CHAPTER SIX
THE IMPORTANCE OF CHANGE

Most people don't like change, and certainly not the thought of it. How many times have I heard the mantra that 'It's always been done this way' in some aspect of business, and inevitably one of the attributes of the great leaders and innovators is their use of change as an effective business tool. As I cover in Chapter 8, all the major step-changes in Formula One design technology have driven new levels of performance, even if this has meant legions of production staff, engineers and mechanics coming to terms with new technologies or entirely new ways of doing things.

I am quite sure that, when John Cooper decided to put the engine behind the driver, or McLaren's John Barnard raised the prospect of making a chassis from carbon, there would have been a few raised eyebrows.

From my experience change is a good thing, mainly because change comes hand in hand with continuous improvement and innovation. Formula One cars are changed by means of relentless development season to season, race to race, and even from one practice session to the next. So the mindset of people working in Formula One is that avoiding change, trying to keep everything just as it is, is a guaranteed way of failing. The moment we aren't changing, be it evolving our product, adopting new technology or improving our processes, the competition will leap ahead.

The ability to manage change and make the most of new challenges can deliver great rewards. When I look back at the changes within Formula

One, it is striking just how much has changed and why, and the effective way in which it has been managed.

The changes wrought by Bernie Ecclestone on the sport during the 1970s dragged Formula One into the modern era of commercialized sport. He was the trailblazer, and not everyone could see the big vision Bernie had for the sport. Today he is renowned for building Formula One into a global sports business and, although his style has sometimes courted controversy, his strengths are clear. He recognized value, and he knew how to develop a sustainable and highly profitable business model around it.

At the time of writing, in 2014, he has been embroiled in a number of court cases resulting from the purchase of Formula One by private equity giant CVC Capital. This includes a criminal case in Germany but, whatever the outcome, nothing will diminish his achievement in developing Formula One. It has been a story centred on constant evolution.

When he bought the Brabham F1 team and realized that Formula One didn't actually have a viable business model, his strategy became based on change. Getting all of the teams to commit to compete in all of the races was a start. Back in the 1970s not all of the teams competed in all of the races.

Having all of the races on a Sunday was another step, because events had evolved to take place on Saturdays, Sundays and even public holidays during the week. When combined with the lack of guaranteed attendance by all the teams and drivers, it meant the sport was more difficult to follow from the point of view of the media and fans and, perhaps most importantly of all, for TV broadcasters.

For Bernie Ecclestone this meant changing the relationship with TV broadcasters to offer them the opportunity to purchase the rights to the sport on long-term, lucrative contracts, and effectively using the same tool to convince race promoters to pay fees to stage F1 events. Organizations that in previous years had been suppliers suddenly found themselves transformed into customers; the money flowed in the opposite direction.

All these changes took time and encountered resistance, but in the case of the TV broadcasters and race promoters they knew that Bernie had it within him to take his show elsewhere if they were not prepared to pay for it. He understood the value of the business better than anyone else at the time. There are those, such as McLaren's Ron Dennis, who are critical of Bernie's actions, and maintain that he effectively robbed the Formula One teams of their birthright to the sport's commercial control under the terms of the Concorde Agreements between Ecclestone and the FIA commencing in 1981. I have some sympathy with that view, but ultimately no one else was able to deliver the changes that Bernie drove through, and his main crime seems to have been the ability to out-think all the other stakeholders.

Changes large and small are important to building and evolving a business. If you accept that innovation is vital to business success, then you are also accepting that change is an inevitable part of business life. And it is, because, even if you make the decision to try not to change, to maintain the status quo and resist progress, eventually events will overtake you, because change is inevitably forced upon us by outside sources. There is always someone innovating and changing, and you cannot strategize based on anything other than change. There is also the issue of compliance and regulation, factors that affect most businesses – F1 included.

Among the apparently small changes made by Bernie's organization was the requirement for each Formula One team to field two cars – not one or sometimes three as happened in the past – and for the design graphics on team cars to be the same. This gave each team a strong identity, created a better platform for sponsors and gave the made-for-TV F1 show a more polished finish. Today it is not even questioned, but moving to a two-car-per-team format was yet another step in evolving the F1 sports entertainment show.

