is not such a variable that it cannot be specified. It can be designed, made available and it can be shared among the public sector agencies.

THE SOLUTION

It is with this last notion in mind, that this paper introduces Duologik DRaaS for Public Sector agencies. **The company offers DR assessment, management, recovery services and comprehensive reporting with a Zero backup window (no time to be allocated to back up).**

Based on Duologik past experience, any municipality can move its corporate DR infrastructure into Duologik trusted Private Cloud co-located in Sungard Disaster Recovery center and expect **to save up to 40 percent on its costs over a five-year period.**

Duologik would put together a strategic plan which would identify the strategic outcomes that the municipality wishes to accomplish. As part of such a plan, a project that would include an environmental scan of the computer assets of the municipality including servers and operating systems would be initiated. Such scan would likely reveal the significant time spent by municipal IT staff for the upkeep of the system or KTLO (Keeping the Lights On) instead of spending their time improving productivity of the municipal organization. Every IT director/CIO knows that the core business of the municipality is to serve residents, not running computer systems or providing computer infrastructure for disaster recovery. Equally important is the ability of the municipality to develop a virtualization strategy for their datacenter(s) and implement it as a pre-requisite to migrating the databases for desired mission critical applications to the cloud.

Although the primary function of DRP is to protect the continuity of mission critical applications, it's prudent to note that the cost impact of failed non-mission critical applications can be also significant. These costs can be comprised of general loss of employee productivity, delays in restoration of revenue systems, loss of scheduling capabilities, etc. Duologik will work with the municipality to identify these systems which pose the highest business risks for inclusion in the DRP solution.

Most municipal IT shops have a relatively lean team. However, if through the journey to the cloud the CIO/IT director can free up 20 to 30 percent of IT staff time to get them working more closely with the operating departments (their true clients), it will significantly improve the performance of the municipality as a whole. The municipal CIO and staff can drive the efficiency of applications, rather than spending their time running a backup, changing a hard disk or patching an operating system.

Duologik can show how it can serve the needs of the municipality and provide a custom tailored solution that would be the best fit for their individual requirements. In essence, what Duologik would provide is ON DEMAND optimized base IT storage for data backup and recovery and in this model, the municipality would incur a monthly fee for the service.

Duologik can also be used in a consulting capacity to migrate the municipal data into their private cloud and then manage it after the move is complete. The management will include back up, monitoring, testing and recovery time/objective through a proactive type managed service.

Undoubtedly, municipalities would want their DR solution to be substantiated, so it would be necessary as part of the solution to produce a report; a DR Deployment process; which prescribes the business case and return on investment scenario. The report will identify all the phases of the cloud deployment process and zero-in on the initial deployment such as setting up the security infrastructure, firewalls, migrating non-critical applications (such as the helpdesk) and connecting all municipal sites to the hosted facility site via an onsite server. This can be followed by moving live municipal systems over to host site. This phase may also include testing the functionality of mission critical systems in the hosted environment. These are all part of the Duologik solution.

SUMMARY

In essence, Duologik offering is composed of the following key steps:

1. Identification of the public sector need for the Infrastructure for DR: this step involves consultation with the public sector agencies to understand the current needs, the mission critical requirements, current production environment and the resources available in the event of disaster. Duologik can also assist in developing a Business Impact Assessment (BIA) if the organization has not already conducted such an exercise so that it can tie the SLA to the critical apps from the BIA. The offering will involve an assessment of the readiness of the organization to acquire Disaster Recovery as a Service (DRaaS) under contractual and service level agreements.
2. Provision of the Infrastructure either on premise or in the Cloud (in Canada): the Solution that will be presented to the public sector (whether on premises or hosted in the private cloud) will be compelling in that it will have a substantially lower costs than the alternative of providing the solution internally by the organization itself. Duologik, as part of DRaaS, will also assess the requirements for networking and connectivity of the organization to the DR site. The assessment will identify any gaps in the solution proposed. The obvious advantage is that subject to contractual agreements, both Capex and Opex for the municipality can be optimized especially under Shared DRaaS scenario.
3. Proof of concept and solution validity: this will involve migrating database-driven business applications to Duologik private cloud using Duologik unique and green infrastructure. This will also involve a “mock exercise” with the cooperation of the public sector organization. Duologik cloud solution will be scalable, always available and secure.
4. Entering into Contractual and Service Level Agreements and provision of ongoing support.

