

# Pivoting for success: How Integrated Micro Products competed and thrived in telecommunications

This case study illustrates how strategic positioning, technological acumen, and timely adaptations can lead to transformation, growth, and sustained success in the dynamic world of technology and business.

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## Teaching Case Factsheet

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**Discipline:** Management and business studies

### Introduction

The business landscape is an ever-evolving arena, with small innovative companies often facing the challenge of competing against industry giants. This case study delves into the journey of Integrated Micro Products (IMP), a pioneering company that navigated the turbulent waters of technological advance and market dominance. The case of Integrated Micro Products demonstrates that even in the face of formidable competition, strategic innovation can lead to remarkable success. IMP's story encapsulates the dynamic nature of business, where calculated decisions, opportunistic timing, and visionary thinking intersect. It emphasises the importance of staying attuned to shifting market dynamics and having the flexibility to adapt. This case study imparts a crucial lesson: that strategic positioning, foresight, and the courage to embrace change are the bedrock of sustained success in the rapidly changing landscape of technology and business.

### Background

Founded by Mark l'Anson and David Liddell in 1982, IMP rose to prominence with its groundbreaking use of microprocessor technology. In its early years, IMP harnessed the potential of the new generation of microprocessors to creatboth financiers and venture capitalists. Critically, IMP's journey was supported by venture capital funding from the outset, providing the company with a solid financial foundation. In an era where UK venture capital was more daring and willing to take risks, IMP was able to secure the necessary resources to fuel its expansion. While not on a par with California standards, the company's financial position was robust within the UK

context. The initial capital infusion enabled IMP to grow rapidly and assertively in its pursuit of innovation.

As the company evolved, a notable shift occurred in leadership roles. One co-founder transitioned from technical roles to overseeing the technical department, while the other assumed the role of managing director, focusing on sales and marketing efforts. This division of responsibilities exemplified the adaptability and versatility of IMP's leadership, capable of navigating changing demands and maximising individual strengths.

Overall, the management structure was characterised by a remarkably flat hierarchy, a strategic decision that fostered collaboration and agility. A significant move was the inclusion of a proficient finance director, who steered the company's financial operations, allowing the technical co-founders to focus on innovation. This balanced leadership approach ensured that every aspect of the company, from technical development to financial management, received the attention it deserved.

Within just five years of inception, IMP was making significant profits, gaining favour with financial backers and earning accolades in the market. IMP's management approached its operations with a straightforward yet effective formula. By maintaining a gross margin of 55%, allocating 15% each to sales and marketing, research and development, and admin overheads, the company managed to maintain a 10% profit margin. This disciplined approach to financial management underscored IMP's commitment to sustainable growth and profitability. The company's ability consistently to execute this formula underscored its operational effectiveness and pleased its financial backers.

However, a significant turning point loomed on the horizon. The industry behemoths, which IMP had been steadily outpacing, unveiled their own versions of the technology. Most notably, IBM entered the scene with a computer strikingly similar to IMP's product... with one key difference: it was IBM! This eventuality posed a daunting challenge: how does an innovative David compete against the Goliaths who are equipped with immense resources, expertise and reach?

Faced with the realisation that a head-to-head battle against industry giants was unsustainable, IMP embarked on a journey of strategic reinvention. Towards the late 1980s the company understood the need to carve out a distinctive niche that would shelter it from the impending storm of competition. The prevailing path, if unaltered, would lead to stagnation and eventual demise within two to three years. Despite the gravity of this pronouncement, the message was not readily embraced by external stakeholders. Venture capitalists failed fully to comprehend the necessity for transformation and objected to investing heavily in an unproven market and reducing the company's profits. As a result, IMP management had to make a series of bold decisions that would challenge convention and reshape the company's course. The question for them was not merely how to survive, but how to thrive in a market where the advantage of technological novelty was swiftly diminishing. The solution lay in focusing on a more specialised market segment, one that was significant in size, yet overlooked by the bigger plays: the fault-tolerant computer market. The fault-tolerant computer market presented IMP with a promising opportunity. Fault-tolerant computing aimed to create resilience by creating a computer system that mirrored itself to guarantee seamless operation in the face of component failures. Of course, such redundancy resulted in increased complexity and higher costs. Every aspect of the system was duplicated, ensuring that no single failure could disrupt its functionality. With two memory boards, two processors, etc and a network of failover mechanisms, the computer offered a seamless transition between the primary and backup systems in the event of external disruptions. By creating a fault-tolerant computer IMP sought to establish itself as a true contender in a market valued at approximately £1 billion. This strategic shift was not without its challenges. Notably, the fault-tolerant market was already inhabited by two substantial incumbents: Tandem, an enduring player, and Stratus, a startup that had gained a head start.

