

# Mastering Technology Strategy

*How to leverage technologies for corporate success in a systematic and sustainable way*

## Essential enabler to implement corporate strategy

Consistently managing and exploiting the ever-changing development of technology can determine success or failure for a company. In order to prevail in an environment of volatile market requirements and increasing competition, companies need well-defined technology strategies that act as links between corporate strategy, business model, internal resources and external demand.

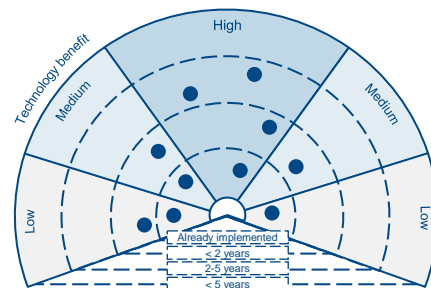
Arthur D. Little defines a technology strategy as a plan with technologies to prioritize, including when and how to master them. On this basis, appropriate strategic actions, such as investments and R&D projects, can be elaborated on in order to reach the desired position. In this way, a technology strategy acts as an essential enabler to implementing corporate strategy.

## Defining technology strategy

To build the bridge from corporate priorities and environmental conditions to a coherent technology strategy, the Arthur D. Little approach to defining technology strategy comprises four phases:

- **Intelligence:** As the first step, relevant technologies have to be identified and assessed. To perform this task, search fields are derived from corporate strategy, technology trends and competitors are analyzed, and technologies are finally evaluated with respect to their potential benefit to the company (Fig. 1).
- **Trek:** The second step elaborates on which technologies the company needs in order to gain competitive advantages. This can be performed by technology unbundling, in which all technologies required for relevant products are identified. Building on this concept, the capabilities are then assessed, gaps are identified and strategic actions are formulated (Fig. 2).

Fig. 1: Technology Radar



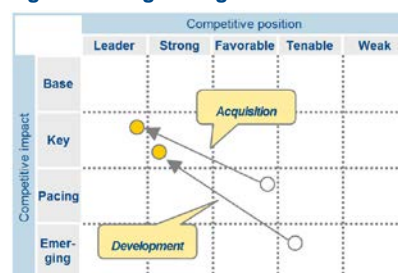
- **Retrieval:** In order to close the gaps between the identified technology, decisions need to be made in the third step on whether to make, buy or collaborate. In our framework, we consider various aspects such as technology impact, maturity, and competitive position to define the appropriate sourcing option for strategic actions.
- **Program:** Finally, the implementation plan for the technology strategy is addressed in the fourth step. This includes roadmapping to provide a time frame for planning, steering, and controlling. Moreover, resource management is crucial to ensure the availability of skills and competencies. Furthermore, organization, roles, and responsibilities should be aligned to enable an efficient and effective execution of the implementation plan.

## Success factors

Arthur D. Little's Innovation Excellence study drew on over 650 responses from companies across various industries in order to identify related success factors.

For the *Intelligence* phase, top companies are characterized by structured use of

Fig. 2: Defining strategic actions



both internal and external sources, and by a systematic process for interpreting and disseminating actionable business intelligence. During *Trek*, a deciding factor seems to be a good understanding of technologies in terms of quantified contribution to corporate goals, with respect to their impact within the industry. Further on, in the *Retrieval* phase, programs to access and develop needed competencies from outside the company are mastered, particularly by the top companies. Finally, crucial factors during *Program* are early market acceptance tests for new developments, as well as encouraging teams to "fail early", when costs are still low.

## Case examples and outlook

Arthur D. Little has helped numerous clients to develop tailored technology strategies. For a company in the metals industry, we refined technology and competency platforms and redefined the global R&D organization. As a result, we were able to both realize annual cost savings of US\$ 25 million and identify overall growth potential of over US\$ 100 million. Another example is a vehicle and chassis manufacturer for which Arthur D. Little realigned the product portfolio with respect to market needs. By introducing platform-based technologies, a potential key and core module reduction by 40% was achieved. Numerous other examples show comparably successful effects. With its proven methodology, Arthur D. Little enables companies to sustainably leverage technology strategy for corporate success.

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