
What's the Real Cost of Disaster Recovery?

“THE PROS

and cons for any business.”

What you should know about the costs of Business Continuity and Disaster Recovery:

The following illustration shows the five-year cost performance of a hot-site agreement versus JIT, or just in time, provisioning model applied to a mid-sized organization. As the table illustrates, the costs associated with a hot-site agreement can be exorbitant. Whereas, the JIT model affords itself to organizations who do not have a massive technology footprint, and are willing to insure properly for unforeseen events. Just-in-time, when applied to Disaster Recovery, computer hardware, and space, is acquired only at time of disaster and therefore does not incur a monthly run rate or maintenance fees. Hotsite pays for hardware that is only used if testing or when disaster strikes every year. Using JIT hardware is only purchased at time of disaster.

Hot-site agreements are not without their benefits. It would be unfair to categorize the decisions that go into entering a hot-site agreement by simply using the chart at the right as a guide. Many outstanding factors must be considered. In particular, organizations who need access to data and processing capabilities through a mainframe must take a hard look at the hot-site option as purchasing a mainframe quickly is difficult, if not impossible.

For those of you who are not familiar with the JIT model, it is worth understanding where this thinking comes from and how it originated. Just in time is an inventory and logistics method implemented to improve the return on investment to the business by reducing in process inventory. In order to achieve just in time, the process must have high visibility into what is going on elsewhere within the process. This is why any just-in-time strategy must be heavily dependent on a strong incident management team plan, business continuity plans and disaster recovery plans that can inform the recovery process and signal for critical hardware and infrastructure components as needed.

This technique was first used by Henry Ford and the Ford Motor Company in the early 1920s as he found that buying parts, rather than holding them in inventory, significantly improved the cost performance of his factory. Later, Toyota Motor Corp. of Japan adopted the just in time approach and improved on it significantly. The company was faced with holding large stocks of parts for cars and it had not manufactured yet. Taiichi Ohno examined accounting

assumptions and realized that another method was possible and that the factory could implement JIT, which would require it to be more flexible but reduce overhead costs associated with warehouse space. Ohno is now recognized as one of the “two pillars” of the Toyota production system.

Among some of the benefits found in studies of Toyota's production system include:

- Employees acquire multiple skills and are utilized more efficiently.
- There is an increased emphasis on supplier relationships as the supply chain is inspected and the relationship between consumer and buyer deepens.

Today, much of the world uses JIT provisioning and logistics techniques in the procurement and delivery of goods and services based on the need to lower costs. However, the JIT system is not without its problems. Chief among these is that it leaves the supplier and the downstream consumer open to supply shocks when demand skyrockets and resources of any given supply become scarce.

In our analysis, several key assumptions have been made. However, this is not a “fantasy model.” We have seen this approach used successfully at businesses to fully recover data centers and understand both its benefits and weaknesses.

The weaknesses:

- The JIT approach requires a much stronger Incident Management Team capability at time of disaster and relies on Business Continuity to communicate with customers and suppliers effectively which will induce higher upfront planning costs.
- The JIT approach requires the procurement of additional engineering resources at time of disaster to assist with recovery efforts so that the customer's IT staff does not “burn out” by working long shifts. Any company considering a JIT approach to disaster recovery should identify a resource for qualified personnel to assist them during the recovery effort.
- Zero downtime, zero transaction loss IT DR is harder to implement using the JIT approach and will increase costs.
- Data centers with large mainframes will be limited by the long lead times associated with mainframe purchases.
- Any RTO that is less than three days should not assume

that JIT will work. A Bava (B/A) can help identify which systems will have to be truly “hot.”

- Any disruption in the supply chain between the customer and the supplier will impact the recovery time objectives and actual recovery performance.

What is even:

- Both hot-site and the just-in-time models are based on a first come first serve basis.
- Both hot-site and the just-in-time models do not guarantee a location for recovery as demand will vary based on the size and magnitude of disaster and the number of concurrent declarations that occur during such a disaster.
- Either hot-site or just-in-time models must be covered by any Business Interruption and Replacement Costs insurance to minimize the likelihood of a company going out of business completely after a disaster.