IMP made a strategic acquisition of a faltering California-based company that had been struggling to create a functional fault-tolerant computer. This acquisition, a move advised against by venture capitalists, provided IMP with a foundation to build upon. It offered a technological framework that, with IMP's expertise, could be transformed into a working product. Integrating their novel ideas into the acquired technology, IMP managed to design a fault-tolerant computer that met the demands of reliability and performance. It also meant that the company now had a significant presence in the States, with Mark relocating to California for six months to oversee operations.

As IMP's transformation took shape, the company found itself positioned with a high-tech product boasting considerable technical differentiation. In particular, and unlike the competition, their system required no special programming techniques and could run 'off the shelf' programming languages, meaning that the barrier to entry for new programmers was removed. Nevertheless, IMP remained a smaller player in a medium-sized market, flanked by the established Tandem and the rising Stratus. IMP's foray into the financial industry, once dominated by its competitors, yielded some success. Notably, IMP's fault-tolerant computers found homes in unique applications such as the BBC newsroom, where reliability was paramount for uninterrupted news broadcasts.

### **Small fish in a big pond? Or big fish in a small pond?**

In its nascent years, IMP operated primarily from the United Kingdom, a choice guided by local considerations. However, it swiftly became apparent that the UK market was lagging behind, fraught with risk-averse companies compared to their international counterparts. Within the span of its first 5 to 6 years, IMP's market landscape had undergone a transformative shift. A mere 10% of sales were anchored in the UK, while 50% emanated from the United States. IMP's endeavours stretched far beyond the Atlantic, as it forged impactful alliances in distant corners of the globe. India and Japan emerged as fertile grounds for business growth, with key partnerships solidified.

As Integrated Micro Products (IMP) wrestled with its pursuit of a market foothold, a game-changing partnership emerged on the horizon. Motorola, a formidable leader in various industries, notably in complex mobile radio systems, extended a pivotal contract to IMP. The implications were profound in how this shaped the market positioning of the company going forward.

Motorola's dominance in critical communication systems offered IMP a remarkable opportunity to showcase its prowess in providing innovative solutions for mission-critical operations. This collaboration sparked a shift that laid the foundation for IMP's future success. IMP's alignment with Motorola fuelled a shift from being a niche fault-tolerant computer provider to a trailblazing force in the telecommunications sector. With Motorola's radio systems as a springboard, IMP harnessed its technological expertise to elevate mission-critical communications. IMP's fault-tolerant computers empowered organisations like the New York police services and other similar entities with unprecedented capabilities, enabling instant communication and advanced switching functionalities. However, despite these strides, IMP found itself facing financial challenges and a sense of untapped potential.

As IMP transitioned further into the telecommunications domain, it encountered a new set of challenges: meeting the stringent requirements of telecommunications standards. These standards demanded equipment that could withstand extreme conditions, from lightning strikes to simulated earthquakes. IMP's fault-tolerant computers underwent rigorous testing, emerging unscathed from trials that pushed the boundaries of durability. The hardware-based approach to reliability was at the forefront, offering a level of dependability that software-based solutions struggled to replicate.

### **Pivoting the Perceptual Landscape: A Bold Positioning Strategy**

The partnership with Motorola and the shift that it involved ended up being beneficial for IMP. In the run-up to its Initial Public Offering (IPO) on Nasdaq, IMP recognised a fundamental truth: technological innovation alone was not enough to captivate markets and investors. Conversations with analysts unveiled a transformative insight. A seismic shift in the telecommunications landscape was underway, with the transition from electromechanical switches to computer-driven switching. This insight spurred IMP boldly to redefine its identity.

Amidst these strategic crossroads, IMP's interactions with telecommunication giants offered another insight, namely that technological competition often took a back seat to the ultimate quest for market dominance. Telco's profits and motivation were driven not just by technological prowess, but mostly by the size of their network share. The intricate underpinnings of technology were secondary to the broader narrative of market penetration and consumer connections. This revelation reframed IMP's position within the ecosystem. It was an infrastructure provider, an enabler of systems that underpinned the network. The role played by IMP's fault-tolerant computers lay beneath the surface, unobtrusively ensuring the efficiency of telecommunications giants' operations. This realisation reshaped the company's competitive stance, aligning it with the intricate interplay of infrastructure and consumer-facing functionality.

