Among large corporations, acquisition and strategic investment are the primary means to innovation. In the past two years, Microsoft, for example, has acquired 15 companies and invested in another 71. These acquisitions and investment targets include innovators such as ShadowFactor (Internet voice chat), Audible.com (streaming technology), Blackboard (e-learning software and services), SMART (Internet-ready connected homes) and Entropic (speech recognition). During the same two-year period, Cisco acquired 36 companies. Like Microsoft, it targeted small players with innovative technology.

The practice of innovation by acquisition is not unique to the high-tech industry. In the past year, for example, Coca-Cola and PepsiCo have been falling over each other to acquire innovative manufacturers of alternative beverages. This emerging sector—which includes bottled waters, all-natural juices, and teas laced with ginseng and other herbs—has quickly grown into a $5bn industry.

But why do such large corporations pay premium prices to acquire innovative upstarts, many of which have minimal or even negative earnings? Two reasons: corporations need to sustain a record of innovation to remain competitive; and, with a few exceptions, corporations today lack the capacity for organic (internal) innovation.

**Sustained innovation**

In every industry, the leading companies are the innovators. Yet the cadre of innovators keeps changing. Today’s innovators—Dell, Cisco, Charles Schwab, Southwest Airlines, Starbucks, the Gap, University of Phoenix and others—are relative newcomers.

The high turnover among leading innovators suggests that the real problem isn’t innovation—it is sustained innovation. Companies may chance upon a good idea that will give them an advantage for a while. But sooner or later—and usually sooner—they cede this advantage to a competitor who has an even better idea.

In an effort to maintain a leadership position, corporations often seek to buy innovation off the shelf through corporate acquisitions. This strategy is sometimes effective, at least in the short term. Other times, it fails because the acquiring corporation underestimates post-merger integration difficulties. In both cases, innovation by acquisition is always at enormous cost, either in cash or stock, to the shareholders of the acquiring corporation. Those shareholders would see far higher returns on their investment if corporations were able to innovate organically.

**Organic innovation**

Corporations typically have an abundance of resources to support innovation: investment capital; talented employees with ideas; R&D laboratories; and established brands and distribution channels. Yet in spite of these advantages, corporations are unable to innovate organically because they are not organised to do so.

Capital allocation is a case in point. In nearly all corporations capital is allocated through central planning. This process freezes resources in line with an annual budget. Central planning is also a backward-looking and legacy-heavy approach that leads to over-investment in mainline businesses at the expense of new ventures.

The failure of new-venture units represents another example of how corporations today are not organised to innovate organically. Since the 1970s, corporations have tried to innovate organically by creating new-venture units. But most of these experiments failed because the new-venture unit resided at the periphery of the corporation, remote from its core strengths.

Research by the Strategos Institute suggests that “intramarkets” and “extramarkets”—new market-based
forms of organisation – can help companies achieve organic innovation. Unlike the failed new-venture units, market-based organisation represents the most promising alternative to innovation by acquisition.

**Market-based organisation**

The concept of market-based organisation emerged from a study of Silicon Valley companies, where an absence of hierarchy, bureaucracy and central planning have enabled innovation to flourish. Our reasoning is that if corporations applied market principles to their own internal organisation, they might be able to sustain organic innovation. If market-based organisation can deliver sustained organic innovation, corporations that adopt it could maintain their leadership positions perhaps in perpetuity.

Markets work in ways that promote innovation. Unlike hierarchies, which control resources by giving senior management (the central planners) the authority to allocate resources, markets provide a dynamic mechanism for attracting resources to the most innovative projects.

Markets also encourage exploration and experimentation, leading to more viable ventures than would result from the allocation of resources by a hierarchy. And markets are free of the vested interests that impede hierarchical and centrally planned companies.

Of course, hierarchy, bureaucracy and central planning are not without virtue. For example, they are effective in the stewardship of routine activities, which require stable management structures and large-scale infrastructure. But these forms of organisation frustrate the entrepreneurs within a company, who will often leave in order to pursue their ideas elsewhere.

**Intramarkets and extramarkets**

In intramarkets, all trading of ideas, capital and talent takes place among a corporation's employees or its business units. Shell, EDS and BP Amoco are pioneers of intramarkets.

Extramarkets are similar to intramarkets except participation includes selected external trading partners. IBM and the World Bank are extramarket pioneers.