He also introduced fences around the Formula One paddocks to keep the general public out and applied security systems to limit who entered. Only passes issued by Formula One Management to the teams could permit access, the exception being the credentials issued by the FIA to the media and race officials. A controversial move from the point of view of the paying spectators, limiting access to invited team guests only raised the value of becoming a sponsor, positioned Formula One's inner sanctum as the elite place to be seen, and created a more rarefied atmosphere for the drivers and teams to go about their business untroubled by autograph hunters.

This change remains a bugbear for fans, and some marketeers with teams and sponsors, as it made Formula One inaccessible, limited driver–fan interaction and has given the impression that Bernie does not care for the spectators keen to catch a glimpse of their heroes. Once again, it is an understandable view, but Bernie recognized that the value lay in exclusivity, and that, for the corporate customers keen to gain privileges for their guests at events, paddock access would be a key selling point. And, quite frankly, the fans are not Formula One Management (FOM)'s customers; they are the customers of the event promoter. Formula One's job is to lay on a spectacular show.

By the time I joined the management board of Jordan Grand Prix in July 1998, paddock passes issued by FOM had become so highly sought after by sponsors that we could effectively apply a simple rule of thumb: for every $1 million spent by a sponsor with the team on an annual basis they could have one pass. As Eddie Jordan said to me at the time, every negotiation with a potential Formula One sponsor would come down to two things: the size of the logo on the car and the number of paddock passes. He wasn't wrong.

Large sponsors like tobacco giant Benson & Hedges might secure 10 passes per weekend for the season, in return for their overall US$25–30 million deal, while a modest sponsor such as Brother Industries would be offered four passes at only selected races or even at certain times of the race weekend. Having an FOM-issued sponsor guest pass meant you would be among the elite of Formula One, and that was the positioning Bernie strove to create.

Other small changes included FOM's insistence on each team parking its truck and mobile hospitality units within a defined space, each unit equidistant from the next such that the Formula One paddock area is immaculately laid out and presented. One of the most frequent comments I have had from clients has concerned this attention to detail, the fact that the truck and support vehicles are just as immaculately presented as the Formula One cars themselves. It all helps to woo customers seeking to promote their brands by associating them with a world-class activity.

As the sport of Formula One found its commercial feet in the 1980s, the Ecclestone business model developed further. The fact that television companies were by now spending a lot of money on the TV rights meant that those same broadcasters had to elevate Formula One to the top of the sports schedules to ensure they drew in the largest audience possible, while the race promoters were also more motivated than ever before to sell as many tickets as possible in order to meet the financial demands of their contracts with FOM.

With vastly increasing television audiences and well-promoted events, the teams found it possible to attract a larger and broader range of commercial sponsor. The tobacco industry, for so long a staple source of revenue, continued to pump hundreds of millions of dollars into the sport, while sectors such as clothing, electronics, IT, telecommunications and energy arrived and developed, so that by the 1990s to walk through the Formula One paddock was to gain an insight into the industries, sectors and brands that were making good money and confident of their global ambitions.

At Jordan Grand Prix between 1995 and 2000 we saw tobacco sponsorship from Benson & Hedges augmented by significant multimillion-dollar deals from brands such as MasterCard International, Pearl Assurance, Hewlett-Packard, Lucent Technologies, Infineon, Deutsche Post, DHL, Danzas, Brother Industries, Total Oil and Repsol: global payments systems, insurance companies, IT, telecommunications, computer chips, freight logistics, computer printers, and oil and gas companies.

But change was coming, and it would require a great deal of management.

A number of things began to happen at the same time. The campaign against tobacco advertising and sponsorship was gaining pace. As covered in Chapter 3, France's Loi Evin in 1991 effectively curbed tobacco and alcohol sponsorship within that major European economy. This had a devastating effect on France's place in world motor sport, effectively surrendering the future growth of the Formula One-based high-performance engineering and technology sector to the UK.

With tobacco coming under threat it was also noticeable how commercial sponsors were beginning to evaluate and monitor their sponsorships within Formula One more carefully, for it was no longer one of a few global sports entities. In the 25 years since Bernie had taken over the reins of Formula One, sports such as soccer, golf, rugby, cricket, snooker and sailing had carved out their own significant offerings. Our customers were facing a lot of choice, and were becoming more discerning.

We were also seeing that, with the previously cast-iron tobacco revenues coming under threat, we could not rely on our other types of sponsor to be as committed. Indeed, we began to see that not every new sector had the fundamental strengths of the cash-rich tobacco sector.