The company's early collaborations with Motorola set the stage for a symbiotic relationship. IMP's role as a provider of fault-tolerant computer systems dovetailed seamlessly with Motorola's aspiration to offer comprehensive solutions. Based on this work and their new-found insights, IMP embarked on a strategic repositioning endeavour, transitioning from a fault-tolerant computer company to a Telecoms Computer Company. IMP's positioning shift was embodied in a comprehensive brochure. This document not only highlighted IMP's accomplishments in collaboration with Motorola, but also laid out a visionary narrative for the future of telecommunications. This strategic manoeuvre was audacious, considering IMP's relative size and industry expertise compared to telecommunications giants. Nevertheless, IMP's confidence in its technological capabilities and its forward-thinking approach ignited a spark of curiosity among industry behemoths.

IMP's IPO marked a pivotal moment in its journey. The market response was not explosive, but IMP's repositioning efforts garnered the attention of analysts and industry players. The shift from a fault-tolerant computer focus to telecommunications innovator began to permeate the market discourse. This change in perception opened doors to conversations with telecommunications giants like Lucent, Alcatel, Siemens, and NTT, signalling a remarkable shift in IMP's market presence and aspirations.

IMP's positioning, bolstered by its strategic rebranding, set the stage for a meteoric rise. The newfound interest from telecommunications giants propelled IMP's growth trajectory to new heights. Collaborations flourished as IMP's fault-tolerant computers became integral components within the networks of these giants. The shift in perception, coupled with an unchanging commitment to technical excellence, transformed IMP from a small contender to a revered partner at the forefront of telecommunications innovation.

## **A New Chapter: Acquisition and the Reality Check**

The IMP journey reached a pivotal juncture when it was acquired by Sun Microsystems, a significant player in the telecoms industry but unable to access the lucrative 'central office' part of the market without IMP's technology. However, the acquisition was accompanied by another crucial realisation – the fault-tolerant approach, while revolutionary in its time, was not the sole direction for the future.

As the 1990s progressed, a paradigm shift was on the horizon. The advent of networking technologies ushered in a new era of possibilities. Systems could now be interconnected, and data duplication across networks became feasible. The rise of faster and more robust networks meant that redundancy could be achieved through software-based redundancy and failover mechanisms. This marked the gradual transition from hardware-centric fault tolerance to networked reliability solutions.

IMP's journey through the landscape of fault tolerance coincided with a brief yet critical window of technological convergence. The fault-tolerant solution, while ahead of its time, saw its prime era as the technology ecosystem rapidly evolve. The emergence of advanced networking capabilities and software-based failover mechanisms rendered the hardware-intensive approach less critical.

## **Conclusion**

The case of Integrated Micro Products (IMP) serves as a compelling testament to the power of visionary thinking and strategic adaptation. It exemplifies the importance of recognising changing market dynamics and boldly pivoting to carve out a unique space. By focusing on a specialised market and delivering technological excellence, IMP not only survived but thrived in a domain where bigger players reigned supreme. Recognising that being in the right place at the right time is an essential aspect of business, IMP positioned itself to seize the opportunity when it presented itself. The company's journey, from grappling with competition to repositioning itself as a telecommunications innovator, offers invaluable lessons. IMP's narrative underscores the point that while innovation is the heart of progress, the ability to perceive and adapt to evolving market dynamics can redefine a company's trajectory. This case study presents a vivid illustration of how strategic positioning, supported by technological acumen, can pave the way to transformation, growth, and enduring success. IMP could have taken alternative paths. Still there is an inherent challenge in foreseeing the optimal course. Amidst the chaotic churn of a rapidly evolving technology landscape, IMP's advantage lay in aligning its offerings with transformative shifts. Recognizing the impending revolution in data and voice communication, IMP positioned itself as a critical enabler within the telecommunications sphere. The confluence of circumstance and strategy converged when the Internet emerged, and IMP was poised to capitalise on this due to its calculated positioning. Despite the uncertainties, the decisions made resonated with the times, propelling IMP's ascent to new heights.

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