



How “Focused Factories” Deal With Disruption

Establishing a clear and consistent focus, and knowing when to change it, is the essence of manufacturing agility.

Factories don't just make things. Viewed properly, they are where the rubber of corporate strategy meets the road of the marketplace. Ideally, then, a factory should operate in alignment with competitive business priorities: in short, it should be focused. When a business tries to group too many different products, markets, and technologies into the same manufacturing facility, performance and productivity suffer.

This concept was introduced in 1974 by Wickham Skinner in a much-cited *Harvard Business Review* article, “**The Focused Factory**”, and was widely embraced by a manufacturing community then in the throes of a productivity crisis. No-one since has convincingly refuted that in general focused factories outperform unfocused competitors.

A lot has changed in the last 40 years, however. Due to the combined impact of creative destruction and globalisation, change is no longer a likely eventuality but the norm. There is now no way to predict where the next disruptive player in any industry will spring from. As a result, it seems that focus has somewhat fallen out of favour. Fear of disruption often leads managers to regard coherence as a constraint hindering them from moving with the times. Aiming for agility, many companies are, intentionally or not, drifting back

toward the unfocused approach that occasioned Skinner's original article.

Perhaps businesses could use a reminder of why focus is important, as well as an illustration of how focused factories can evolve to meet changing market demands. I had the opportunity to work with Skinner on the recently published paper “**The Strategy-Focused Factory in Turbulent Times**” (co-authored by Hendrik Brumme of Reutlingen University and Daniel Simonovich, INSEAD Adjunct Professor of Strategy and full professor at ESB Business School - Reutlingen University), which follows Hewlett-Packard's award-winning plant for computer servers in Germany over a particularly eventful period, roughly 1990-2005. During these years, HP's Herrenberg factory had to navigate existential change not once but twice as the personal-computing industry matured, without dulling its focused approach.

From “innovation” to “solutions”

Above all else, early adopters of personal computing sought the best possible product quality and performance. Therefore, HP - one of the few computer companies in existence at that time - emphasised innovation mastery and R&D culture. It was rewarded for these strenuous innovation efforts

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with high profit margins, one of the benefits of being among the first market entrants.

The arrival of new firms, particularly Dell and Compaq, in the early 1990s signaled the beginning of a “commodity phase” wherein customers became more price-sensitive. HP was forced to bring its costs to heel in order to compete in an environment less responsive to innovation-based differentiation.

As the market moved from adolescence to maturity in the early 2000s, increasingly complex consumer needs emerged. Specifically, enterprise clients began to demand customised solutions for the computerisation of entire businesses. Once again, HP’s strategy had to evolve as the company developed capabilities for solving customer problems and configure-to-order business IT solutions.

The evolution of the Herrenberg plant

With each change in corporate strategy, the Herrenberg plant changed almost unrecognizably, in keeping with the “focused factory” concept. In the initial “innovation factory” phase, Herrenberg was a low-to-mid-volume plant with a high degree of vertical integration, located closely to R&D and skilled labour. HP’s German plant excelled at the hard-to-manufacture innovations it received from an R&D programme that absorbed 10-15 percent of revenues.

In the mass-production or “operational excellence factory” phase, vertical integration was reduced through inbound outsourcing as the facility was completely rebuilt as a large-scale factory. Fewer technology engineers were required; Herrenberg instead took on a largely temporary and flexible workforce to suit fluctuating consumer demand. Crucially, HP accomplished this transition without compromising the product quality achieved during the previous, R&D-driven phase.

Moving into the “solutions factory” phase resulted from outsourcing low-end production parts and using the freed-up managerial capacity to establish a problem-solving competency. By integrating activities hitherto carried out by its customer-support and channel partners, Herrenberg was able to offer turnkey computer systems ready the day after delivery to the client’s site. Once again, engineers were asked to undergo a paradigm shift into a more customer-facing role. Even with training support, not all employees could adapt. Those who couldn’t or wouldn’t take to the new mission were assigned narrower functions centred around standard modules rather than solutions integration.

Universal aspects

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We do not argue that every industry will mature in this precise way, or within the timeframe here noted with HP. The three specific stages outlined above won’t apply across the board. However, one aspect of HP’s evolution that we feel has broad resonance is what we call the *commodity intersection point*, i.e. the juncture at which there are enough players in a nascent industry to make standardisation and crimped profit margins a *fait accompli*. When any sector arrives at this tipping point, it is usually a good time to revisit factory focus and restore the easily blurred link to competitive business strategy.

What Herrenberg did right

In its twice-over reinvention of the Herrenberg plant, HP did many things right. Most importantly, the company recognised that the main challenge in successfully achieving focus change transitions does not lie in a plant’s physical transformation, but in the management of engineers and operators with regard to changing skills and capacity requirements. The effort to communicate the new strategic focus and motivate the workforce began months before any actual changes were introduced, so as to create a sense of urgency and inspire collective commitment. Additionally, Herrenberg used its rewards system to incentivise adherence to the focus change, while making sure that top-performing engineers were given first crack at training for complex new roles.

Hewlett-Packard also ensured that non-manufacturing functions played their part. For example, HR was given the necessary time and resources to adjust to changing staffing needs. Sales was fully supported in its transition to a high-volume, well-integrated outfit for the “operational excellence factory” phase, as well as to working alongside engineers for the “solutions factory” phase.

Maintaining focus

HP’s remarkably consistent success during this turbulent period was partly due to its yearly manufacturing policy reviews, where manufacturing managers worked with corporate strategists to answer two questions: “What is our manufacturing strategy today?” and “Which parts of it need adjustment?” The reviews ensured that corporate strategy and manufacturing strategy remained joined at the hip, and prevented needless complexity from creeping in to warp the overall mission.

The in and outs of outsourcing

When volume and cost-efficiency concerns came to the forefront in the “operational excellence” phase, HP opted not to offshore Herrenberg’s production to

China or another low-cost labour market. If it had done so, the transition to the “solutions factory” likely would not have been possible, because the plant would be too far away to service German customers effectively. Many companies in a similar situation have discovered to their chagrin that manufacturing capability is not a boomerang.

This example shows that no matter your current position, you should always have a Plan B. But it is not easy to formulate and execute a plan for dealing with disruptive change if what’s happening on the shop floor is, well, all over the shop. Now as ever, factories must have a clear and consistent focus.



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