

MANAGING FOOTPRINT CHANGES

A guide for manufacturers and distributors

About TriVista's footprint consulting business

TriVista is the management consulting firm that helps business leaders transform their operations and financial performance. We advise clients on operations, supply chain, technology, and mergers and acquisitions.

Our footprint and network optimization experts help optimize supply chain and manufacturing networks, working collaboratively with management teams, applying analytical rigor, experience-based insight, and proprietary network design process to develop and implement optimal footprint strategies on a global basis.

Footprint Strategy. We help clients align their networks around evolving business strategies, using scenario driven analysis to weigh costs, risks, benefits and return on investment.

Facility Transfers. We help clients navigate complex footprint changes, including facility moves, startups and closures, where we help accelerate implementation, reduce risk, ensure business continuity, and maximize return on investment.

Project Planning & Execution Support. We support clients with project management support, including facilitating budget and savings tracking. From temporary project management resources that supplement your team, to running the full PMO.

Capacity Modeling, Flow & Layout Optimization. We help clients optimize asset utilization across their manufacturing and distribution networks. In both new and existing facilities, we unlock capacity and drive cost reductions by optimizing the flow of people and materials.

Real Estate & Government Incentives. We help clients select, negotiate and secure real estate leveraging our global network of 3rd party brokers. Furthermore, when you're considering pursuing investment incentives, our experts can help navigate the complex landscape of incentives on a global basis.

Risk Assessment & Mitigation. We help clients formalize risk assessments that consider multi-stakeholder and solicits cross-functional inputs. It's our job to make sure hidden risks are identified and mitigated appropriately.

Expert Team

We have the right team in place to help develop and execute the analysis and develop the strategy

Proprietary Tools

Complex projects often require unique tools and processes to reduce risk and ensure outcomes

Regional Expertise

We understand unique regional aspects of complex transfers – throughout Asia, Europe, and the Americas

Risk Mitigation

Our proprietary risk assessment tools ensure you understand what can go wrong, before it happens

Collaborative Approach

We take a collaborative approach with all client stakeholders to make your project a success

When business needs change and you need to re-evaluate your footprint, thorough analysis and planning are critical to success.

For many companies, recent trends have accelerated the need for reevaluating their footprints. The past few years have seen an acceleration in the pace of mergers and acquisitions. Tariffs and the COVID19 pandemic have forced companies to take a fresh look at their footprints and supply chains with an eye toward greater resilience in the face of such disruptions. Dramatic shifts in labor markets, the decreasing competitiveness of places like China, minimum wage hikes, and the attractiveness of near shoring options in Mexico are also forcing many executives to re-consider their legacy footprint strategies.

Whether simply shifting production for a single site, a realignment of manufacturing among multiple sites, or a large-scale footprint redesign involving plant expansions, closures, and new plant construction, manufacturing footprint changes are difficult and risky. Therefore, it's not surprising that many companies struggle with these complex transitions.

Understanding the many different factors that contribute to the complexity, and the ways to properly manage such an undertaking and to mitigate risks, is key to successfully navigating these complex transfers.

Common Drivers of Footprint Change

- Strategic business shift
- Capacity expansion / reduction
- Real estate changes (lease expiration, real estate sales, etc.,)
- Mergers and acquisitions
- Raw materials and supply availability / proximity shifts
- Re-distribution of customer demand
- Availability and cost of labor
- Transportation/logistics/distribution costs and efficiency
- Competitor dynamics

Beyond lease expiration or the need for capacity, changes to the fundamentals of your business can sometimes warrant realignments in your production footprint. As business dynamics shift, periodically assessing your footprint may be required to ensure competitiveness, and support growth.