The strengths:

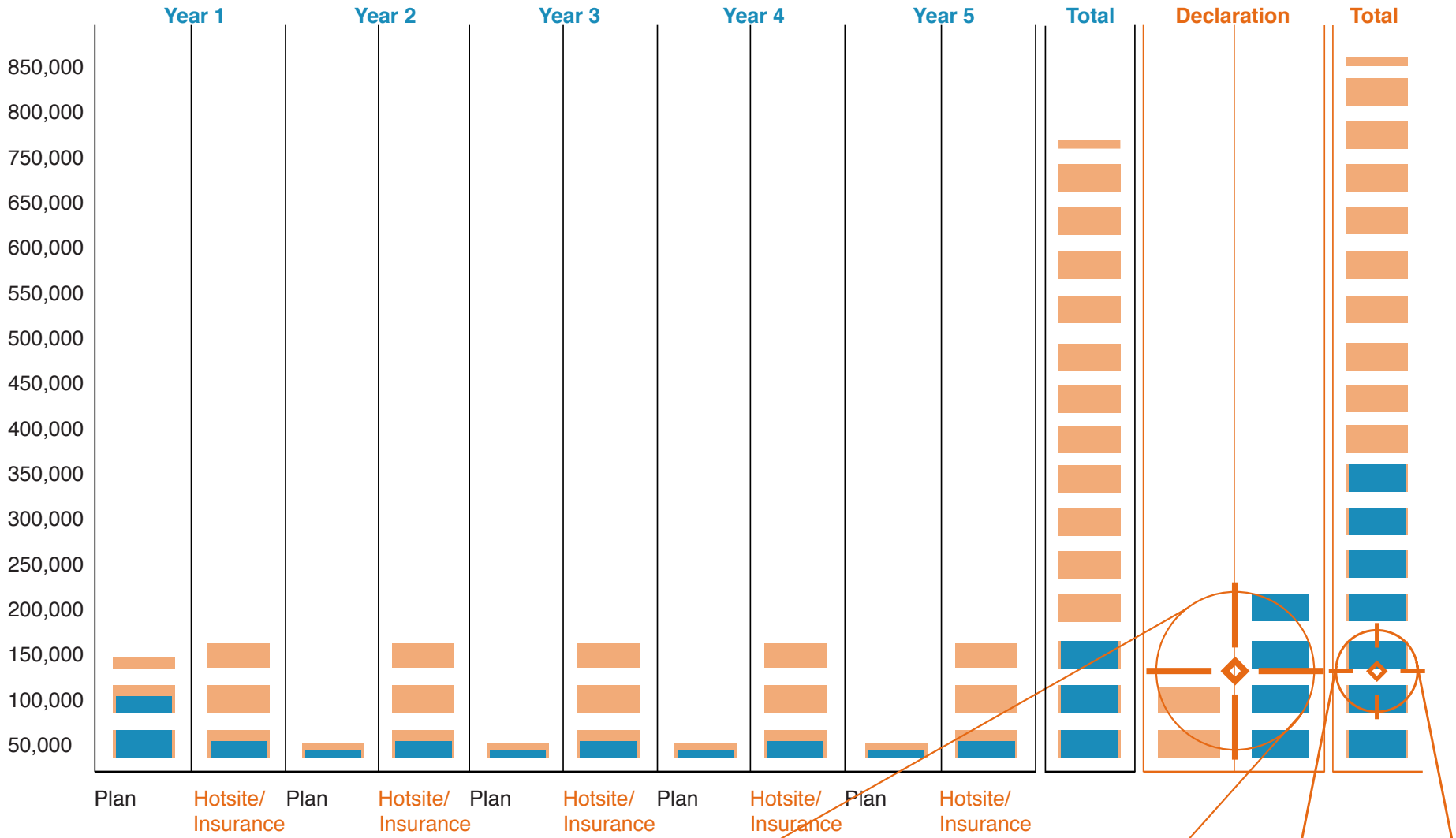
- JIT outperforms a hot-site agreement over a five-year period on a cost basis with no declaration with nearly 70% savings.
- JIT outperforms a hot-site agreement at time of disaster in any disaster that runs beyond the declaration contract limit (the standard is 31 days) and save significant fees (which in our model are estimated at \$25,000 a day for every additional day beyond the thirty-first day).
- JIT is offset by insurance and the hardware used to recover is the same hardware that will be used in production once normal operations are established. This cost is more likely to be covered under a standard business hazard policy.
- The just-in-time model outperforms a hot-site agreement as it leaves the recovery location (Co-Location Facility, secondary data center, unused office or factory space, or the procurement of a rental or an additional facility) is up to the company after a large scale event.
- JIT does not incur a declaration fee, maintenance fees, or unforeseen testing fees (whether used or not) until the time of the disaster.

