

## DCR Project Management Methodology

### Implement a DCR Methodology

Does this mean that there is more than one DCR methodology? Yes, there are probably almost as many ways to conduct a data center relocation or consolidation as there are consultants and I.T. vendors who offer these complex services.

What this means is that the experience and skills of the people involved in planning and moving your data center matter – a lot. While most I.T. methodologies share some basic commonalities, there can be significant differences based on the size of the project, the scope of the migration (campus, across-country, or international), and the capabilities of the team that will be responsible for the project's success. Almost everyone now follows the Project Management Institute's (PMI) project management process for good reason: it works – and it's the place to start organizing your DCR methodology.

- **Project scale** - Outside of the largest organizations, those with mature Program and Project Management Offices, the requisite skills and experience to manage a project of this size and complexity may be scarce or inadequately supported – particularly for a DCR
- **Complexity** - Unless your PM team is DCR-experienced, the amount, diversity, and depth of detailed information that must be uncovered, analyzed, and acted upon will be a real challenge
- **Focus** - In many small systems and non-I.T. business or office relocations, the focus is more on “when we'll complete the project.” How it is accomplished just isn't that difficult. In a data center relocation, the “how” becomes critically important.

The PMI project management methodology is powerful and very well-documented, and there are many very capable project managers who are trained in the PMI approach. An increasing number even have the prestigious Project Management Professional (PMP) certification.

**However, don't confuse an effective DCR planning methodology with a Project Management methodology. They are complementary, but different enough in a number of subtle ways as to contribute to significant problems later on if you aren't aware of the differences in focus, detail, and technique.**

### DCR Methodologies

In the DCR setting, “when” is of course, important. But even more critical is “how” we plan to get there. “How” IS difficult. The focus of your DCR must be on how your systems, applications, and networks will migrate.

In a business environment, HOW you execute a mission critical project, such as a data center relocation or consolidation, determines your true schedule and costs. “When” is merely a derivative of that function. As you begin to plan your project, you will quickly notice that no one has all the details — not you, not the data center operations and technical staff, nor your vendors and consultants.



These details will be uncovered over time, but only with a lot of hard, gritty work by you and the entire DCR team. Learn the process (to be expanded on later) at the start and it will help you manage workloads and stakeholder expectations in the future. A good methodology is based on many years of real-world data center relocation and consolidation experience. Use it because it is a well-proven and cost effective approach.

## The Ten-Step DCR Methodology

Once the project is defined and the core team assembled, there are certain activities that are essential. Here is a simple list of the ten most critical tasks that any DCR project manager must take care of:

1. **Inventories** – hardware, applications, and every component that will be relocated or consolidated. The inventories need to be detailed, accurate, and complete – with equipment model and serial numbers, configurations, replacement value, vendor contacts, and a Visio diagram of how each system is de-installed (before) and re-installed (after). You won't get the detail required without considerable effort. So, if this comes easily, you haven't done it right.
2. **Security** - the dominating characteristic of a large DCR is activity. Everything is in motion at one point or another. A good security plan will help ensure that data doesn't disappear, that unauthorized people are kept away, and that the business remains un-compromised.
3. **Planning** – from the early “pre-planning” phase through detailed DCR planning, to schedule development and the move days, you will spend far more time and effort on this area than anywhere else.
4. **Budget** – A DCR is expensive, very expensive if what you are relocating or consolidating is a major facility. The DCR budget must adequately cover new construction, renovation, site closure, equipment, staff, tools, and outside expertise from vendors and DCR specialists. Managing the budget and keeping your executive management well informed are major challenges.
5. **RFPs, SOWs & Contracts** – Vague RFPs make for poor SOWs. Poor SOWs make for terrible contracts. Take the time to work with DCR specialist's right from the start to develop the right RFPs and Statements of Work (SOWs) for your project.
6. **Use the DCR Specialists** – Selection of the right type of DCR specialist for each critical area is important. But, do you need one single company to do it all? That depends on you. If you're internal DCR teams lack specialist skills, whether in planning, schedule (Move Domain & Move Days) development, or equipment de-installation, moving, and re-installation, then you will need to acquire that one company that can provide all of the required services. Not many DCR companies actually provide the services they offer, Hi-Tech is the ONLY hands-on DCR service provider you'll find.
7. **Plan the Move, Move On Plan** – Moving equipment is a critical part of the project. Systems must be broken down, packed, transported, re-assembled, tested, and re-certified by the vendors. Racks and other equipment support systems must be ready, utilities and communication services need to be ready, and people have to be migrated from where they are now to where they will be.

8. **Prepare the New Facility, Close the Old One** - Inspections of any new or renovated data center must focus on more than the technology being installed. You must ensure that fire suppression systems are ready, tested and approved. Cooling systems must be adequate for projected growth. Utilities must be in place and operational. And, the place must be clean – very clean. While you are necessarily focused on the destination, you must also do what is necessary to de-commission equipment that won't move and close the old data center facility.
9. **Backup The Data** – Your backup media will work (it ALWAYS does, you NEVER have problems), but just in case it doesn't *this* time, you need to have a recovery plan. And that plan must be thoroughly tested, with practice runs conducted at regular intervals during the detailed planning phase. Virtualization tools can be utilized here to host systems remotely. But even there, a DCR-based recovery plan is essential. And it's not the master DR/COB plan that everyone has, but too few organizations test enough to assure that it will function as expected when required.
10. **Migrate** – when it's time to move, stop planning and move. This is the moment when careful planning and capable project management result in flawless Move Days. When everything has been relocated or consolidated, the old systems retired, and the vendors have re-certified their products, you can take that well-earned vacation day. And then get ready for the next big project because Management now has a better understanding of the business value of great project management.