Start with the basics



**DETERMINE TRANSFER
COMPLEXITY**



**CONSIDER RISKS
IN ADVANCE**



**CONSIDER ALL
ASPECTS OF THE
BUSINESS**



**SPEND SIGNIFICANT
TIME EVALUATING SITE
READINESS**

“Footprint
changes are
difficult and
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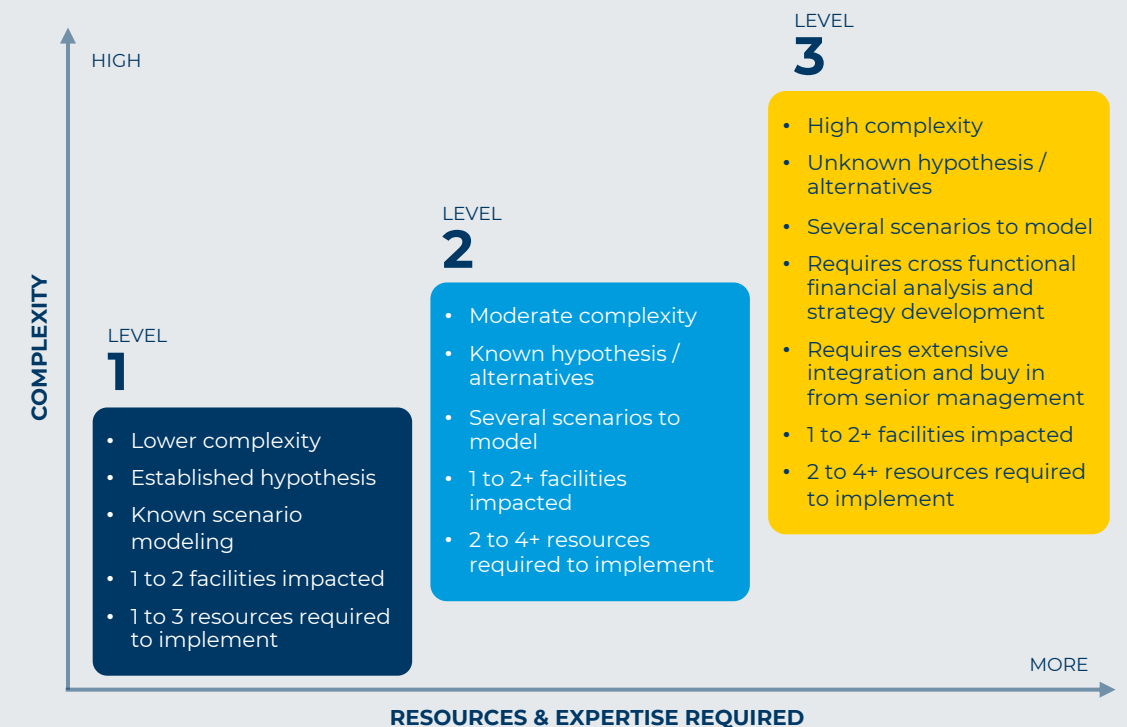
Footprint initiatives vary in size, and complexity

As shown in Figure 1.0, complexity levels vary. From simple one or two-site consolidations to complex situations involving numerous sites, a range of outcomes, cross-functional financial analyses, and strategic considerations.

Despite the implied simplicity, even level 1 footprint transitions can be complex, especially if the transition involves new greenfield or brownfield facilities, significant transfer of assets or knowledge, or impacts many employees, customers, or suppliers.

Organizations that lack significant experience managing footprint changes may overlook critical items resulting in substantial production delays and cost overruns, among other risks. The more complex the undertaking, the more important it is that project teams have direct expertise conducting thorough financial analysis, developing comprehensive project plans, and program managing the transfer(s).

Figure 1.0
Footprint Transfer Complexity Matrix



Footprint changes impact all functional areas of the business

1 PROCESSES AND PRODUCTS

- ✓ Identify unique and/or redundant manufacturing capabilities at each facility
- ✓ Consider developing optimized production synergies across product lines and equipment availability
- ✓ Consider developing strategic process and product approaches including centers of excellence or factory in factory

2 HR & KNOWLEDGE TRANSFER

- ✓ Develop a robust communication plan
- ✓ Develop severance, retention, and relocation strategy with detailed costing
- ✓ Identify key personnel risk and determine process documentation requirements

3 FACILITY, UTILITIES, & ENVIRONMENTAL

- ✓ Utilize layout best practices to create an optimized production and distribution flow
- ✓ Ensure utility requirements support planned growth objectives
- ✓ Mitigate potential environmental risks
- ✓ Create office space enabling collaboration across the organization

4 EQUIPMENT, INVENTORY, & CAPACITY

- ✓ Develop detailed equipment plans to validate useful life of existing equipment and estimate cost to replace/upgrade
- ✓ Analyze current and future capacity requirements to support business growth
- ✓ Determine inventory space requirements and optimal racking design

5 CUSTOMERS & SUPPLIERS

- ✓ Develop optimum customer service, inventory, and logistics levels
- ✓ Identify critical inventory build SKUs to ensure service levels and lead times are maintained during transition
- ✓ Develop mitigation strategies to support customers if issues arise
- ✓ Determine if redundant capabilities are required temporarily during transition



Almost every function within a company will be affected by a transfer, and each function needs to be carefully assessed to determine critical paths and assess any unique risks.