Around the turn of the century what is now referred to as the dot-com bubble came home to bite us. Sponsors such as Lucent Technologies, MCI WorldCom and Nortel Networks, which had come in with a bang, suddenly upped and left. The NASDAQ exchange had taken a dive, which led to an exodus of marketing dollars. Here was external change, and we had to cope.

We also saw some sponsorships end because an increasing emphasis from shareholders around the world on good corporate governance exposed some of the old-style deals whereby a CEO had driven sponsorships simply because he liked Formula One. At Jordan we saw one sponsor embroiled in a corruption scandal, and another pull out in the wake of inappropriate behaviour by a senior executive who was accused of using the Formula One activity for his own personal gain. In neither case was Jordan party to what took place.

With stock markets uncertain, the new technology sectors under pressure and commercial sponsors becoming more selective by the day, Formula One teams in general retrenched and moved back towards tobacco – at the very moment when it was under threat as never before.

In 2000 British American Tobacco started its own Formula One team, acquiring the entry previously owned by Tyrrell Racing, while Benson & Hedges remained with Jordan, Mild Seven sponsored Benetton, Gauloises supported Prost, West backed McLaren, Marlboro remained with Ferrari, and Winfield had just completed its activity with Williams. That was seven teams beholden to tobacco.

In July 2002 it was announced by the European Union that legislation had been agreed that would see an end to tobacco sponsorship and advertising in three years' time. Formula One's single largest source of revenue would end on 1 July 2005. Here was a classic example of change coming from outside; either you prepared for it, accepted it was coming and did something about it, or you stuck your head in the sand and hoped somehow to get through. The latter strategy didn't seem particularly appealing.

I recall sitting in my office in 2002 and wondering where on earth Formula One teams would find a replacement for tobacco. It didn't seem easy, and it wasn't.

Vodafone's arrival with a title sponsorship of Ferrari in 2004, a deal that moved to McLaren in 2007 partly because of the continued demands of Marlboro as Ferrari's long-term partner, gave some light. But even more hope came from the next sector to be targeted by the Formula One team sales departments: banking.

HSBC had been involved since 1998 thanks to Jackie Stewart, but in the mid-2000s ING, Credit Suisse, Royal Bank of Scotland, Santander and UBS would come into the sport, eager to promote their brands globally and associate them with a sport renowned for its following among the international business community. To some, it looked as though we had found our tobacco substitute.

As we now know, some of those associations would become relatively short-lived thanks to more external tremors, this time from the financial crisis of 2008 and the subsequent bank bail-outs. Royal Bank of Scotland, now a global player, was a particularly high-profile victim, its CEO Fred Goodwin a Formula One fan whose ambitions for RBS and close friendship with Jackie Stewart had led to a title sponsorship of the Williams team. ING came and went in three years. Credit Suisse followed suit. Only UBS and Santander stayed in, the former as a key partner, not of a team, but of Formula One itself. In Santander's case they had avoided the worst of the financial storms and cleverly used Formula One's popularity in the UK to make the most of rebranding of the recently acquired Abbey National Building Society with the help of brand ambassadors Jenson Button and Lewis Hamilton.

What was evident within the commercial sponsorship arena was that Formula One was having to endure not only the boom-and-bust waves of natural economic cycles, but the rigours of the modern business world and the inability of many companies to take anything more than a short- to medium-term view. Brands that Formula One attracted and lost, such as Nokia, felt burned by their experience. Not only that, but those major brands that were attracted by the global audience and associations with Formula One were, more than ever, only interested in supporting top teams with a winning record.

For the teams lower down the order, the end of the first decade of the new century proved to be a disheartening time, as they had to rely even more on the revenue from FOM, sponsorship generated by their drivers and, in many cases, shareholders' funds paid directly or indirectly through associated businesses dressed up as sponsors.

As if the dot-com bubble, tobacco legislation, the banking crisis and economic turmoil in F1's heartland of Europe were not enough, the sport also witnessed a sharp correction as four major car manufacturers exited with little notice. The decisions by Ford (2004), Honda (2008), Toyota and BMW (2009) to turn their back on the sport were a further hammer blow. And if that was not enough, demands for better corporate governance in relation to sponsorship deals and growing concerns about F1's image in a world where environmental awareness was increasingly important only added to the mix.

