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STRATEGY

Racing to ROI: Formula 1's Playbook for Winning Business

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Applying F1's engineering-brand matrix to accelerate competitive advantage.

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Introduction

In the 2023 Formula 1 season, Red Bull Racing's relentless engineering push resulted in RB19. This car combined Honda's next-gen hybrid power unit (RBPTH001) with a pioneering low-rake aerodynamic concept. By integrating real-time data in the team's wind-tunnel tests, CFD runs, and on-track simulations, the Red Bull team delivered a chassis-and-engine package that won 21 of 22 Grand Prix races. The team's technical dominance secured back-to-back Constructors' and Drivers' titles and, importantly, supercharged Red Bull's global brand: Merchandise sales spiked 40 percent, social media followers rose by 1.2 million, and new sponsors lined up for 2024. RB19 exemplifies how synchronizing R&D excellence with strategic performance outcomes can create a virtuous cycle of engineering breakthroughs and business success.

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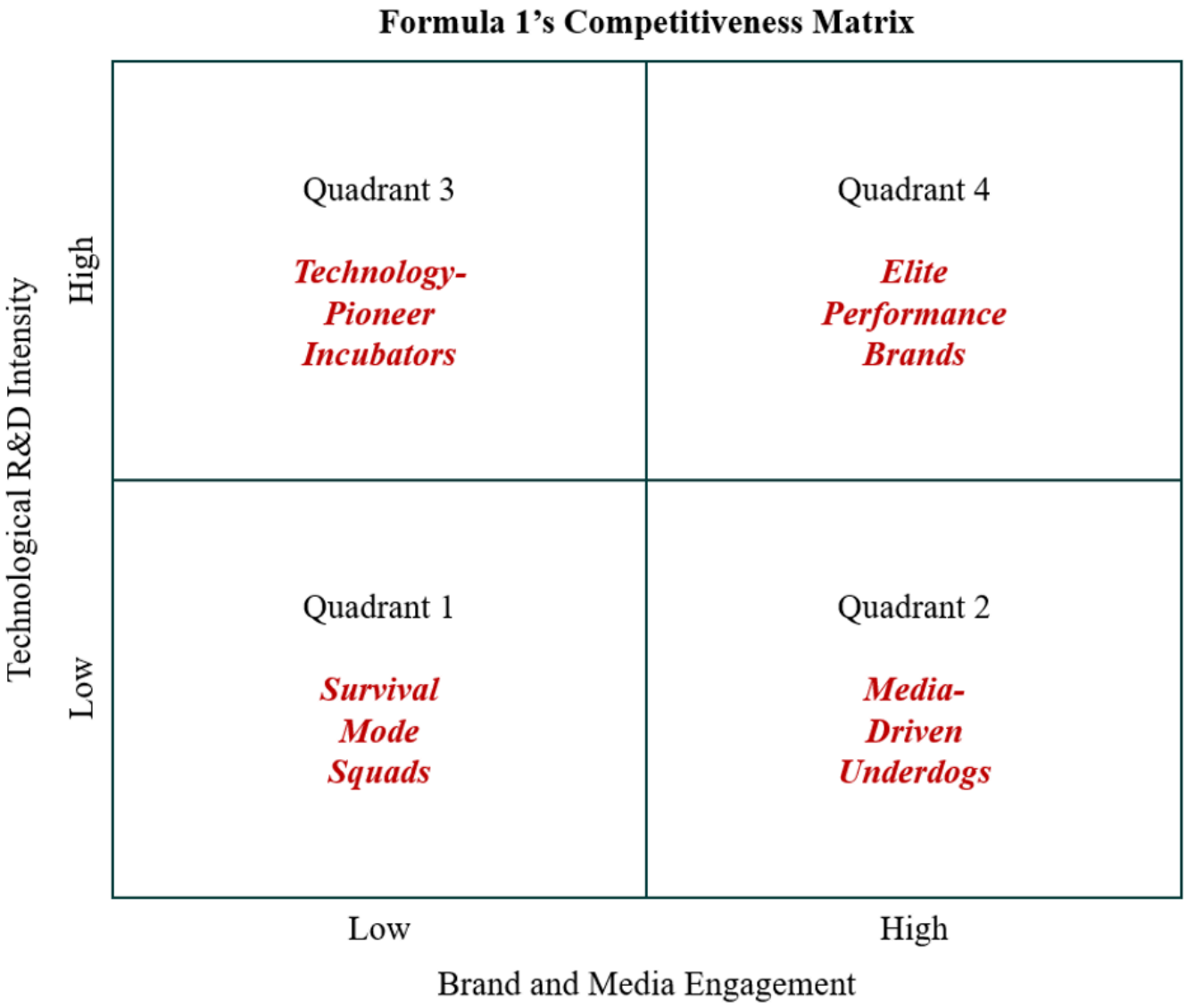
The Red Bull vignette illustrates that Formula 1 is more than high-speed racing. The F1 series is an ecosystem in which teams balance engineering, sponsorship, fan and community engagement, and global branding. Every lap around the racetrack represents not only a technical challenge but also a business opportunity. Consequently, F1 teams have to continually decide and balance investments; how much to invest in wind-tunnel testing, race car simulation, and power-unit development, but, at the same time, focus on cultivating sponsors, producing digital content, and creating immersive experiences for fans. In contrast, many companies struggle to sustain technological innovation,