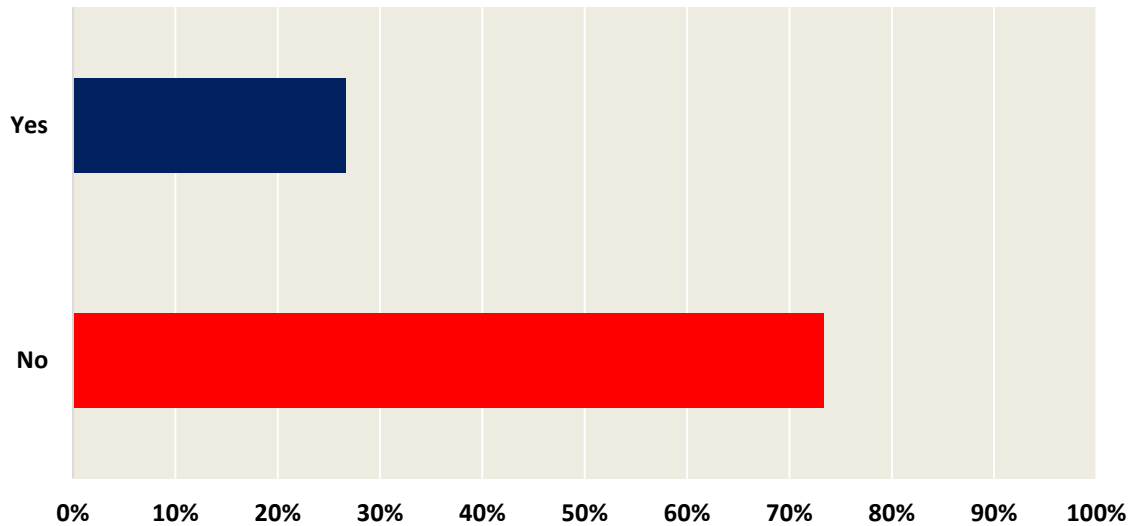
WHY DUOLOGIK

Duologik is an Ontario company based in Richmond Hill, Ontario who has delivered DR services in their private cloud since 2004. It is led by 2 IT executives who worked for well over 30 years in the municipal field. Duologik Executive Advisor has been a CIO in three different municipalities in Ontario. The company specializes in providing CIO level services to municipalities. Duologik is an ISO certified organization with its Design, Development and QA processes based on well-defined and mature quality processes according to the ISO 9001:2008 standards.

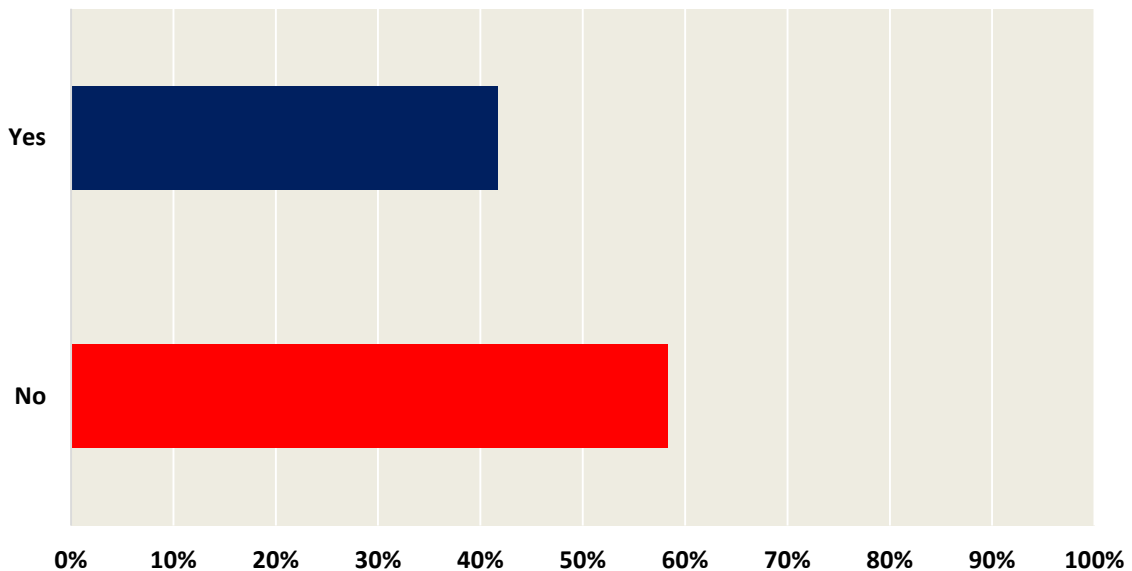
Duologik is uniquely positioned to be able to address datacenter transformation in the holistic manner required to truly achieve new levels of efficiency, able to “right-size” datacenter to the correct configuration that meets the IT workloads of the public sector organization, while simultaneously reducing its carbon footprint. In a modern world of both Cloud Computing and Climate Change, it is this science that is essential for future-looking 21st century CIOs.