The behaviour of car manufacturers, who fall in and out of love with Formula One in a bizarre cycle of appraisal, investment, reappraisal and withdrawal, added to the view that for many teams the traditional commercial model was likely to remain broken, or at least never regain reliability.

Changes brought about by external factors such as economic cycles, legislation and revised business priorities among customers are an inevitable part of the cut and thrust of business. To Formula One's credit, across the spectrum of the commercial rights holder at FOM, the regulator in the FIA and the leading teams, meeting the challenges presented by these changes has been more or less successful, even if it hasn't come without a degree of collective hand wringing along the way. Change is seldom easy, but faced with Hobson's choice the option of doing nothing is likely to be terminal.

For the teams facing a much more demanding sponsorship environment the winners, at teams like Ferrari, McLaren, Williams and Benetton, were those that offered ever more diverse services to existing customers and repackaged their offerings to new ones. The old model of selling sponsorship based primarily on the brand awareness generated by TV coverage combined with corporate hospitality at events was replaced by a much more sophisticated offering that provided the customers with value 365 days a year.

Factory visits, team-building events, the presence of the F1 car and drivers at trade and consumer shows and exhibitions, product launches and internal staff motivational programmes: these have become the day-to-day nature of sponsorship activation within Formula One over the past 15 years as the sector has had to change its customer proposition.

Bernie Ecclestone's response to growing the revenues of Formula One at a time of increasing uncertainty over the traditional business model was to begin a process, in the late 1990s, of harnessing the power of the sport's appeal to an entirely new type of customer, which would include governments and sovereign funds. Just as he had understood the potential in packaging Formula One for the television age in the 1970s, introducing competition between broadcasters and race promoters, so he recognized that governments were increasingly interested in using global sporting events to promote their nationhood, communicate that they were open for business with international markets, and promote tourism.

Compared to the ritual of the International Olympic Committee and FIFA awarding the rights to stage the Winter or Summer Olympics and the Football World Cup to a different country ever four years, the appeal of Formula One was clear. Generating a global audience whose cumulative figures each year could stack up favourably against the quadrennial Olympic Games and World Cup, here was a sport that didn't have to run a long-drawn-out raffle to award an event. Build a Formula One track to specification, with sufficient hotels and transport infrastructure nearby, and a multi-year contract can be had to stage a premier World Championship sporting event in return for a substantial rights fee – but one that was significantly lower-cost than the offering from either FIFA or the IOC.

Malaysia was the first to come to the table, its government under Dr Tun Mahathir undertaking to build a state-of-the-art Formula One facility adjacent to the brand new Kuala Lumpur International Airport and sign up to a long-term contract. I remember arriving at the Sepang Circuit for the first time in 1999 and wondering in awe at the sheer scale of the place, ultra-modern garages, enormous paddock, covered grandstands, well-equipped media centre and medical facilities.

Not known as major followers of Formula One, the Malaysian people did not exactly flock to those initial events, but then they were not the audience being sought. For Malaysia the benefit of having Formula One was to put the country and its capital city at the centre of the world sporting map for a week or two every year. As F1's media corps jetted into town, a generation of sports fans from London to Tokyo, Montreal to Sao Paulo, were introduced to the reality of Malaysia as host nation, and Kuala Lumpur as our base.

Malaysia worked well for Formula One, so much so that the model was repeated within three years and contracts signed with Bahrain and China. By 2004 they had built their venues and were staging the inaugural Formula One races in the Middle East and most populous nation on earth respectively, and from then on a surge of new markets and venues burst upon the sport: Singapore, Abu Dhabi, South Korea, India and ultimately Russia, President Putin rather ironically opting to have Formula One help ensure the sporting legacy of the estimated US$50 billion spent on creating the infrastructure at Sochi for a single Winter Olympics. That must have struck Bernie as being ironic.

This drive eastwards for Formula One helped meet the challenge of the changes impacting on the traditional business model of the sport, not only generating new revenues directly from the host venues and their promoters, but potentially creating a wealth of new commercial sponsorship opportunities from among companies eager to reach those markets. The fact that the indigenous populations of some of these countries were not avid followers of Formula One was an early concern but, as the trends have shown in China and India, their growing middle classes and wealthy elite become drawn to Formula One as their aspirations grow and consumerism takes holds.