particularly in effectively balancing technological innovation for new-to-the-world products relative to leveraging the sales and business success on already-existing products that the company has in its global portfolio.

To capture F1's repeatable success formula, we propose a "Competitiveness Matrix" that is best understood as a managerially focused 2×2 matrix that captures these competing priorities along two central dimensions: (1) **Technological R&D Intensity** (Low ↔ High), which focuses on how aggressively an F1 team finances and leverages in-house innovation; and (2) **Brand and Media Engagement** (Low ↔ High), which centers on both the breadth and depth of an F1 team's sophistication when it comes to sponsorship, social-media content, experiential events, and broader fan-community tactics. In short, just as classic managerial business matrices clarify **trade-offs** between, for example, cost and differentiation or innovation and efficiency, our F1-focused 2×2 matrix captures the strategic postures on-the-track and off-the-track.

To position our 2×2 matrix (see Figure) within the current F1 environment, it is important to note that since 2021, every F1 team must fit its car-development budget under a spending cap, currently $135 million for 2025. However, all marketing efforts, sponsorship activation, fan engagements, and, importantly, driver salaries are outside this cap limit. In other words, "High" versus "Low" R&D intensity simply describes how much of the $135 million a team allocates to engineering and performance-related expenses since not all teams might reach the **$135 million cap**; while "High" versus "Low" brand/media engagement refers to uncapped investments in digital content, experiential events, and sponsor partnerships.

The following sections examine each quadrant – anchored by Formula 1 examples (e.g., Williams, McLaren, Toyota, Haas, and Red Bull Racing) that capture key business lessons for non-F1 companies. In the spirit of F1, the article's "checkered flag" is a "Pit-Stop Checklist" that guides business managers in assessing and as warranted, realigning their ideal profile for alignment of technological R&D intensity and brand/media engagement fit.



Survival Mode Squads (Quadrant 1)

F1 teams in Quadrant 1 operate on limited real budgets for Formula 1. These teams are **market-oriented**, as best they can, but invest sparingly in both the engineering of the car and strategic marketing for the team's brand. They run lean technical programs that often eliminate critical F1 technical aspects such as deep wind-tunnel testing and high-end simulation. These teams also simultaneously spend limited effort on sponsorship activation and engaging fans in their teams. As such, "survival-mode squads" rely on selling F1 ride seats, tapping legacy revenue, and eking out modest prize-money returns.

