Executing Your Technology Strategy

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Being able to move your technology company forward through innovation, can be a tricky proposition. Your firm needs to think about efficiency with current products, while also being creative with innovation for products and technology that you need to get to the market in a timely manner. Your firm wants to have as large of an "installed base" as possible and need to do it before your competitors do. Here are some areas where your firm could focus their strategy:

1. Collaborations

2. Acquisitions

3. Backward Integration

4. Patent Policy

I recently did some research on Avigilon, a Canadian company who has really good focus and vision towards expanding the installed base of their product lineup. They do this by being very innovative with their products through their technology strategy.

Avigilon competes on a dominant design basis and supplies most of the complementary products for their technologies and designs, giving them an end-to-end solution. There are also many complementary products in this sector available by other suppliers; e.g., Canon lenses.

Avigilon's systems are sold through a network of re-sellers known as "integrators" and although the company focuses on expanding organically, they recently made some key strategic decisions regarding alliances and acquisitions.

Collaboration Alliances
Avigilon formed these strategic alliances in 2009 for compatibility and ease of integration, while also reducing their R&D costs. This brings less confusion to the market, and offers combined synergistic 'best effects', which may lead the partners' to co-opting other competitors.

1st – Avigilon joined the *Lenel Open Access Alliance Program* (OAAP). This open architecture design allows integration of Avigilon's HD video surveillance system and Lenel's industry-leading *OnGuard* commercial security platform.

2nd – Avigilon became a member of the global *Open Network Video Interface Forum*(ONVIF), enabling integration of ONVIF standards-compliant IP (digital network) cameras with their Control Centre's high-definition surveillance software.

Collaboration Pros

By being involved with these selective alliance partners, Avigilon uses a "network view" by establishing external relationships and connectivity with experts in their technology area; the partners are focusing on value-added interactions and a competence-based trust.

Collaboration Cons

There may be more 'private' benefits to their alliance partners than common benefits to all; Avigilon's technology used in the network, may somehow get *appropriated* by a partner or they may use the alliance as more of a one-way knowledge transfer mechanism.

Systems Integration

Avigilon's 4-Port analog video encoder enables integration of legacy conventional cameras with their HD surveillance system. Thus, Avigilon can attract customers who already have existing systems and want to branch out into a higher-end product, without the need to purchase an entire system. This gives Avigilon more scope and potentially a larger installed base.

Acquisitions

With limited resources and a need for quicker time-to-market, Avigilon decided it would be faster, less risky, and less expensive to acquire, rather than develop these competencies.

1. S2 Netbox was acquired for integrating Avigilon's *ACC* through a browser-delivered management system and they also wanted to integrate access control with alarm and temperature monitoring.

2. RedCloud Security was purchased for their web-based, physical and virtual access control systems. Their patented products are complimentary to Avigilon's technology and product line-up, giving the Company a share of the $6 billion dollar electronic access control market.

3. Video IQ was acquired for their patented real-time video analytics technology, which provides solutions for security and business intelligence applications. This technology complements Avigilon's innovative products, allowing for analytics capability while giving more scope to their abilities, a broader customer reach, and larger market potential.
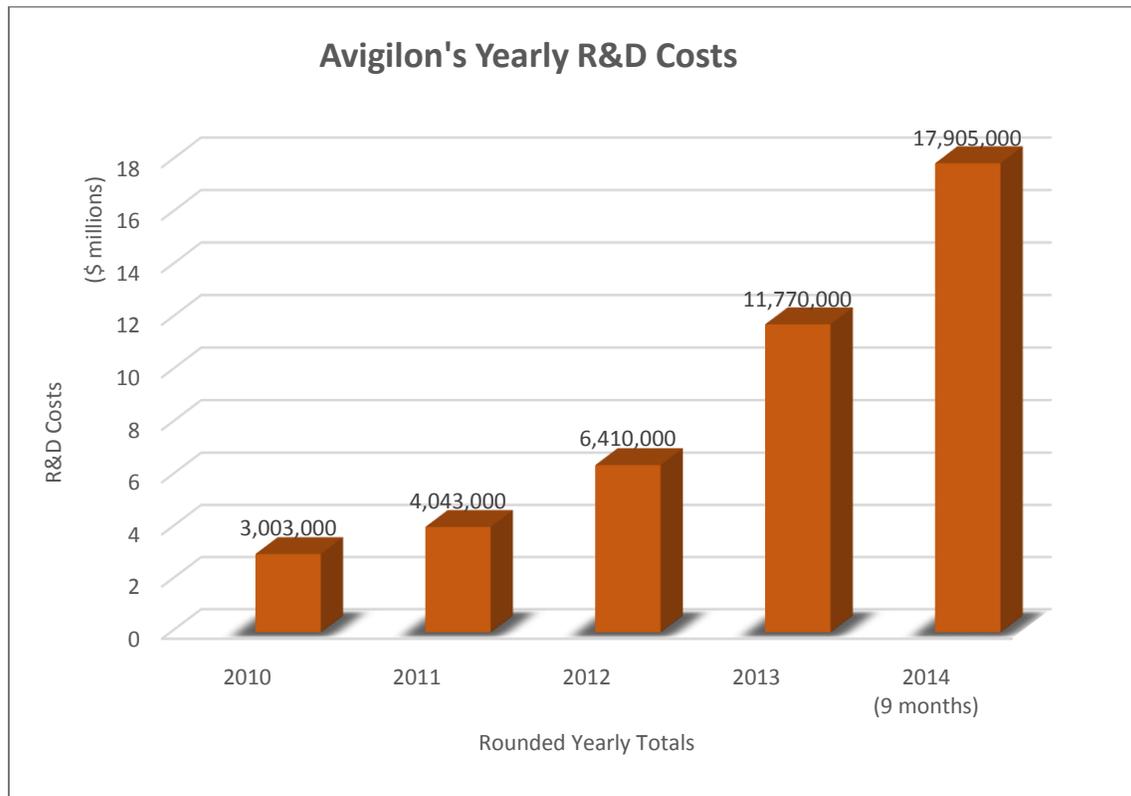
Network Externalities