APPENDIX

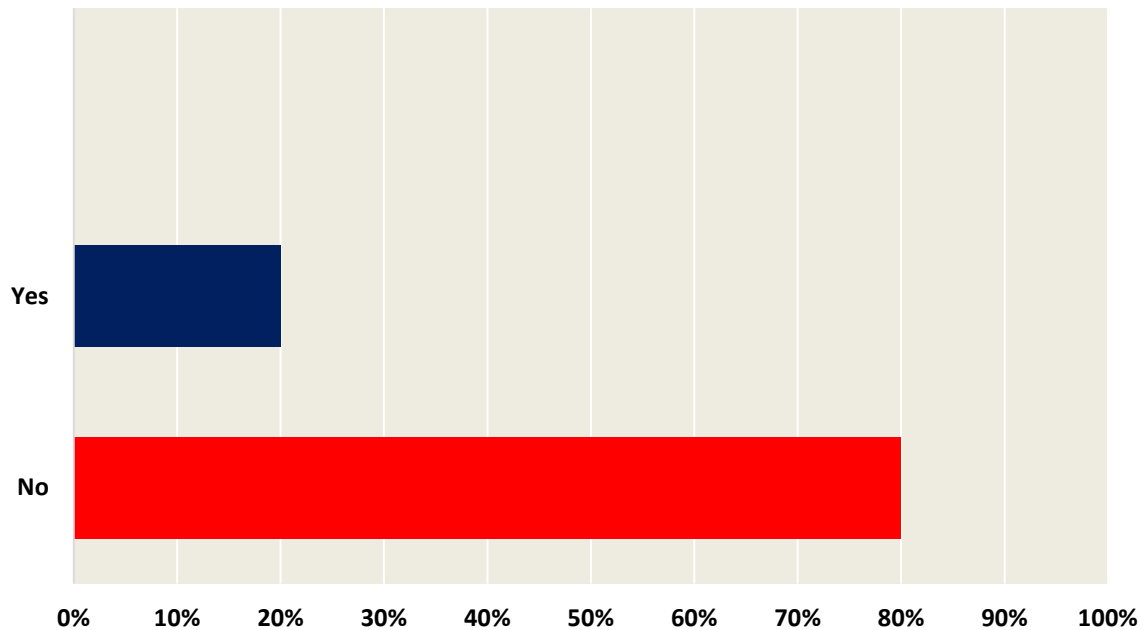
Q1. Does your organization have a detailed Disaster Recovery Readiness plan?



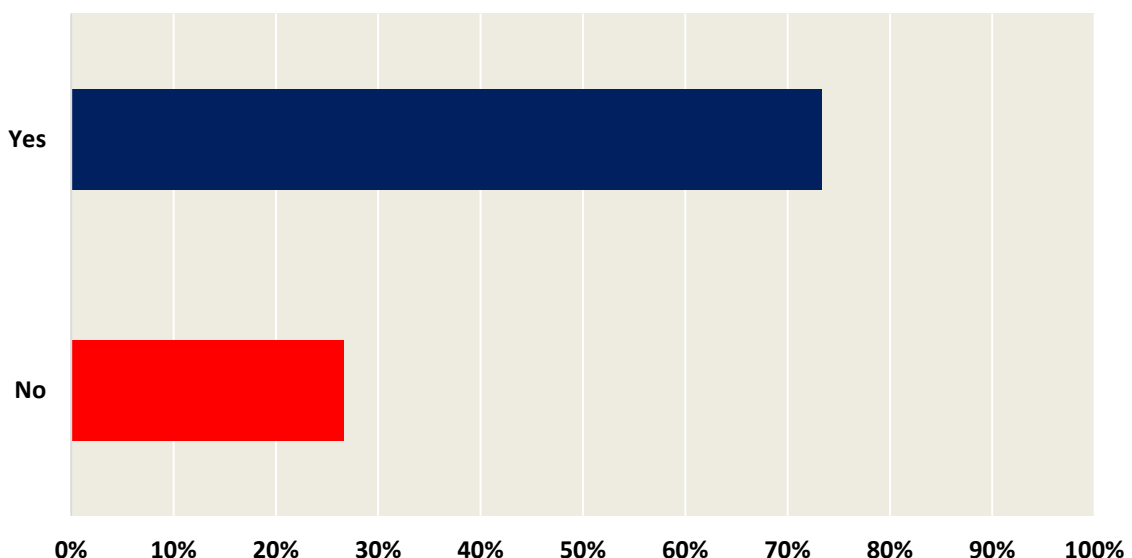
Q2. If yes, do you conduct periodic testing to ensure the plan works?