Grid Snapshot. After Dorilton Capital's acquisition at the end of 2020 and the introduction of the 2021 budget cap, Williams faced enforced reductions in wind-tunnel time and related R&D resources. For the 2022 car development, FIA-imposed wind-tunnel restrictions led Williams to anticipate "short-term pain" as they adjusted to leaner technical **operations**. In this context, the team sought efficiency gains rather than expanded wind-tunnel **testing**. On-the-track and off-the-track, **Williams** emphasized heritage narratives (e.g., celebrating past championships) in occasional social-media posts. They had limited new sponsorship pursuits or fan-activation campaigns, reflecting a priority on cost control over brand-expansion.

Race-Day Takeaways. For non-F1 companies that operate in similarly capital-intensive industries, the Williams case has several implications. First, when resources are tight, one avenue to move forward is to focus on **operational excellence** and serving a niche segment to preserve the company's viability. Williams leaned on its storied heritage to maintain loyalty among long-time supporters – much like small and medium enterprises might double down on a core regional client segment instead of seeking out new markets. Second, a company, at times, accepting slower market growth is realistic, assuming the company stays agile to take advantage of (potential) future opportunities. By minimizing overhead – streamlining human resources, renegotiating supplier contracts, and cutting wind-tunnel hours – Williams was able to reallocate scarce funds to the needed basic operations. Likewise, companies with limited budgets can monetize existing intellectual property (such as offering consulting services or licensing niche technologies) to generate incremental revenue without sizeable upfront investment.

Questions for Managers:

- How much cost-cutting is acceptable before the company compromises its ability to invest in future products or services?
- If market growth becomes stagnant, can the company pivot toward Quadrant II and become a media-driven underdog by boosting its brand visibility (through low-cost digital storytelling) even without increasing R&D spend?

Media-Driven Underdogs (Quadrant 2)

F1 teams in Quadrant 2 operate with what can be considered inadequate engineering budgets but excel at crafting compelling **brand and media narratives** that often capture the attention of both fans and sponsors. Consequently, "media-driven underdogs" invest heavily in digital storytelling, influencer partnerships, and purpose-driven brand messaging to increase their footprint in the business. They spend only limited resources to support state-of-the-art wind tunnels or advanced simulation tools. As such, the competitive edge for an F1 underdog team is not the lap time or a race or series outcome but instead from **capturing attention**, attracting sponsors, and building a community around their underdog status.

Grid Snapshot. A few F1 teams have demonstrated how poor on-track performance can actually be offset strategically by building powerful brands that captivate fans and attracts sponsors. During its disastrous partnership with Honda from 2015-2017 – a crisis so deep that Fernando Alonso famously labeled the power unit a "GP2 engine" – McLaren focused on fan engagement and brand heritage. Led by marketing professional Zak Brown, McLaren rallied its fanbase through campaigns like #BelieveInMcLaren and #FansLikeNoOther. This resulted in social media growth in line with more successful on-track teams like Ferrari. The success was mainly realized by re-embracing McLaren's heritage. Similarly, the Haas F1 Team used its underdog status on the Netflix series "Drive to Survive" to make then-team principal Guenther Steiner into an influential personality. Steiner's budding "star effect" was a key factor in Haas securing a title partnership with MoneyGram. These media-driven Haas narratives also complemented sustainability initiatives, which resulted in the team being recognized with FIA's highest environmental accreditation.

Race-Day Takeaways. For non-F1 companies that lack the financial means to go after pioneering R&D wins, the above stories offer clear lessons. First, brand-based storytelling and digital channels can synergistically work to elevate the brand (and the team) when you have a lean technical base as the foundation. A well-crafted brand narrative often wins the race over incremental product improvements in terms of media impressions and sponsor appeal. Second, purpose-driven partnerships – whether they are with sustainability

advocates, assuming that is a focus that is attractive to the company, focusing on building lifestyle brands, or engaging with micro-influencers – help **underdogs** enter new markets. These media-driven underdogs can tap into shared values instead of competing on product features. As such, by aligning with broader **social narratives**, companies can create a "halo effect" that extends beyond their core offerings.

Questions for Managers:

- Are there strategic legacy assets (heritage, founder story) that the company can leverage and/or convert into brand "currency"?
- Which micro-influencers or niche communities could champion the company's "underdog" brand narrative?