## DCR Risk Awareness Planning

Risk of project failure is always present in any I.T. initiative, as it is in virtually every area of human endeavor. Industry data has long suggested that as many as 80% of all I.T. projects fail to deliver the benefits promised. For a DCR project (because it IS mission-critical!), failure can mean anything from minimal disruption and rapid recovery to substantial business interruption, loss of revenue, damage to your firm's reputation, civil lawsuits, and even government investigations. All of these are nice things to avoid.

### Risk Identification

Many (but, not all) project risks can be mitigated or even avoided, but only if they are identified and planned for in advance. For a DCR project, there are a few key areas of risk that always demand closer scrutiny:

- Project management and execution
- Budget
- Technology & vendors
- I.T. management, process, staff
- Capacity Planning
- Facilities & infrastructure, security
- DCR planning & risk
- DR/COB plans

There are always a few too many companies that fail to learn from the DCR mistakes (and successes!) of others. To reduce the inevitable risks that come with moving systems from one place to another, you should perform a risk assessment.

## Risk Assessment

Using the broad categories listed above, a risk assessment document should be prepared by the Project Manager and the technical (HW, Applications, Data, Network, Facilities) teams - focused in detail on these checkpoints:

- **Hardware** - focus is on assessing risks due to hardware: age, condition, revision level, configurations, “hot spare,” or “asset safeguards” device maintenance/warranty requirements, capability planning for near-term needs at the target site, and other issues. Vendor “re-certification” issues must also be resolved.
- **Backup & Restore** – focus is on the OS, application, data, and systems backup & restore capabilities available, tape systems, and other related issues
- **Network** – focus is on the network: architecture, components, IP addresses, wireless access points, and other network/infrastructure points of failure
- **SAN/NAS/Data Storage** – focus in on backup & recovery of critical data storage systems and software, and on safeguarding data through the end-to-end migration process
- **Applications** – focus is on application migration issues, license requirements, warranty and service maintenance impacts. Also: database and application risks due to changes in IP addresses, hardware, network components and other issues
- **Enterprise Software** – focus is on the critical “enterprise” solutions (SAP, Oracle, etc) that run the business. Key issues include license, warranty, service level agreements, and other risks due to a change in location and/or hardware. Systems and application versions, support, technical updates/upgrades must also be assessed for potential risks

For each risk that is identified, the key business impacts must be assessed. A risk description, risk scenarios (best case, most likely, worst case) must be developed; risk mitigation solutions must be created for each scenario, and costs must be attached to each scenario and solution. Finally, senior management should be made aware of the completed risk assessment and they should be prepared to provide guidance on the appropriate business approach to each identified risk.

## DRC Project Management Checklist

While a detailed coverage of DCR project management practices and methodologies is outside the scope of this Guide, this checklist will help focus your attention on the importance of relying on accepted PM standards.

- DCR Project Lifecycle
- Project Integration Management
- Time Management
- Cost Management
- Quality Management
- Human Resources Management
- Communication Management
- Risk Management
- Procurement Management
- Vendor Management

The size of your DCR project will determine the structure of the PM team. For a large enterprise initiative – or one that will have global activity - you should implement the PMI Program Office model: an overall program manager will coordinate the activities of project managers. Project managers should be assigned to each key domain and/or location (in multi-site DCR's). Domains might include:

- Mainframe/Host complexes
- Server farms
- DASD and Storage systems
- Specialized equipment
- Outsourced systems and services
- Procurement and Logistics
- Facilities
- Voice/Data, etc.

The all-too-common practice of assigning one PM to run the entire project may work for small efforts. But, a large DCR will need a dedicated PM team.

## DRC Project Management Responsibilities

The role of the project manager in any data center relocation or consolidation is critical. It is here, more than anywhere else that the project will succeed – or fail. Because the job is so important, your project managers will be among the most experienced and capable in the organization.

Your project management team (and for a larger project, you will need a team) should ideally be supported by an enterprise-wide Program Management Office (PMO).

The PMO should have the authority and budget to commit and manage the resources (budget, people, processes) needed to ensure the project's success. Among the many responsibilities that the DCR project manager will have are to:

- Lead meetings to manage and coordinate data center relocation, consolidation, and migration plans
- Lead meetings to manage and coordinate data center relocation, consolidation, and migration requirements, specifications, and architecture
- Lead meetings to manage and coordinate data center relocation, consolidation, and migration execution
- Create and maintain Microsoft Project, Excel, and Visio documentation, track and support overall project direction and progress on a daily and weekly basis
- Interface with construction manager(s), crew leads, and data center build teams
- Manage outside data center vendors and services suppliers
- Direct and coordinate cross-functional organizational activities for the project to ensure that key goals or objectives are accomplished
- Be effective working among highly technical IT professionals
- Manage and complete the project within an intense operational production data center environment, while using sound technical, political, and procedural judgment throughout the process.
- Ensure financial accountability and electronic logging for data center assets, particularly in a large enterprise I.T. environment.



See the PMI PMBOK for more information on PM roles and responsibilities. If you're responsible for a data center relocation project, you have already started that process by reading this Guide. Once you have the core team in place, you can begin to develop a detailed scope:

- Is this relocation within the existing campus or to a new facility at a distance?
- What will move?
- What will remain?
- When is this supposed to happen?
- What is the financial plan?
- Will you do it with in-house staff?
- Will you use consultants?
- What migration strategy – forklift, swing, swap...?
- Who are the key stakeholders?

When your project's scope has been defined, the next step to begin your Data-Center-Relocation Project is to contact Hi-Tech Transportation, Inc to start your High-Level Pre-Planning Phase.

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