

Ingredients of a successful public-private partnership

A case study of the landmark vaccine vial monitor partnership

Public-private partnerships are an important vehicle to drive improvements in global health. By sharing responsibility and risk, the public and private sectors can successfully tackle pressing global health problems through developing new technologies—and adapting existing ones—to ensure they are affordable and accessible to everyone who needs them. Recognizing this, PATH has coordinated many public-private partnerships to advance global health solutions, such as the vaccine vial monitor.

LEARNING FROM PAST SUCCESSES TO SUPPORT FUTURE ACHIEVEMENTS

For almost three decades, PATH has partnered with Temptime Corporation (formerly known as LifeLines Technology Inc.), the World Health Organization (WHO), and the US Agency for International Development (USAID) to develop, introduce, and expand access to the vaccine vial monitor: a small label with an immense global health impact. Known as the VVM, this small sticker adheres to a vaccine vial and changes color as the vaccine is exposed to heat, letting health workers know whether to use or discard the vaccine. Since its introduction, the VVM has helped ensure that only potent vaccines are administered in routine immunization programs and campaigns.

The success of the partnership that created the VVM depended on four key elements:

- A clearly defined problem and potential solution
- Long-term investments
- Political commitment and support
- Demonstrated expertise and trust among partners

This partnership provides a useful example to policymakers, funders, nongovernmental and multilateral organizations, and product developers of how the public and private sectors can better address today's greatest global health needs through dynamic, long-term partnerships.

DEFINING THE PROBLEM, IDENTIFYING A SOLUTION

In the mid-1980s—with primary support from USAID, among others—PATH began working with the WHO to turn the idea of a VVM into a reality.



Umit Kartoglu

A health worker in Niger reaches for three vials with the vaccine vial monitor (VVM). In 1996, the VVM became commercially available, markedly reducing vaccine wastage and saving millions of dollars.

PATH launched a search, internally and externally, for suitable technologies that could be used to monitor heat exposure. After evaluating one of its own technologies in partnership with the WHO, PATH identified a more capable technology manufactured by Temptime. Although Temptime's technology was originally developed to help the food industry monitor perishable products, PATH saw the potential to apply it to vaccines.

Recognizing the superiority of Temptime's technology and the potential for the VVM to be a mutually-beneficial health solution—one that worked with different vaccines, could meet the needs of developing countries, and offered a sufficiently large market to encourage private sector investment—PATH and Temptime began working together to adapt and produce the VVM.

INVESTING IN NEW GLOBAL HEALTH TECHNOLOGIES

As with most projects, securing the first dollars for the VVM was the most critical step to ensuring its success. To help decrease the significant upfront investment of Temptime—a small start-up company with limited capital—PATH worked closely with the company by providing design assistance and purchasing prototypes for technical and field evaluation using funds granted to PATH by USAID for the development of new global health technologies.

“That’s when we could begin working on the VVM in earnest,” said Ted Prusik, senior vice president at Temptime.

Although Temptime was the only manufacturer with the expertise to produce the VVMs, concerns about their ability to serve the entire vaccine market soon arose. To address these questions, Temptime needed to purchase new high-capacity manufacturing equipment.

Realizing that this challenge could end the VVM’s development, PATH helped Temptime procure a low-interest loan—which the company paid back—through a special program within PATH. “PATH took a risky step by loaning us the money, and we took a risky step by accepting the money and buying the equipment,” Prusik said.

With the loan in hand, Temptime was able to secure additional private-sector investments to pay off the cost of the equipment, tempering vaccine producers’ concerns and allowing the VVM to advance.

BUILDING POLITICAL SUPPORT THROUGH KEY NETWORKS

Once the VVM had proven its value in both laboratory and field testing, the WHO and the UN Children’s Fund (UNICEF) created a policy in support of the technology. However, to be successful as a new technology, the VVM needed an established market to enter.

“There were a lot of barriers that PATH helped us with, including funding and advocacy to help convince UNICEF and vaccine manufacturers that the VVM is a robust, science-based and valuable technology,” Prusik said.

PATH and the WHO worked to help create demand for the VVM among international procurement agencies, such as UNICEF, and to build support among vaccine manufacturers, who would need to apply the VVM to their products. This journey took nearly a decade.

“Once UNICEF included the VVM in their requirements, it was requested for the polio vaccine, allowing the production of the VVM to thoroughly take off,” said Michael Free, vice president and senior advisor for technologies at PATH. “Those steps moved everything forward in a different, more predictable manner, and motivated manufacturers to adopt the new technology.”



A machine at the Serum Institute of India Ltd., applies vaccine vial monitors to the tops of vials. Today, the monitors are placed on all vaccines distributed by UNICEF, saving US\$5 million annually.

PATH/Savir Malhotra

GARNERING STRENGTH THROUGH TRUST, EXPERTISE

“You can have a problem identified, and you can actually have a solution, but if you don’t have the financial capital, the credibility resulting from a track record and the reputation for establishing important partnerships and delivering, reaching success is very difficult,” said Steve Landry, who represented USAID in the VVM partnership and is now director of Multilateral Partnerships at the Bill & Melinda Gates Foundation.

Indeed, the capabilities of Temptime and PATH allowed them to secure additional funding and political support for the VVM across sectors and across the globe. By strengthening partnerships with other key stakeholders, such as UNICEF, vaccine manufacturers, and ministries of health, the VVM was brought to market in 1996.

Today, the VVM saves the global health community an estimated US\$5 million annually, and it has helped Temptime grow from a small start-up company into a financially stable, dependable supplier that continues to meet global health needs today.

IMPROVING GLOBAL HEALTH THROUGH INNOVATIVE PARTNERSHIPS AND PRODUCTS

By sharing long-term funding responsibilities, building networks, and establishing credibility through successes, public-private partnerships have the power to bring important technologies to market, supporting new businesses, saving money—and saving lives.



PATH is an international nonprofit organization that transforms global health through innovation. We take an entrepreneurial approach to developing and delivering high-impact, low-cost solutions, from lifesaving vaccines and devices to collaborative programs with communities. Through our work in more than 70 countries, PATH and our partners empower people to achieve their full potential.

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