



ARE YOU READY?

CONFIDENTIAL CLIENT, *EUROPE*

SITE STRATEGIC MASTER PLAN

CASE STUDY: PROJECT MANAGEMENT
AND SCHEDULING



Site Strategic Master Plan

PROJECT OVERVIEW

A manufacturing site was predicting a change to their product portfolio and volumes over the following five years. CAI's team of experts were engaged to **help our client understand how to effectively develop a Site Strategic Master Plan**. We were assigned to train and mentor the site team throughout the development process of a comprehensive and data-driven Strategic Site Master Plan, containing the design of the new footprint, the need for capital investment, and a restructuring plan for the manufacturing site to meet the future predicted volume scenario.

CAI's team of experts worked with each department at the client site implementing a **structured and data-driven process** that helped align their site plans with their business plans for a five-year horizon.

The resulting integrated master plan embodies the future business strategy and operational/engineering needs for the organization to support the strategy, both adopting new technologies and/or simply planning capacity expansion.

CHALLENGE

The ongoing development of the manufacturing site is essential to provide future state readiness for a continually evolving business environment.

Strategic questions needed to be answered by the organization about their growth, for example how much they could increase their manufacturing before investing in capacity expansion, installing a new production line, building more laboratory space, or increasing utilities capacity.

The challenge to CAI was to help the client document site objectives and key assumptions, structure data, train/mentor site personnel on the site master plan process, keep departments aligned throughout the process, and assure consistency while business goals and assumptions were changing.

Top management's challenge to CAI was to complete site strategic master plan within **two months** from the project kickoff. CAI's standard template for site master planning allows timeline optimization for data collection and final reporting.

STEPPED APPROACH

A stepped approach to strategic site master planning was followed:

1. Gain a comprehensive picture of business goals and agree on assumptions.
2. Establish the baseline by getting a full understanding of the business fit of the site, current capability, capacity, and utilization.
3. Evaluate the entire site demand impacted by the business plan.
4. Identify the 'Needs' (gaps) to meet business goals.
5. Optimize before investing and reassess the "Needs" (Risk Assessment, Operational Readiness and Assessment program could be used.)
6. Develop options and document impact to site.
7. Build the Implementation Plan (Cost Estimate, Phasing, Risk mitigation).

1. BUSINESS GOALS AND ASSUMPTIONS

A kick off meeting was held to communicate the business goals and assumptions.

Because master planning addresses the big picture, the input of all operational functions is critical to move the process forward. Directors and managers in charge of business and operations, together with key people needed to identify assumptions, were involved. The best results are achieved when management is committed to the strategic site master plan process and is willing to input into the needed projections.

Business plan communication included goals for growth, pipeline of products (including ongoing business, awarded new business and potential new business) and other initiatives envisioned for the planning horizon of five years.

During the kick-off meeting, the team developed a list of assumptions, determined if those assumptions needed to be challenged, and identified potential follow-up actions, for example in-house/outsourced warehousing. Having a clear definition of the assumptions is critical to understand the master plan and to change it when conditions change, to maintain consistency.

Weekly meetings were carried out to validate the progress, identify any critical issues, drive the schedule to achieve the upcoming goals.

2. ESTABLISHING THE BASELINE

The master plan started with a comprehensive understanding of current site capability, capacity, and utilization. This step included the business fit of the site today (by illustrating the site's defined and approved role, assets, sourcing, and technologies), and the site's capacity and potential (current capacity and utilization, assuming the current product mix remains).

Understanding how the existing site is operating and where opportunities and limitations currently exist for adding capacity and/or increasing utilization was key to developing a defensible master plan. In addition to talking with managers when compiling operational data, leveraging existing management information systems to map the baseline could be helpful.

Capacity and utilization methodology needed to be specific for each operational area. Workshops with department heads established the best definition of capacity for their department (for example, laboratory capacity driven by samples or headcount, warehouse by storage pallets, offices by headcount or seats, manufacturing by units or batches).