As an example, Ferrari opened its first dealership in mainland China in a downtown Shanghai location in 2004, the same year as the first Grand Prix was staged just outside the city. With some 25 per cent of China's trade being driven through that one city, it came as no surprise that the Shanghai dealership provided to be a success, and by 2012 Ferrari had expanded to add more than a dozen around the country, by now the Italian marque's most important market in terms of growth. Out of a total of 7,138 cars sold worldwide during that year, 734 were sold in China, making it second only to the United States in terms of Ferrari sales.

In 2013, at the 10th Formula One race to be held in Shanghai, the race attendance was among the highest yet seen, with over 80,000 spectators on race day alone. If ever there was an indication of the long-term game plan of Formula One playing out, that was it.

The flip side of Formula One's expansion eastwards has been a reduction in the number of events held in Europe. In 1997 there were 16 Grands Prix, of which 12 were in Europe and four 'long-haul' in Australia, Japan, Canada and Brazil. By 2012 that balance had shifted, with 20 events featuring only eight in Europe and 12 in the Americas, Middle East and ASEAN countries. At a time of economic difficulty in Europe this change, although controversial with the media and fans sorry to see traditional venues disappear, helped drive up the value of remaining core events such as the Grands Prix in Monaco, Italy, Britain, Germany and Belgium. It also gave enhanced credence to Formula One's status as a true *World* Championship.

Change in the organization and structure of Formula One's business has also seen parallel changes in its priorities, technologies and processes. Each met with resistance; each resulted in improvements in key metrics including safety, performance and spectacle.

The changes brought about in terms of safety have been profound, ending the all-too-regular fatal accidents that killed drivers, spectators and track marshals during the first five decades of the sport's history. It is remarkable now to reflect on the fact that Jackie Stewart was pilloried by some for his campaign for improved safety including questioning the validity of racing Formula One cars around the Nurburgring's Nordschleife circuit, which was built in the 1930s.

From seat belts to full face helmets, fireproof clothing and, much later, the more recent innovations such as the HANS device, the changes met with suspicion and questions, but it's only as a result of these changes that the safety record of Formula One has improved to become the benchmark of motor sport worldwide. The remarkable thing now is just how few other series have embraced the holistic view Formula One has taken to changing its priorities.

Processes have changed too, from a time when pit stops were something to be avoided through to the modern era where they are not only mandatory but embraced by all the teams as a key aspect of race strategy. A grainy video on YouTube shows a 22-second pit stop by Brabham's Nelson Piquet in 1982, the mechanics hurriedly trying to replace all four wheels and tyres and refuel the car as fast as possible. Thirty-one years later that same process was no longer a novelty, and the time taken for the performance-enhancing stop had dropped to 2 seconds, admittedly without the refuelling element. At the 2013 United States Grand Prix, Red Bull Racing set a new benchmark of 1.923 seconds for a pit stop with driver Mark Webber.

Along the way countless teams of mechanics had to wrestle with the improved performance demanded of them by the team bosses, examining the processes, technology and training involved in producing year-on-year improvements against a backdrop of ever increased safety demands. Performance and safety have had to work hand in glove.

Technological change within Formula One has been an inevitable part of this techno-centric sport, but the rate of change has increased dramatically over the years, particularly with the arrival of data-driven engineering and the information technology age.

When I started working in the sport, engineers in the 1980s still drew designs on paper, the draughtsman's job unchanged significantly since the industrial revolution. Clipboard in hand, race engineers would carefully make handwritten notes during practice, qualifying or a race in order to discuss the subjective feedback of the drivers afterwards. More often than not engineers were using their eyes, ears and noses to detect problems with a car, for without data systems only the tell-tale plume of black smoke from the rear of the car, drip of fluids on to a garage floor or grating sound of an engine misfiring on one cylinder would warn of mechanical failure.

The IT revolution required existing engineers to retrain and an investment in talented young personnel for whom the new technologies were familiar. There were those who changed, and those who didn't, and it was the former who thrived. Neither experience as an engineer nor utilization of the new technologies could win on its own, but combine the two and it was a powerful tool.