Technology-Pioneer Incubators (Quadrant 3)

F1 teams in Quadrant 3 prioritize deep engineering skills and **R&D investments** while maintaining a relatively low profile in their brand presence. These "technology-pioneer incubators" focus on allocating substantial financial **resources** to wind-tunnel testing, advanced simulation platforms, next-generation power-unit development, and other cutting-edge technical initiatives to make their F1 cars as sophisticated as they can be each racing year. At the same time, these F1 teams underinvest in content marketing, sponsorship activation, and fan-centric outreach compared to what perhaps would be expected in the F1 ecosystem. The primary objective of these F1 teams is to push the state-of-the-art performance envelope rather than cultivating a direct-to-fan consumer following.

Grid Snapshot. The Toyota F1 team during the years 2002 to 2009 represents a focus on immense technological ambition and very limited focus on brand building. With a colossal budget, estimated at $300-$400 million per year, Toyota built a state-of-the-art F1 factory in Cologne, which operated as a "technology pioneer incubator." This almost exclusive engineering focus led to significant innovations (e.g., "double diffuser" in 2009) and the development of the Kinetic Energy Recovery System (KERS) that benefited Toyota's hybrid road cars. Yet, despite the technical superiority, the team's brand remained largely

unfamiliar to the public. When F1 rivals were focused on branding narratives, Toyota's image was corporate and distant. The Toyota car had a simple red-and-white livery, and the team underinvested in content marketing, fan engagement, and getting sponsorships. Their philosophy was clear: Toyota technology was the brand, and the results on the track were expected to drive brand recognition. After eight seasons (and an investment estimated at more than $2.5 billion) without a single victory, the 2008 financial crisis forced the company to re-evaluate and Toyota decided to withdraw from F1.

Race-Day Takeaways. For non-F1 companies with similar structures to what we described in the grid snapshot – such as a conglomerate's internal R&D arm or an independent technology incubator – the Toyota model offers important business implications. First, deep technical investments can lead to valuable spillover **innovations**. Hybrid power-unit research in F1 has been informative for the development of automotive "heat pump" prototypes and other energy-efficient solutions in "normal" public-used road vehicles. Second, minimal brand investment comes with definite risks: Without purposeful brand visibility, valuable intellectual property could go unnoticed or become under-monetized. As such, maintaining a low profile can limit opportunities for licensing, collaboration, or attracting top-tier strategic partners.

Questions for Managers:

- Is the company leveraging trade shows, or even white papers and reports, to strategically signal its technical and engineering leadership?
- Could the company form technology and engineering joint ventures or licensing deals to boost return on investment (ROI) on its R&D efforts?

Elite Performance Brands (Quadrant 4)

F1 teams in Quadrant 4 combine massive financial investments in cutting-edge engineering with best-in-class brand activation. As such, "elite performance brands" focus on **being both** "lifestyle" icons and F1 on-track powerhouses. These teams pour resources (financial, knowledge, skills) into proprietary wind tunnels, advanced in-house composite factories, and hybrid power-unit integration while simultaneously executing 360° digital

storytelling, experiential fan events, and cross-industry strategic brand alliances. The strategic goal of these F1 teams is universally to create a self-reinforcing cycle that centers on the notion that on-track success fuels brand allure, and that brand appeal generates revenue to **support further R&D**.

Grid Snapshot. Red Bull Racing and the company's RB18 launch and fan-experience tour in 2022 is a logical example of elite performance brands. On the engineering side, RB18 benefited from Red Bull's wind tunnel in Milton Keynes, a proprietary simulation stack that is enhanced by data-science integration. The team also benefitted from its close relationship with Honda (and later Red Bull Powertrains) on its hybrid power-unit development. At the same time, the business side organized "Red Bull Fanparks" in major cities. They partnered with music festivals and produced a YouTube series called "The Driver Diaries." This experience involved granting fans behind-the-scenes access to both F1 drivers and the team's engineers. They also expanded into e-sports with the Red Bull Racing Esports division. This involved hosting virtual races that drew tens of thousands of online viewers. Red Bull's lifestyle apparel and extreme sports sponsorships also helped to extend the brand's reach into new market segments – from snowboarding trails to mountain biking events which reinforced Red Bull's performance-oriented image.

