

Digital Disruption of Business Models: The Mass Mitec Story

by [David Wortley](#)

Digital technologies arguably present the most profound and disruptive opportunities and threats to established business models than ever witnessed before. Throughout history, quantum advances in communications technology — including the printing press; canals, railways, and roads; and telephones, radio, and television — have had a major impact on business and society, spawning new businesses and changing the status quo over ever-shorter timescales. Today, however, the raft of truly disruptive and empowering consumer technologies is both unprecedented and, to a large extent, unpredictable in its consequences for businesses of all sizes and for society as a whole. This *Executive Update* charts the digital transformation of Mass Mitec, a UK-based small-to-medium enterprise, via a disruptive digital technology in the 1990s and uses the story as an illustration of the potential and dangers of digital disruption.

The 1980s: Cost Savings to Competitive Advantage Shift

Throughout the 1970s, the digital computer landscape was dominated by central mainframe computers developed and supported by giant corporations such as IBM, Burroughs, Honeywell, International Computers Limited, and so on. It was only toward the end of the 1970s that minicomputers such as the IBM System/34 and HP 3000 began to appear in smaller businesses. The predominant cost/benefit model of these systems was one of cost reduction and improved efficiency rather than technology-driven innovative new services aimed at delivering competitive advantage and differentiation from the competition.

In the early 1980s as a marketing executive in IBM's General Systems Division, I witnessed the beginning of a shift in emphasis away from technology-driven cost reduction toward technology-enabled customer-centric innovative services. This was best exemplified by UK-based pharmaceuticals distributor Unichem's use of a hand-held scanner to enable pharmacies to auto-order drug replenishments with a guaranteed 24-hour turnaround. The business proposition offered by Unichem at the time involved the pharmacy investing

£5,000 in the scanner and modem cradle which, once installed, was used to scan bar codes, enter drug replenishment quantities, and then to auto-dial Unichem to automatically generate an order, invoice, and shipping instructions. This not only saved the company admin staff but also created an electronic bond with its customers. The proposition was further enhanced by the fact that, as I recall, a pharmacist could terminate the agreement, return the technology to Unichem, and be refunded with the original investment. This use of a disruptive technology to enhance service and build electronic ties was the inspiration for starting my own startup consultancy, Mass Mitec.

It is also worth reflecting at this point on the prevailing business models for computer manufacturers in the 1980s, which were based on very high margins for hardware and software sales and highly dependent on an experienced and well-paid sales force that understood both the technologies and the business applications.

1984-1990: The Mass Mitec Story – Consultancy to Presentation Services

Mass Mitec was born in 1984 as a consultancy providing strategic advice on the use of digital technologies for competitive advantage. Mass Mitec stands for “Marketing Administration Support Solutions and Marketing Information Technology.” Mass Mitec began by equipping itself with technologies to demonstrate the power of disruptive technologies, even in the smallest organization. Technologies in 1984-1985 included digital imaging of business presentations, email, and digital telex. The company began by offering consultancy services to the same blue chip clients I had developed relationships with when I worked for IBM but quickly evolved to become one of the UK’s pioneers in business presentation graphics, not only designing and imaging corporate presentations, but also supplying digital imaging solutions to its clients.

The predominant corporate presentation media of those days was largely 35mm slides and overhead projectors (OHPs). Data projectors were rare, expensive, and difficult to set up. Mass Mitec used desktop PCs to design presentation slides and the best-available technology to output the presentations onto 35mm slides or OHPs. By today’s standards, the quality of the presentation output was poor but, at a time when the existing creative companies offering the same services either had to use rostrum cameras or specialized hardware costing around £250,000, Mass Mitec — through its use of disruptive technologies — could offer very fast turnaround rates at very affordable prices. Although Mass Mitec began using these technologies and other innovations such as telex mass mailshots as a practical demonstration of the company’s expertise rather than as a presentation service supplier, it soon became clear that its corporate clients were more interested in presentation services and/or presentation technology than consultancy. In adopting these innovative disruptive technologies primarily for our internal use, we created new customer expectations around a new value proposition. In the process, Mass Mitec’s business model shifted from providing consultancy based on the creative use of technology for competitive advantage to business presentation services based on the use of the design and imaging technologies, which not only gave us competitive advantage but also the sale of those same technologies to our corporate clients.

Within the space of two years from start up, Mass Mitec had established a profitable presentation solutions business, leading the market in the UK. Our innovative business model was based on premium design services supported by hardware, software, and support services. Moreover, Mass Mitec became the first company in the UK to be accredited by Microsoft as a Center of Excellence for PowerPoint software.

However, we recognized that software such as PowerPoint and Harvard Graphics would empower people to create their own presentations and that data projectors would also begin to replace 35mm slides and OHPs as the primary tool for corporate presentations. Consequently, we foresaw that the same technologies that had helped Mass Mitec rapidly expand would just as quickly threaten our business model, and our geographically remote customers would be vulnerable to competition. Thus, Mass Mitec needed to innovate its business model again by taking advantage of even newer disruptive technology.

1992: Disruptive Digital Communications – DiskFax to the Rescue

The digital disruption that enabled Mass Mitec to evolve to a different business model was a device called [DiskFax](#). It had been developed originally to enable software companies to distribute upgrades and bug fixes to clients more reliably and quickly. When DiskFax came onto the market around 1991, Hayes Modems dominated the market, with its fastest modems operating at 9,600 bps over a standard phone line. DiskFax had a 10MB hard disk with 3.5-inch and 5.25-inch disk drives capable of reading IBM, Apple, and Unix disks and transferring their contents with 100% data integrity over a standard phone line to a remote DiskFax.

