



FLOWMON

Czech Republic, www.flowmon.cz

A joint research project gave rise to the creation of a new business. Very quickly the researchers understood that their product was not suitable for the market and entered into collaborations with partners to focus on and sell their real USP. Thanks to this new OI strategy, the business became profitable within 18 months

Executive Summary

A small group of Czech scientists worked for the pan-European association GEANT. They had no idea that this project would change their lives forever and give rise to the Flowmon solution which would one day monitor and secure a pan-European network used by 50 million users.

CASE N° : EE25

SECTOR: INFORMATION TECHNOLOGY

TECH INTENSITY: HIGH-TECH

LIFE CYCLE STAGE: ESTABLISHED

INNOVATION VECTORS: PRODUCT,
CUSTOMERS & MARKETING

01 PARTNERS: PSR, LARGE CORPORATION

KEYWORDS: Start-up, technology transfer,
network monitoring solution, security and
configuration problems

- BACKGROUND FRAMEWORK
- INNOVATION CHALLENGE & MARKET OPPORTUNITIES
- OI TRAJECTORY
- BUSINESS IMPACT
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BACKGROUND

The origin of the Flowmon technology is to be found in the Czech academic network, CESNET. CESNET provides network connection between academia, and also has its own research programme. CESNET participated in a project for GEANT, the pan-European research and education network that interconnects Europe's national research and education networks. GEANT built a high-speed internet network which was intended to serve European universities and research institutions. The goal of the Czech team was to develop a solution which could handle the monitoring of such an infrastructure. Their results were so impressive that it was decided to commercialize them.

2007 – Invea-Tech founded as a university spin-off through a technology transfer from CESNET

2008 – FlowMon {product and brand name registered by CESNET) helps first 50 customers to know and secure their networks

2009 – Introduction of IP Data Retention solution

2010 – Gartner identifies Invea-Tech as the only European Network Behaviour Analysis provider

2012 – Invea-Tech has partners and customers on 5 continents

2013 – AdvalCT company acquisition

2013 – Flowmon Networks enters Deloitte Technology Fast 50 for the first time

2014 – Selected in ACE Top 100 most innovative companies in Europe

2015 – Introduction of Flowmon DDoS Defender solution

2015 – Invea-Tech splits into Flowmon Networks and Netcope Technologies

2016 – Flowmon Networks placed in Gartner Magic Quadrant for Network Performance Monitoring

The company's future plans include developing new functionalities for network monitoring and taking their operations to a global level.

INNOVATION CHALLENGE & MARKET OPPORTUNITIES

The results of the GEANT project had been so

impressive that the consultative committee advised the team to establish a company. At first it seemed that Flowmon would acquire its first customers within a short time. Leading information technology companies became interested in the solution. Later, however, it became clear that academic expectations did not match economic reality: there was no awareness of the market; actually, the prototype was a long way from the product; there was no interest in expensive high-end equipment manufactured by a new vendor with no business history; there was no interest either in the product from resellers and distributors. Pre-agreed business deals failed or were postponed. There was almost no revenue, but employees and office rent had to be paid and 50% of the capital was burned in seven months.

However, there were no similar solutions on the market. They had a vision that their top-class technology could help to manage computer networks with their growing complexity and be at the forefront of the fight against modern cyber threats. Increasing network speeds and complexity required modern network monitoring solutions, such as Flowmon was offering.

OPEN INNOVATION TRAJECTORY

Concept development

The basic concept, in terms of technology, was taken from the CESNET work and the GEANT project. In terms of the business concept, at first it was very vague. It was the first spin-off in the Czech Republic where the former researchers were given the task of establishing a company. They received a lot of interest in the technology, but few customers. The solution was too advanced (few could understand the value) and too expensive. The first year was very hard. They had to rethink their offering and pricing. They also found that they had to educate their customers. Their first assumptions about the market did not survive their first encounter with the customer.

The development process, IPR and competition strategy

As the initial product concept and customer assumptions did not work (high-end, expensive product) the development had to focus on market requirements:

- Downgraded in both speed and price: 10Gb/s → 1Gb/s → 100Mb/s;
- Concept changed from product to solution; from net flow probe to network traffic monitoring;
- Offering included customer services – professional analysis of network traffic, security and configuration problems.

There were many interactions with customers in the development of the concept.