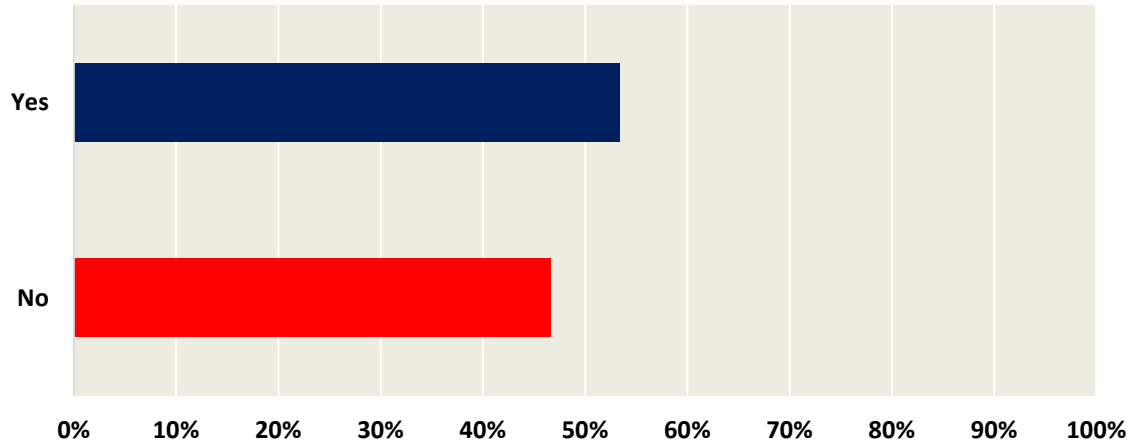
Q3. Are you required by any compliance (such as audit or bylaw) to have a Disaster Recovery plan in place?