Using data to drive decisions and gain stakeholder buy in is critical, because eliminating 'gut feel' decision making ensures business continuity and reduces risk.

While the list of considerations is extensive, included here are several areas to consider when planning a transfer.

Spend significant time evaluating site readiness

Transfers to other sites in your network

While seemingly the easiest type of transfer — moving production from one site in your network to a different site in your network — relocation of production amongst existing facilities presents its own unique challenges. Balancing the needs of ongoing production, identifying redundant capex, expanding existing facilities to accommodate new production lines, choosing when and how to ramp down/ramp up production across the network, and determining how to ensure steady supply during the transition isn't an easy task. Furthermore, it's important to consider such factors as utilities (including electric, natural gas, water, and sewer) to ensure such moves are feasible and that any necessary utility expansions are included in investment planning. Increased labor needs at the destination site(s) should be considered. Should

closure of existing sites be necessary, there are additional labor considerations required (including potential relocation of employees, bonus compensation for continued production after the closure has been announced, and severance packages for those not being retained within the company).

Establishing entirely new production sites

Establishing new production sites brings many of the same challenges, including utilities assessments, planning, and investments, building design and renovation, expansion or construction, and labor considerations, as well as other complexities. A central decision to be made in this instance is between greenfield (entirely new production facility construction) and brownfield (installation of manufacturing systems within existing buildings). Important factors to include in that decision-making

analysis include space requirements, local regulatory restrictions (zoning laws, noise statutes, traffic regulations, and the like), raw material and finished product storage and flow, and (in the case of brownfield sites) evaluation of existing buildings and infrastructure. Government incentives can be an enticement in deciding among suitable locations, but they come with their own set of complexities, challenges, and risks.

All these key considerations come before any actual execution of the transition commences. Execution brings its own extensive list of requirements, complexities, and risks. While much of it is standard project management once the above decisions have been made, it's critical to keep in mind the potential for disruption to the manufacturing process. Plans to keep sufficient product flowing and inventories on hand during transition periods among production sites are essential.

Consider transfer risks upfront

Develop a transfer failure mode & effects analysis (“TFMEA”) to identify risks and develop mitigation plans

Utilizing a cross-functional team, lead an open discussion and brainstorming session to identify risk areas across all parts of the business. Do this in your Phase 1 Planning. Once the team has developed a list of the areas of risk, analyze the risks based on:

- Probability of the risk/event occurring
- Impact to the business from a revenue/ margin perspective
- Ability to detect the event before it occurs

Once you compare the identified risks against these metrics, develop a pareto to identify the top areas of risk, and assist the cross functional team in the development of initial mitigation plans:

- **High risk** items require immediate review and mitigation
- **Moderate** risk items, will need to be managed by exception
- **Low risk** items will most likely not need to be mitigated but should still be reviewed together as a team

Developing high-risk mitigation plans prior to project execution greatly reduces the overall risk for all stakeholders

Cross Functional Risk Considerations



Financial Impact of the Event/Risk



Probability of an Event/Risk



Ability to Detect the Event/Risk Occurring



Pareto Risks & Develop Mitigation Plan(s)

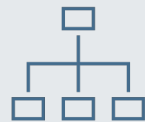
Spend extra time on analysis, modeling, and planning



KEY CONSIDERATIONS



A PHASED APPROACH



**PROGRAM
MANAGEMENT
RESPONSIBILITIES**



**APPLY THESE BEST
PRACTICES TO
MAXIMIZE SUCCESS**

“Calculating savings is the straightforward part; estimating one-time costs can be a lot more difficult”

Key considerations for managing footprint changes

Footprint changes are risky

Given the inherent complexities, the potential impact on customers, the need to minimize business interruptions, and the costs involved, any transfer poses major risks. Beyond obvious risks like improper budgeting, you should also consider the following:

- **Customer impacts**
 - During transition
 - After transition
- **Supply risk**
- **Infrastructure and utility risks**
- **People challenges**
 - Identifying critical skills
 - Employee flight risk and retention tools
 - Knowledge capture and transfer
- **Environmental concerns**



Often overlooked, these critical risks should be evaluated and quantified before making any footprint change so that management and other stakeholders are appropriately informed and mitigants can be established.

