



ADL Matrix

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A number of tools have been developed to help with strategic decision making around technology investments. Typical of these are those which make some classification of technologies in terms of their open availability and the ease with which they can be protected and deployed to strategic advantage.

For example, the consultancy Arthur D. Little uses a matrix which groups technological knowledge into four key groups – base, key, emerging and pacing.

- Base technologies represent those on which product/service innovations are based and which are vital to the business. However they are also widely known about and deployed by competitors and offer little potential competitive advantage.
- Key technologies represent those which form the core of current products/services or processes and which have a high competitive impact – they are strategically important to the organization and may well be protectable through patent or other form.
- Pacing technologies are those which are at the leading edge of the current competitive game and may be under experimentation by competitors – they have high but as yet unfulfilled competitive potential.
- Emerging technologies are those which are at the technological frontier, still under development and whose impact is promising but not yet clear.

Making this distinction helps identify a strategy for acquisition based on the degree of potential impact plus the importance to the enterprise plus the protectability of the knowledge. For base technologies it may make sense to source outside whereas for key technologies an in-house or carefully selected strategic alliance may make more sense in order to preserve the potential competitive advantage. Emerging technologies may be best served by a watching strategy, perhaps through some pilot project links with universities or technological institutes.

Models of this can be refined, for example, by adding to the matrix information about different markets and their rate of growth or decline. A fast-growing new market may require extensive investment in the pacing technology in order to be able to build on the opportunities being created whereas a mature or declining market may be better served by a strategy which uses base technology to help preserve a position but at low cost.

For more detail on this approach see <http://www.adlittle.com/>.