10 Helpful Tips

1. Involve cross-functional team from business and operations
2. Assure consistency with corporate culture
3. Allow for flexibility within the proposed strategy
4. Highlight resources to implement
5. Involve an acceptable degree of risk
6. Be achievable in an appropriate time frame
7. Be practical – find the right balance between the need data-driven decision and the effort to collect data
8. Keep the high-level look – the delivered plan must be efficient, cost effective and facilitate revision
9. Should be clear and easily understood by corporate management
10. Update assumptions when conditions changes and update site master plan to maintain consistency



3. ENTIRE SITE DEMAND

The entire site demand impacted by the business plan was evaluated:

- Warehouse space
- Laboratory capacity
- Offices and ancillaries (parking, canteen, gowning)
- Manufacturing
- R&D
- Site Infrastructures
- Utilities

Future state capacity and utilization, assuming the future product mix is part of this step. The master plan must be based on robust data-driven process to ensure the outcome is realistic; failing to fully understand capacity drivers will prevent the management from optimal capital planning.

4. IDENTIFY THE NEEDS

Based on the outcome of step 3, the team developed the gap analysis to understand the “Needs” – the gaps to be addressed to achieve the business goals.

5. OPTIMIZE BEFORE INVESTING

To help minimize the “Needs”, site management agreed to revisit the assumptions made about operations and to perform an operational excellence assessment to identify specific strategies for improving efficiency and increasing capacity.

This enabled optimal capital investment prioritization, making funds available where really needed instead of allocating for capacity expansion before demonstrating that existing capacity utilization has been fully optimized. Once the operational assumptions changed as result of the optimization, steps 1 to 4 had to be reiterated to keep consistency throughout the master plan.

6. OPTIONS & SCENARIOS DEVELOPMENT

Many options were developed to address the identified gaps for each business scenario. Typically, one option was developed for each scenario, and multiple options were explored when different assumptions were added, for example the need to increase capacity of one department could be addressed through a line revamping or line replacement.

Once all the different scenarios and options were developed, pros and cons were evaluated considering both capital and operational costs, together with implementation risk (for example significant disruption to operations, regulatory impact, long timeline associated with permits required).

An executive summary of the strategic planning options comparison was provided to support presentation to executives and decision-makers.

OPTIMIZE BEFORE INVESTING

CAI experts can support any organization to establish an Operational Readiness and Assessment program that identifies areas of improvement and to re-work internal processes before investing. View our case studies to learn more about our breadth of expertise.

[LEARN MORE](#)

7. IMPLEMENTATION PLAN

Site engineering team, with the oversight and support of CAI experts, have developed the high-level implementation plan only for those scenarios and options which were selected during the pros/cons assessment:

- Conceptual layouts for the areas to be modified
- Logistic constraints in terms of pallet and material flow have been considered in terms of staffing and for gowning room sizing
- Schedule and the capital cost estimate for the development program
- Impact analyses on utilities systems and on general infrastructures due to future expansions of production
- Risk mitigation for implementation phase

CONCLUSIONS

Strategic Site Master Planning is the result of a coordinated series of data-driven decisions regarding the actions to be taken to achieve business objectives and is built along both analytical and creative pathways. It is a decision-making process that is composed as part analysis of the context and part proactive creativity.

A Strategic Site Master Plan is the product of this process, managed through the participation of cross-functional team, divided into steps, and characterized by checks and feedback. It indicates the strategic orientation for the future of an organization and defines the sequence of activities needed to achieve the main objectives over time, defining priorities and obtaining alignment to the organization's strategic goals.

Typically, the Strategic Site Master Plan is updated periodically, to maintain consistency with revised business strategy or changes in the operational assumptions.

Investing in Strategic Site Master Planning provides organizations a competitive advantage, enabling them to plan for and maintain Operational Readiness in a continuously evolving business environment.

WHY STRATEGIC SITE MASTER PLANNING?

This depth of planning helps an organization lay out the strategic orientations for the future and define a plan to align with the strategic objectives.

It also defines priorities, enabling organizations to achieve and maintain Operational Readiness over the time in a continuous evolving business environment.



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