What a customer should think about when it comes to hot-site approaches:

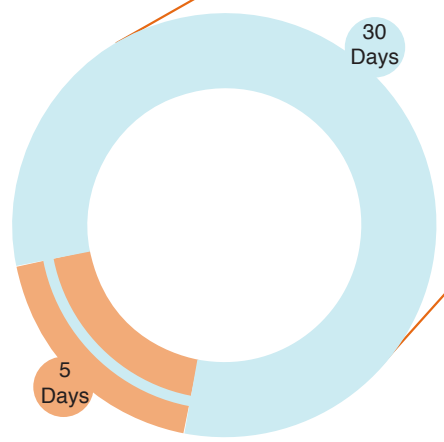
- Does your existing hot-site contract automatically renew? If so, when?
- Does your existing hot-site contract guarantee a recovery location, or is there language in the contract that may have you recovering to a location further away than expected?
- Does your existing hot-site contract use a “first come first served” provision that allows for delays of hardware, resources, workgroup recovery locations or even engineering personnel at time of disaster?
- Does your existing hot-site contract guarantee the effective recovery of your systems?
- Is it possible, given the existing language in your contract, that your existing contract may have you recovering hundreds if not thousands of miles away from your primary place of business, customers, employees and families?
- Are there hidden testing, declaration, or overuse costs associated with a disaster declaration that you have not factored into the actual cost of utilizing your hot-site at the time of disaster?
- Is your risk profile so high, or geographically dependent, that the assumption that you are making about your hot-site are out of sync with the realities you most likely will be facing after a disaster?
- Will you be competing with other customers for resources that are held in a syndicated “ pool” when declaring a disaster?
- If you are purchasing hardware, is the cost of the hardware spread across the five-year term of the agreement, are there other ways to provision both the cost and the use of this hardware other than putting the hardware at a hot-site location at which additional fees for maintenance and testing may be incurred?

What the model assumes:

1. The model is based on a technology footprint for computing hardware that is valued at a total of \$1.5 million.
2. This model represents a total bill of materials that is the low average of organizations in the Fortune 1000.
3. All costs for services and hardware are based on BAM's experience and do not indicate actual performance as each customer's experience will vary.
4. The hot-site expense is conservatively estimated at \$12,000 per month; or \$144,000 a year.
5. The declaration fee for the hot-site used in this model represents 66% of the total five-year run rate of the agreement; or \$96,000.
6. Five additional days have been added to the declaration fee at a cost of \$25,000 per day in the hot-site model.
7. The estimated cost for creating a robust incident management team and concurrent business continuity plans is \$150,000 in the JIT model.
8. An additional \$50,000 is shown in year three of the JIT numbers for plan updates and testing.
9. Insurance costs in the JIT model are estimated at one hundred thousand dollars per year.
10. Plan maintenance costs associated with the JIT model are estimated at \$10,000 per year.
11. An additional \$200,000 has been added to the JIT model at time of declaration to secure incident managers, public-relations specialists and additional engineering resources.
12. A three to seven day recovery time objective has been used in this model and assumes that there is not a mainframe or any offsite servers available at time of declaration. Only tape media or low profile, small form factor SAN's or other appliances apply to this model. However, the number of servers used in this model can be as high as 1000.



Hotsite
 Just In Time



Covered by Declaration price
 \$25,000 per Day After 30 Days

+1.5M in hardware replacement cost
 replacement cost covered by insurance

Contact

Kevin Burton

kevin@thinkbam.com

480.239.9724

Angela McGee

angela@thinkbam.com

480.239.5647