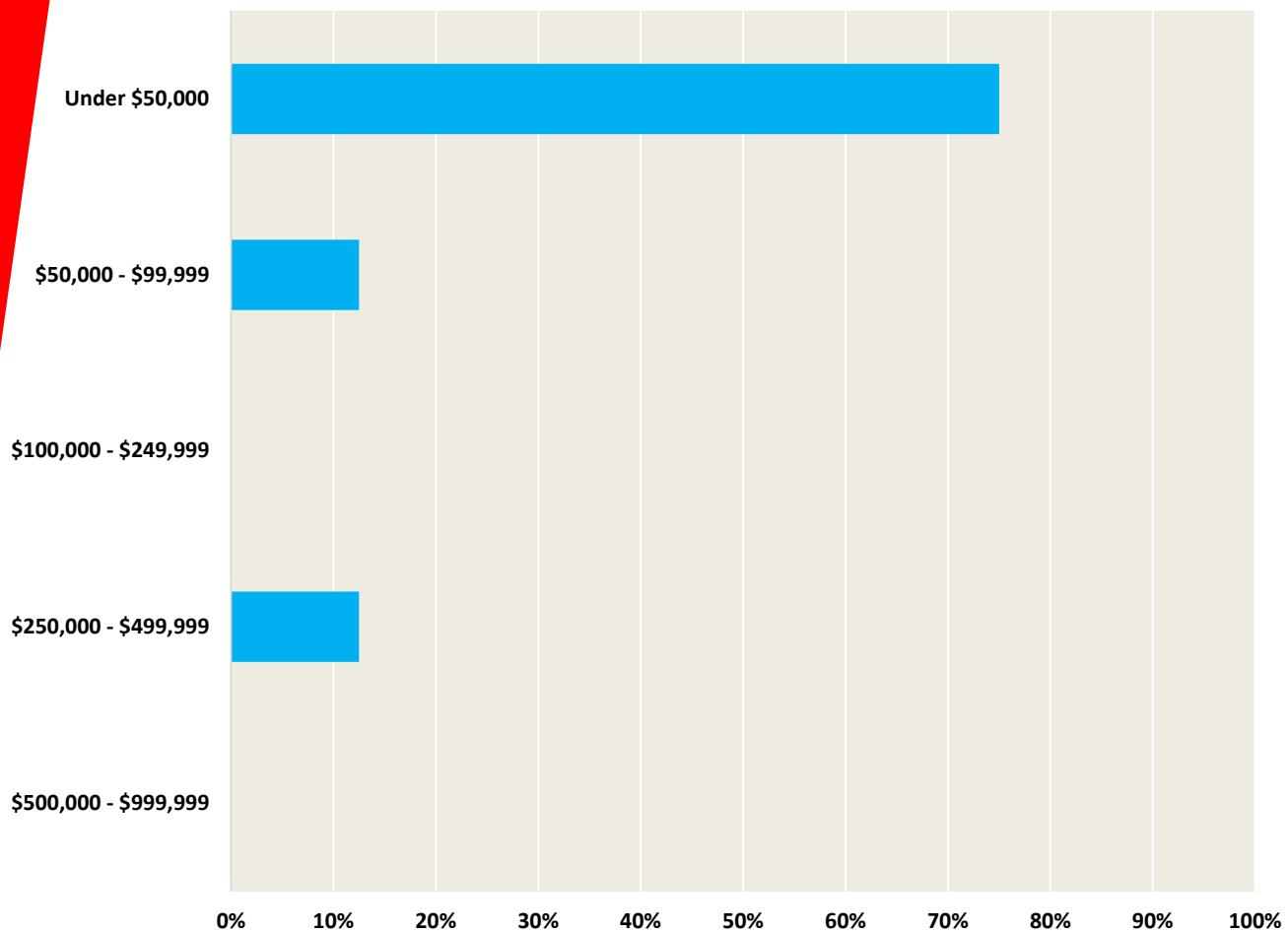
Q4. Would your organization be interested if there was a shared Disaster Recovery Service amongst participating municipalities that will lower your cost to implement and manage your disaster recovery activities?



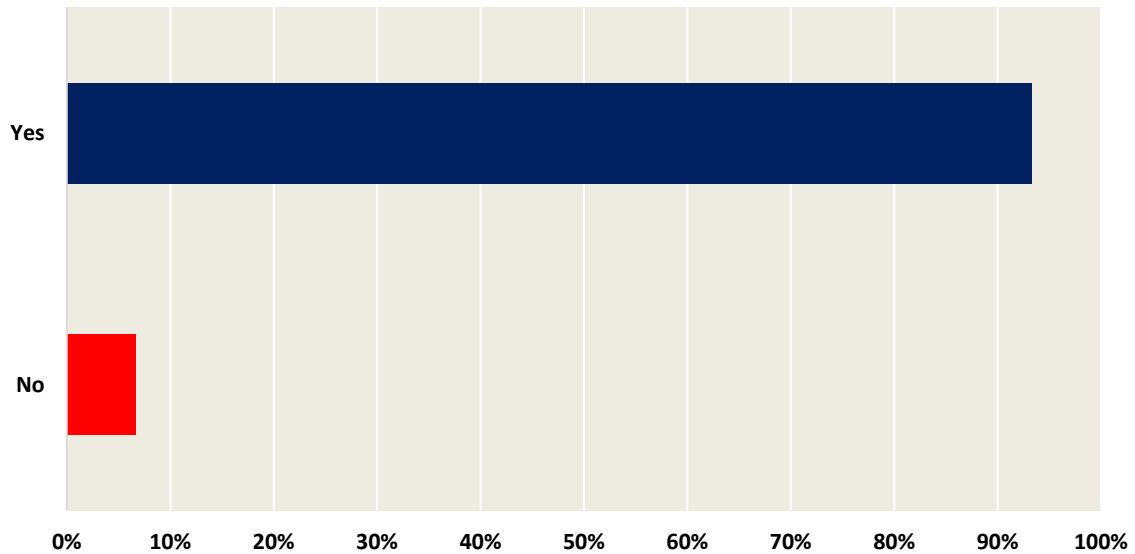
Q5. Do you have a budget for your total DR planning, implementing and testing activities?



Q6. If yes, what is your annual budget allocation?



Q7. Does your organization have a requirement for business continuity at an ALTERNATE facility?



Q8. Would you be interested in learning more about Disaster Recovery in the cloud?