Race-Day Takeaways. Because Red Bull Racing synchronizes its efforts in engineering R&D for the benefit of its F1 cars and also nurtures its brands widely and strategically, each aspect of the company's efforts (i.e., R&D and branding) synergistically increases the effects of the other. For example, an engineering breakthrough during a Friday practice session can often translate into social-media buzz. This social-media torque, or roar if you will (admittedly we go a little overboard in F1 terminology!) then attracts new sponsors and financial funding for next season's aerodynamic F1 upgrades. As such, by **diversifying revenue streams** for the team through licensing, merchandise, and lifestyle partnerships, Red Bull can effectively hedge against the inherent variability of prize money and automotive (and F1) regulations.

Questions for Managers:

- How can the company balance R&D investments with strategic brand investments so that each fuels the other?

- Which adjacent markets (e-sports, lifestyle apparel, experiential events) can the company seed with its “performance” story?

Pit-Stop Checklist: Strategic Takeaways

No single quadrant in Formula 1’s Competitive Matrix is definitely the “right” choice to be successful. Each quadrant and accompanying strategy represents a distinct risk-return profile and deliberate posture in the industry and in the marketplace.

Survival-mode squads in Quadrant 1 preserve cash and focus on core engineering and business operations but (likely) sacrifice growth potential. Media-driven underdogs in Quadrant 2 trade deep engineering for compelling brand narratives that are usually the reasons for attracting sponsors and engaging fans. Technology-pioneer incubators in Quadrant 3 invest heavily in technical and engineering R&D, resulting in innovations but risk leaving valuable intellectual property (IP) underexposed. Elite performance brands in Quadrant 4 synchronize top-tier engineering with immersive brand experiences. This dual investment effort creates a unique and strategic self-reinforcing cycle but also requires substantial financial means and business sophistication.

Pit-Lane Playbook:

1. **Assess Your R&D and Brand Fit:** Map your company’s current strategic resource allocations. Is the company, or a product division of a large company, closer to Quadrant 1, 2, 3, or 4? What does your answer imply for your company’s competitive edge?
2. **Decide on a Strategic Pivot:** If market growth is stagnant in Quadrant 1, can you ramp up the company’s brand visibility in a relevant part of the marketplace (if so, move to Quadrant 2) without diluting your operational focus? Or, if you have deep technical talent but limited market traction (Quadrant 3), can the company invest in low-cost “brand labs” through storytelling, such as behind-the-scenes content, technical showcases, or thought leadership, to signal this expertise?
3. **Build Complementary Capabilities:** A company should identify minimal financial and resource investments that can help it shore up the company’s weakest links. A

Quadrant 3 company could, for example, partner with a marketing agency to develop thought-leadership content. A Quadrant 2 company could allocate modest R&D funds to increase its credibility in the industry and marketplace.

4. **Leverage Talent as Brand Multipliers: Consider how high-profile talent, such as engineers, executives, or public-facing team members, can serve as both performance drivers and branding assets. In F1, drivers like Fernando Alonso (Aston Martin) and Carlos Sainz (targeted by Williams) brought with them over 33 million combined social media followers, amplifying team reach and brand equity without impacting budget cap constraints.**
5. **Continually Realign as Markets Shift:** Much like the F1's regulation cycles force racing teams to recalibrate every 3-4 years, industries evolve and some evolve very rapidly. Reexamine your quadrant position whenever "industry rules" change – whether that is because of digital-first innovation, sustainability mandates, or new supply chains.

Just as in F1, many racing teams strategize as a part of preparing for each season regarding car design and fan outreach, companies and business leaders must continually recalibrate the balance between their companies' behind-the-scenes excellence (R&D) and front-and-center visibility (brand). Without ongoing R&D and brand evaluations and, as needed, strategic adjustments, even established market players risk falling behind on the competitive grid.

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