Key considerations for managing footprint changes

The skills required to navigate footprint changes may not exist in every organization but are required to maintain business continuity, limit risks, and reduce the impact of failure.

Given the significant financial analysis required, and the impact to a broad base of internal and external stakeholders, it's important to create a project team with sufficient experience to manage these undertakings. As you consider building out your project team, consider the following experience sets that may be required to successfully navigate your transition.

General Business Experience

- Strategic thinking
- Financial analysis & modeling (savings and one-time costs)
- Human resource management

Company Specific Experience

- Vendor management and communication
- Customer management and communication

Footprint Specific Experience

- Project Management
- Project risk analysis and management
- Facility infrastructure
- Real estate
- Government incentives
- Legal establishment
- Capacity and Layout
- Knowledge transfer
- Equipment relocation and transportation
- Logistics analysis
- Production startup and training
- Vendor selection and interaction
- Import / export (equipment and materials)

Key considerations for managing footprint changes

Calculating savings is the straightforward part; estimating one-time costs can be a lot more difficult

Many footprint decisions are driven by savings opportunities - labor rate arbitrage, integration synergies, logistics savings, etc. While these are important contributing factors, it's easy to let savings estimates drive the decision-making process and overlook significant one-time costs that can meaningfully impact the total investment, and payback period.

Most companies understand their labor rates, material costs, and indirect costs, as they need this data to run their business in the normal course. What becomes much more difficult is making informed assumptions about future state costs, and one-time costs associated with footprint transitions.

Be sure to build a detailed budget, with assumptions that have been tested and validated by internal and external subject matter experts. When in doubt, seek additional help to make sure no stone goes unturned.

A phased approach increases success rates, and significantly reduces risk

Experts will tell you that a phased approach to managing footprint transfers is critical to achieve success.

While many organizations will feel compelled to jump directly into project planning, ensuring the appropriate business case(s) has been developed, with buy in from all key stakeholders dramatically reduces transfer risk.

PHASE

1

FINANCIAL ANALYSIS & DATA DRIVEN DECISION MAKING

Evaluate the timing, costs, activities and resources required for project and present findings and plans to management and board of directors for decision

PHASE

2

PROJECT GOVERNANCE & DETAILED PROJECT PLANNING

Establish a Steering Committee and Program Management Office. Develop a detailed budget and implementation plan with critical milestones including securing required resources

PHASE

3

PROGRAM MANAGEMENT

Project manage implementation on time and in full ensuring delivery of financial and operational benefits

The most seamless transitions all have one thing in common —

Extra work was completed upfront to develop the strategy, determine the timing, costs, activities and resources required, align stakeholders, and most importantly complete a cross functional risk assessment of the transfer before any actual transfer work begins.

While every transition has unique elements, the example in **Figure 2.0** provides a good reference for how to think wholistically about this important phase 1.

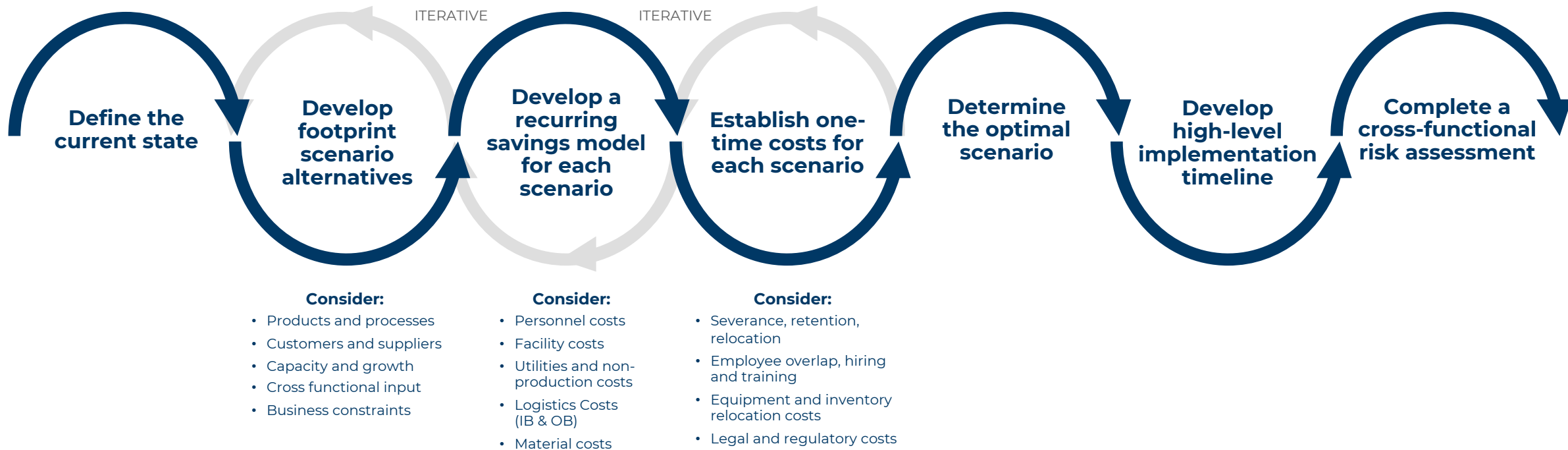
Depending on transfer complexity and other factors, you may need to consider additional situationally specific items around real estate, incentives, org design, etc.