It was this idea that opened the possibility of setting up a national presentation network with outlets all over the UK able to take client presentations and transmit them to a central location for digital imaging with fast turnaround of professional quality 35mm slides and OHPs, creating a vastly improved customer experience that could leverage the emerging market for the imaging of customer-designed presentations. As a result, I approached the leading High Street print/copy franchise to set up a partnership arrangement that would provide access to over 100 outlets in the UK, giving that franchise a new high-margin service to offer to higher-value customers and me a field sales force all over the UK overnight.

We realized that with its simplicity of use, guaranteed data integrity, security, and lack of a requirement for a computer to operate it, DiskFax would enable us to offer 24-hour digital imaging turnaround from anywhere in the UK, provided we could establish a network of access points in key locations convenient to potential customers — something totally new at the time. It was then that Mass Mitec sought a strategic partner that could provide a national network of outlets for customers to take their presentation files. This strategic partner not only needed to have a large network, but also needed to already be in a line of business related to presentations. We decided to target an organization called Prontaprint, a UK franchise operation with well over 100 High Street print/copy centers. The value proposition offered was based on offering simple low-cost/high-margin digital imaging services that would bring better-quality customers through their doors and open up the opportunity to establish a brand identity for presentation services.

We offered each franchisee a package that included a DiskFax, marketing material and sample output, a copy of Harvard Graphics software, and a half-day onsite “Presentation Master Class Seminar” to which they could invite their target clients. Over one weekend, at the annual *Prontaprint Franchisee Conference*, we signed up 50 franchisees and began the process of traveling all over the UK to install DiskFax and help the franchisees launch the service. Within three months of starting the operation, we were processing more than 2,500 presentation slides a month. Over the next three years, the network grew to more than 100 franchisees, and Mass Mitec was transformed from a presentation design and hardware/software sales company into a digital imaging “factory” whose services were promoted by a third party at no cost to Mass Mitec.

In this process, Mass Mitec became inevitably wedded to its partner, Prontaprint, and consequently reliant on the success of its longer-term strategy, which was to morph into a distributor of presentation technology through Prontaprint, as data projectors inevitably replaced 35mm slides and OHPs. This dependence on the technology-enabled strategic partnership with Prontaprint, of which 75% of Mass Mitec business was generated, was the company’s Achilles’ heel.

In the late 1990s, Prontaprint was acquired by a major printing conglomerate based in Ireland that, ironically, wanted to use the business model behind the DiskFax technology to service its print factories in the same way our business model serviced our digital imaging services. Almost overnight, Prontaprint shifted its focus away from presentation services, and we were forced to reengineer the company into a different sector so that our innovative use of digital communications technology would allow us to survive and evolve.

There are several lessons to be drawn from this experience relevant to today’s innovators and digital disrupters. These include:

- In establishing synergistic partnerships enabled by technology, ensure a shared vision for the future, especially if your partner’s core business is different from your own.
- Where possible, avoid exclusive agreements with a single partner unless you are protected by contractual arrangements, especially if your business is likely to become dependent on the single partner.
- Be aware of how your innovative use of technology to create new business models and win-win relationships might be copied or repurposed by another organization to your disadvantage.
- Understand the potential impact of technologies that might disrupt your business model (e.g., low-cost data projectors can be leveraged to your advantage in re-innovating your business).
- Consider an early exit strategy for your business, especially if you recognize potential threats to the long-term sustainability of your business model.

- Make sure you continuously monitor risks to your business model, not only technological risks but also contractual and relationship-related risks.

Even though Mass Mitec had a very good understanding of the evolution of the technologies upon which its business models were based and had also built a business development plan reflecting that evolution, we seriously failed to properly secure or exploit the business and contractual arrangements with our key partner.

Mass Mitec survived as a small enterprise focusing on the use of technology for regional social and economic development, but our business model reverted back to offering high-value consultancy expertise, backed up by demonstrable practical use of technology in daily operations. The survival of Mass Mitec and the avoidance of insolvency came at a very high price — personally and for the business itself. As founder and architect of Mass Mitec's business strategy, I had been so wrapped up in the day-to-day delivery of services and management of a growing business that I neglected assessing the potential risks to the business. I focused on servicing the needs of individual Prontaprint franchisees, instead of developing a commitment and mutual dependency from the franchisor.

Digital Disruption of Business Models Today

The rise and fall of Mass Mitec within fairly short time scales due to the impact of disruptive technologies on existing business models is a small-scale illustration of the opportunities and threats that build and destroy today's companies and their business models. In the 1970s, it was generally true that the cost of entry to a new market was a prohibitive barrier that protected established industry players. Back then, it would have been unthinkable for a record company to enter the airline or banking market, but this is exactly what the Virgin Group has succeeded in doing, using technology to shake up the market and its business models. Although that barrier to entry can be more easily jumped today, companies still face some of the same challenges (such as the pitfalls of partnering) and some of the same opportunities (such as advantages gained by enhancing the customer experience).

As consumers become increasingly empowered by technology and as technology challenges human intelligence and insights, we are entering the unknown with virtually every business and every market open to exploitation in ways we may not yet have imagined. As a very simple example of the impact of empowering technologies, I am now in possession of a drone with a high-quality camera that enables me to produce aerial photos and video that even an experienced helicopter or small plane pilot and camera crew could not match. All I need is the drone, a laptop, and a mobile phone — my overheads are minimal and my ability to produce a fast and precise, customized service to clients is difficult to match. We'll soon see what products and services innovative companies come up with based on this technology and how their path mirrors, in even some small way, that of Mass Mitec.

As a parting note, I am still looking to exploit innovative disruptive technologies to build business models based on new technology-enabled value propositions and my current interests. I believe those interests — digital health and virtual reality — offer tremendous growth potential.

About the Author



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