Initially CESNET was the only technology partner (this partnership still continues). But for other products and solutions many technology partnerships were established. These partnerships may focus on solving compatibility issues, or the creation of an integrated solution. For example, in 2016 Flowmon and Ixia agreed to develop an integrated solution. Ixia's network visibility solution will generate Net Flow data feed from across the data centre and send it to the Flowmon solution for analysis. This collaboration will increase benefits for customers.

The original IP came from CESNET and was transferred to Flowmon. Over time the company's competitive strategy became clearer as they gradually became aware that their USP is actually a niche product instead of a high-end, affordable product.

Commercialization and follow-up

The development and roll-out went in parallel in the early years. First, they downgraded the solution and reduced the price to one-fifth. Second, they developed customer services: professional analysis of network traffic and solving security and configuration problems.

The results were: the acquisition of their first 20 paying customers, official references and first partners, including value added resellers (VARs) and value added distributors (VADs), who showed an interest in the solution. The company became profitable 18 months after it was founded.

Initially, there were no partners. However, with time partnerships emerged, such as the strategic partnership with Check Point Software Technologies. The functionality of Check Point products and solutions provides detection and automatic mitigation of threats on the network perimeter and end stations. Flowmon is used for monitoring traffic in an internal network and for the automatic detection of incidents in an internal network, which are caused by internal attacks or by threats that were not detected on the network perimeter. Together, both solutions provide complex and efficient network protection against

even the most sophisticated cyber threats. The complementarity allows both partners to promote each other's solutions.

At first, there were no significant changes in terms of organization, except for strengthening marketing & sales. Subsequently, positions like Director of Products & Alliances appeared and later the division producing the network acceleration hardware and solutions was spun out. The main reason for this was the completely different sales channels and models required (direct selling vs value chain partners).

On the marketing front, Flowmon relies on partnerships, such as with Channel Partners. Flowmon considers itself 100% a Channel company. Partners have access to online sales, marketing, training and education tools so they can develop their Flowmon business. They also have distributors. To promote their offerings, they conduct workshops and attend conferences in order to introduce flow monitoring and network behaviour analysis to the markets.

Flowmon's solution was initially based on the Flowmon probe (it observes all passing traffic and aggregates information on IP flows into flow records) and gradually developed into a complete solution which consists of Flowmon Probes, Flowmon Collectors (storage and analysis) and additional modules extending functionality, e.g. network behaviour analysis, application performance monitoring and anomaly detection (Flowmon DDos Defender).

BUSINESS IMPACT

The major outcomes for Flowmon as a result of their open innovation collaboration are:

1. A family of network monitoring and security products. New products are developed with Technology Partners – MNCs and SMEs (e.g. Cisco, Check Point), but academia is also involved (Masaryk University R&D algorithms for network security, Brno University of Technology for high speed network tools and algorithms) and CESNET.
2. An international presence through Channel Partners and dozens of partners.
3. Recognition at EU level (GEANT academic network uses their products) and by academic partners.
4. Recognition from big industrial partners; occasional projects with Oracle, HP.

The company learned new business skills. At first, the researchers had no idea how to establish a company. They went to an SME called Unis, which is located in Brno and had contacts with the Masaryk University and Brno University of Technology. Unis was interesting for them as a potential business partner, since it had skills in programmable hardware manufacturing and they thought they could use these competences. As a result, Unis invested in Invea-Tech and found a business person to be nominated as a director (current CEO, Rostislav Vocilka).

In addition, Flowman learned the following:

1. Product development for the market (not for geeks) and the importance of interactions with customers.
2. Customer awareness and readiness may be limited. You may have to educate the market.
3. You can take and learn from QI practices in your industry.

The impact of their open innovation approach has led the business into profits for the past eight years.

LESSONS LEARNED

The case shows the importance of preparing the company internally for partnerships, e.g. the technology transfer from the PSR to the spin-off. One of the aspects of this readiness is market focus. It also shows that the technology transferred may need to be transformed to address real market needs, and that may take time. The case also highlights the importance of reputation and the difficulty for unknown companies to establish partnerships, especially with large companies. Yet another interesting aspect of this company is that it grows organically, without venture capital. In this case customer focus is essential.

Main lessons learned:

1. The PSR can be a source of ideas for a sustainable business.
2. The readiness to accept in-bound technology is important.
3. The value of QI may not be realized immediately, but it will be captured over time.
4. There are QI patterns in industries that you can learn from. Flowmon adopted those involving value chain partners and co-development.