**Shell**

Shell has traditionally been better at investing in large, low-risk projects that yield a modest return rather than in small, high-risk projects that might have the potential to transform an entire industry. In an effort to overcome this tendency to neglect radical innovation, Shell introduced GameChanger – the first intramarket – in 1996.

In GameChanger, innovators (employees) submit ideas to a peer screening panel. Ideas that pass that progress to a review by an extended panel that decides whether or not to fund a proof-of-concept project.

Funded projects must then pass through several other development and funding phases before they could eventually transfer from GameChanger to full commercialisation.

In one recent year, four of Shell's five largest growth proposals derived from this intramarket. And a series of GameChanger projects has enabled the formation of WellDynamics, a promising joint venture in smart wells technology between Shell and US oil group Halliburton.

**EDS**

Inspired by GameChanger, EDS has recently established Idea2Reality, an intramarket initiative of its own. Similar to GameChanger, it attracts ideas from employees and funds development of the most promising submissions. Idea2Reality is the centrepiece of EDS Innovates, a broader initiative to embed innovation in the fabric of the company. By neglecting innovation in the past, EDS has earned the reputation among some of an innovation laggard.

**BP Amoco**

BP Amoco has established an intramarket for trading emissions permits. The approach is an alternative to command-and-control regulation to reduce greenhouse gases. Each year, it allocates emission permits among business units. The total number of permits across all units per year is determined by the annual target for emissions reduction. A higher target reduction means a lower allocation of permits.

If a plant can innovate to reduce its emissions – perhaps by developing low-emissions technology – it can sell to other plants any permits surplus to its needs. Revenue from these sales goes straight to a business unit’s bottom line, boosting earnings and performance-related compensation. Since launching the tradable-permits system in January 2000, BP Amoco’s direct greenhouse-gas emissions have fallen by 71 million tons – three per cent below the portfolio-adjusted 1999 level.

**IBM**

IBM’s alphaWorks extramarket is a web site for the exchange of emerging technology and ideas between IBM researchers, IBM product groups and the wider
community of external software developers. The site currently attracts 400,000 unique visitors (predominantly external software developers) per day.

IBM researchers post alpha code (early-stage technologies) to the alphaWorks site. Developers who visit the site can download this alpha code and collaborate with other developers in fixing bugs, exchanging tips and discovering new applications for the technology. The developers then pass their feedback to IBM via email, electronic bulletin boards and online questionnaires. Finally, the alpha Works team synthesises the developer feedback and forwards it to IBM's product groups.

Established five years ago, alphaWorks currently generates more than 40 new products a year and has reduced the time that IBM requires to commercialise an alpha technology from two or three years to less than six months.

**World Bank**

An enthusiastic team at the World Bank recently organised the first Development Marketplace. The initiative, an extramarket, attracted more than 1,000 ideas for fighting poverty from sources as diverse as individuals, aid agencies non-governmental organisations, embassies, universities, and World Bank staff. At the Development Marketplace – a two-day event at its Washington headquarters – the World Bank awarded $5m in on-the-spot funding to the best ideas.

**Insights from the pioneers**

Before identifying insights that one can draw from the experiences of these pioneers, a couple of caveats: first, market-based organisation is new. Interest in this form is growing quickly. However, only a handful of corporations around the world have so far actually implemented market-based organisation, so data on its efficacy is limited.

The second caveat is to beware of slavish imitation. Design of an effective market-based organisation requires a deep understanding of a corporation’s idiosyncrasies, management processes and historical commitment to innovation.

Caveats aside, here are 10 widely applicable insights from the pioneers of market-based organisation.

**Launch and learn**

Corporations shouldn’t spend years drafting elaborate blueprints before they launch a market-based initiative. Rather, like BP Amoco, they should start with a relatively simple framework that encourages participation of employees and business units. And they should also expect to evolve the system as the needs of the corporation change.

For example, now that business units are familiar with its permit-trading system, BP Amoco is considering the introduction of trading in futures in its intramarket. This would facilitate risk management by enabling business units to secure emissions permits to cover emissions from projects planned for the future.

**Ensure flexibility of staffing**

Intramarkets like Shell’s GameChanger and EDS’s Idea2Reality, which entail the development of an idea from initial submission to commercialisation, need flexible staffing arrangements. For example, when an idea receives GameChanger funding, the innovator and any other required team members must have the freedom to break from existing projects to pursue development of the idea.