Through these alliances and acquisitions, Avigilon is continuing to increase the size of their installed base. With a larger base and less compatibility issues, the requirement for

complementary products is enhanced. This becomes a self-reinforcing character, leading to greater product demand. An example of some complementary products are: numerous types and styles of cameras and lenses; recording devices; access control systems; video analytics software; analog interface encoders; joystick keyboards; Ethernet accessories; and camera enclosures.

Patent Policy

Avigilon uses various proprietary design and technology patents as protection for their products, systems, and software services, while relying on trade secrets for others where they feel the necessity in holding the technology *close* to the company. However, on the other hand, their integration connectivity is built on an open platform for maximum compatibility with existing conventional systems.

With their recent acquisitions, they took control of numerous patents for access control and video analytics, and several of their components and systems also have trademark protection. In fact R&D is one of Avigilon's competitive advantages, their budget has increased steadily over the last several years and this year it will easily top $18 million.

Avigilon's Yearly R&D Costs

Year	R&D Costs
2010	3,003,000
2011	4,043,000
2012	6,410,000
2013	11,770,000
2014 (9 months)	17,905,000

R&D Costs ($ millions) — Rounded Yearly Totals

Some recent patents are: Adaptive Infrared Technology, An in-ceiling pan-tilt-zoom camera mounting system, and High-Definition Stream Management, which is also a trademark. Some trademarks based on their trade secrets are: Lightcatcher Technology (see-in-the-dark) and the Rialto video analytics system.

Here is an **Innovation S-curve** chart showing roughly where their Surveillance Control Centre system (ACC) is currently situated.
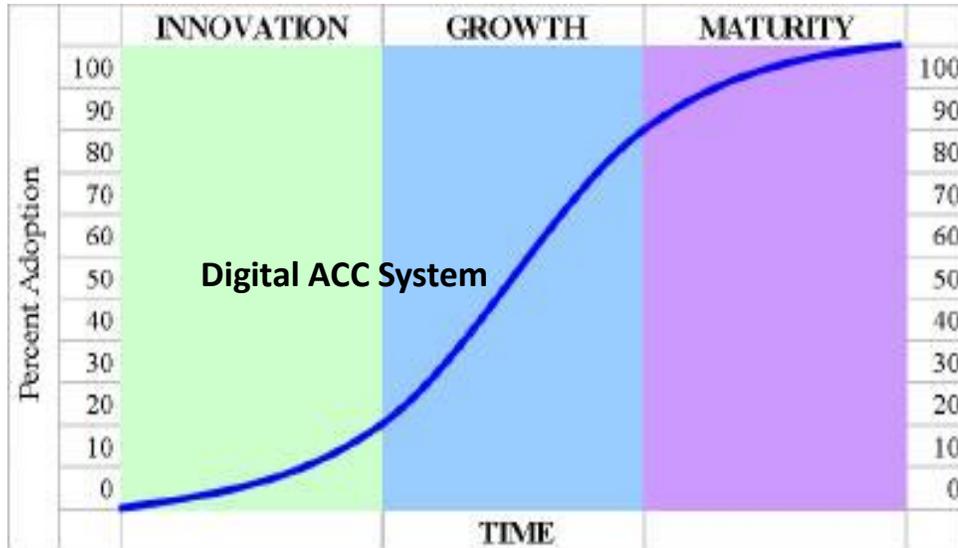
Through great technology strategy and product innovation, Avigilon is a really good example of how to do it right and follow through with good execution.