PHASE
1

Financial analysis & data driven decision making

Figure 2.0

PHASE 1 PROCESS STEPS



PHASE

1

Financial analysis & data driven decision making

SITUATION SPECIFIC CONSIDERATIONS

Cash flow model,
NPV, and Payback
calculations

Detailed
Capacity Model

Organization
Design

Make Buy Analysis

Facility Search with
Real Estate Brokers

Government
Incentives

Regional/Global
Analysis

IT Transistion

Project governance & detailed project planning

Project planning plays an essential role in helping guide stakeholders, sponsors, teams, and the project manager through subsequent project phases.

The appointed project or program manager should clearly define the roles of all the team members to avoid any confusion and highlights roles that are interdependent. If the transfer is complex, consider establishing a comprehensive Project Management Office or PMO.

At this stage, it's important to define project governance.

- Who will serve on the project steering committee?
- What is the frequency that the group will meet to review progress to plan?
- In what format will they discuss open items, issues and successes.
- How are key communications going to be made to employees, suppliers, customers, and other stakeholders?

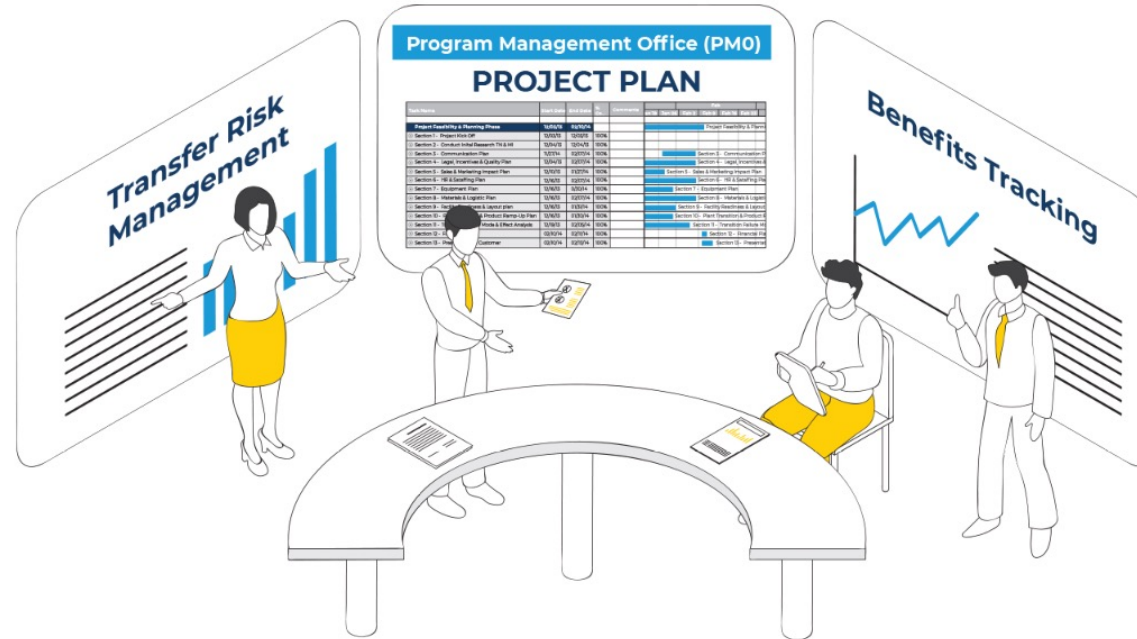
Have the project team establish synergy goals and objectives, prioritize activities, and provide a baseline for performance tracking. In addition, any material risks that were identified in Phase 1 should have corrective action plans developed *in advance*, thereby shortening response time and lessening impact.