**Leverage hierarchy**

When EDS first launched Idea2Reality, some business units, driven by a perceived need to control their staff, attempted to bar the involvement of their staff members in Idea2Reality projects. Executive management issued a corporate edict prohibiting such barring but also compensating business units for employee time diverted to Idea2Reality projects.

**Show sensitivity to middle managers**

The co-operation of middle managers in a market-based initiative is essential. Because they bear direct responsibility for meeting the targets that senior managers set, they have a different perspective on innovation. They’ll probably regard it as less important than the dispatch of a direct-mail campaign, the release of a new version of a product or the preparation of next month’s sales forecast. Sensitivity to their perspective is the primary weapon in gaining their support for a market-based form of organisation.

**Respect the prevailing governance structure**

Whether decision making is distributed or centralised, architects of market-based organisation must understand and respect the prevailing governance structure. Shell, for example, is a federation of operating companies. The parent company is a minority shareholder in many of these operating companies and consequently has little influence over them. In order to function effectively in this environment, GameChanger team members must rely on persistence and persuasion to win ongoing support from the operating companies.

Launching a market-based initiative in a centralised corporation like BP Amoco will probably be easier,
assuming it has the support of senior management. However, the principles of hierarchy, bureaucracy, and central planning are usually more pervasive in centralised corporations, and this cultural legacy might impede the corporation's ability to adapt to a market-based form of organisation.

Know your trading partners and target them accordingly
In extramarkets like IBM's alphaWorks an understanding of external trading partners is paramount to the market's success. Originally, the alphaWorks team defined its external trading partners as all software developers. Today, aided by a much more sophisticated understanding of the developer community, alphaWorks sees its external partners as early adopter type developers – a small percentage of the developer population. Armed with this knowledge, the alphaWorks team has grown smart in its promotion of alphaWorks to external developers.

For example, grassroots promotion (attendance at trade shows, participation by IBM researchers in discussion forums) is effective, whereas overt promotion (for example, advertising) induces a negative perception among developers.

Build and maintain strong relationships
Melinda Lockhart, the architect of EDS Innovates, placed great emphasis on relationship building long before she considered implementation. She devoted most of 2000 to consultation, presenting her evolving ideas formally and informally to as many people as she could reach.

Her style was unwaveringly collaborative. No matter how advanced her thinking, her PowerPoint slides were always overlaid with the stamp “draft” in red letters, communicating a readiness to listen to people's ideas.

And, most important, it helped to alleviate a sense of threat that middle managers might otherwise have felt from the impending introduction of a new corporate initiative.

Encourage innovation, reward innovators and manage failure
If corporations want to become more innovative, they must find ways to encourage innovation among their employees. That might necessitate the development of team-oriented approaches to performance assessment because innovation often depends on teamwork rather than individual accomplishments.

Rewarding innovators is also important. EDS, for example, looked at how it celebrates the achievements of its top sales people – with an annual banquet and awards ceremony – and replicated this format for its top innovators.

Sometimes, of course, an innovator's ideas won't lead to new opportunities. How should corporations manage these so-called failures? Remember this: in the realm of innovation, the only failure is not to try at all.

Develop new innovation metrics
Companies rely on traditional financial metrics such as earnings, stock price, ROE, EVA and MVA. But each has serious limitations, especially with respect to innovation. For example, none can evaluate lost opportunities.

Traditional financial tools are equally inadequate. Benchmarking, for example, encourages companies to replicate the strategies of competitors.

Simple measures of a market-based initiative's vitality are readily obtainable.

Shell can measure the number of ideas that its employees submit to GameChanger; IBM can measure the number of developers who provide valuable feedback via the alphaWorks site; and BP Amoco can measure its greenhouse gas emissions with respect to a previously set target.

But these measures lack the robustness to justify an increased budget or a more pervasive reach for the initiative.

If market-based organisation is to endure, let alone replace conventional resource-allocation processes for new business development, it must demonstrate its value to the corporation with the introduction of new and innovative metrics.

Share best practices
The pioneers of market-based organisation are already seeing benefits from their initiatives. But they're also encountering some difficult questions along the way, such as how many innovations can a typical corporation accommodate at one time? Does market-based organisation threaten to undermine an underlying corporate strategy? How should corporations resolve conflicts between corporate hierarchy and market-based organisation?

Sharing best practices might be the most effective means of addressing these questions. To that end, BP Amoco has joined with DuPont, Ontario Power, Alcan, Pechiney, Shell and others to form the Partnership for Climate Action – a forum dedicated to developing market-based approaches to emissions reduction.