PHASE
2

Project governance & detailed project planning

Build a detailed Gantt chart for all transfer related activities

Include owners, dates and establish a formal Program Management Office (PMO).



PHASE
3

Project / Program Management

To the extent you've planned appropriately in Phases 1 & 2 as suggested above, project managing the transition should go relatively smoothly.

Its important to keep stakeholders aligned and well informed of progress. Weekly or bi-weekly update meetings to review progress should be considered high priority with attendance from all key stakeholder's mandatory.

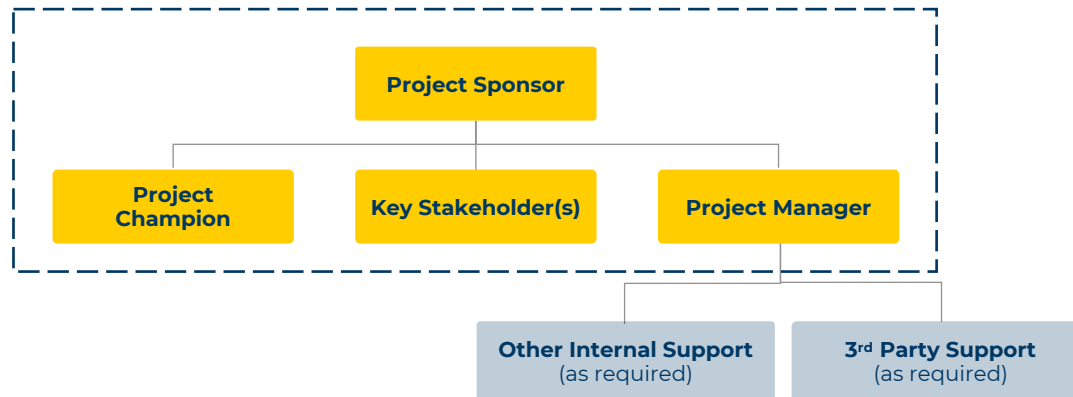
Key success factors for this phase include:

- Manage regular reporting cadence and exception reporting to the steering committee
- Establish formal project management/relocation steering committee
- Maintain open and timely communication with send-site(s) and receiving site(s)
- Manage timeline & monitor progress
- Monitor project budget and cost increases/decreases
- Track initiative progress against timelines and milestones
- Ensure knowledge transfer is done correctly

PHASE
3

Project / Program Management

ESTABLISH A STEERING COMMITTEE



Typical Steering Committee Construct

Project Sponsor	Typically a C Suite Executive
Project Champion	Often the COO or VP of Operations
Key Stakeholder(s)	Could include several of: VP of HR, VP of Finance/CFO, VP of Sales etc. These vary by project and business.

Key success factors:

- Manage regular reporting cadence and exception reporting to the steering committee
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Program management responsibilities

Clear roles and responsibilities will promote engagement and ownership by your team

Ensuring all your program team members are up to speed on project objectives, key milestones, status updates and benefits tracking is a key goal of a structured program management approach.

Furthermore, your project team needs to have clarity on their specific roles and responsibilities throughout the life of the project.

Steering Committee

- Prioritization and successful delivery of program objectives
- The identification and removal of any barriers to delivery
- Continued alignment of program with Business Objectives
- Operational Strategy decisions

Program Management

- Communication Strategy and execution
- Governance, identification of barriers
- Integrated Planning, Program Reporting & KPIs

Workstream Sponsors

- Successful delivery of Workstream objectives
- The identification and removal of any barriers to delivery
- Wave planning and site selection
- Cross functional alignment

Workstream Leaders

- Results delivery
- Workstream Management
- Training

Apply these best practices to maximize success

1. Use data to drive decision making vs. relying on 'gut feel'
2. Take extra time upfront to conduct thorough analysis and scenario modeling
3. Manage risk before, during and after the transition by proactively planning for potential issues
4. Document tribal knowledge before transfer
5. Appoint a project leader with experience handling similar undertakings
6. Build a structured PMO that includes key cross functional stakeholders and provides strong project governance
7. Rigorously track progress to the plan, and financial impact(s) in real time
8. Be alert to changing situations and adjust your plan accordingly

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