To start with, cars were fitted with rudimentary systems that enabled engineers to download basic performance information using an umbilical cable connected to a laptop when the car came into the pits. This gave us a chance to look at what had happened in the minutes and laps driven beforehand. During the 1990s this developed further with wireless networks giving teams the opportunity to monitor both the car and driver performance in real time, allowing for instantaneous decisions on mitigating technical risks, optimizing performance or changing tactics during an event. And now we have systems that are sufficiently sophisticated for us to be able to predict outcomes by analysing trends and mining the data. Big data has become a powerful new tool in Formula One's armoury.

At Jordan Grand Prix we made management decisions based on two principal questions: will it make the car go faster, and will it improve the business? Everything was about the product and the bottom line. Change invariably became part of the week-to-week discussion, because in deciding to purchase new technology, revise a process or alter a priority we had to undertake the most crucial aspect of this philosophy: communication.

You cannot expect to force change on customers, staff or suppliers without undertaking a rigorous analysis of the challenge or opportunity and then communicating the background to the decision in such a way that everyone is aligned. Enforced change is possible, but seldom smooth; it's more effective to explain the reasons for the decisions and allow a period of constructive discussion and development ahead of implementation.

The speed of change in Formula One is necessarily fast because of the complete focus on delivery against immovable deadlines, relentless performance reviews and intense competition from our rivals. We don't have time to debate change at length, so evaluation, decision making and implementation or rejection are rapid.

At Jordan our design office moved from drawing boards to 2D design and finally 3D computer-aided design and computer-aided manufacturing in a matter of five years and, being responsible for the IT partnership with Hewlett-Packard, I was closely involved in managing those changes. As our technology partner Hewlett-Packard was able to advise us of new developments in hardware, software and solutions management, while on our side the technical leaders within our business were constantly looking for new opportunities to improve performance, speed and efficiency within the design, manufacturing and development processes.

Naturally on the management board we had to factor our supplier's encouragement and our personnel's desire to acquire the latest technology against the business's needs to manage available resources. In the case of Hewlett-Packard we initially had US$1 million a year to 'play with' in relation to their sponsorship of the team, above which we had to pay cash. Eddie Jordan, an entrepreneur ever keen to protect and enhance the bottom line, was not overly keen on blowing the sponsorship allocation and starting to hand over cash, so we had to balance our desire for adopting and adapting to new technologies against the priorities of the business to manage its finances.

This is why decisions on expenditure relating to the business, including changing technologies, processes or people, always came down to answering that question about either making the car go faster or making the business more profitable. An ideal answer was both.

A key moment came for us in 1998 with the opening of our 'new' wind tunnel in Brackley, Northamptonshire, which was in fact the refurbished wind tunnel left derelict following the collapse of the Leyton House March Formula One team back in 1991. A new technology, that of stereolithography, or 3D printing as it is more commonly know, was sought by our design department, but it represented a significant investment in terms of cash, change in R&D processes and people. This technology appeared to be straight out of the world of science fiction at the time, enabling us to design a component and print a three-dimensional model of it in resin, a model with sufficient structural integrity for it to be installed on a wind tunnel model and tested immediately. What had taken weeks in terms of prototyping was reduced to days, sometimes hours, and, although this represented significant change, the benefits for our business and to our employers was very clear: it had the potential to make the car faster and improved the bottom line because we could fast-track developments much more efficiently.

The advent of rapid prototyping required investment, retraining, and a change in car development. The benefits became clear very quickly, and in a highly competitive team like Jordan everyone was eager to see those benefits translate into a faster, stronger, safer, more reliable car on the race track.

Customers can drive change and, so long as we are listening to them, create significant opportunities to retain and grow relationships. When

Formula One saw the anti-tobacco legislation of 2005 and financial crisis of 2008 cause an exodus of customers, it needed to do everything in its power to sustain those that remained, and find ways to develop new ones.

During the period of 2008–09 it became clear that one of the sport's major customers, the Renault Nissan group, was demanding that the gas-guzzling V8 engines that were the mainstay of F1 should be replaced with much more energy-efficient power units. Within two years Renault, Mercedes, Ferrari and Cosworth agreed with the FIA a step-change in technology, with a tiny 1.6-litre V6 engine mated to a powerful electric motor and two sophisticated energy recovery systems. This major change was extremely costly, and met a lot of resistance, but it was driven by customer demand; Renault's CEO Carlos Ghosn painted a picture of an automotive future where hybrid and all-electric vehicles would make up his company's product range, and Formula One had a choice to make. We would either be road-relevant, and benefit from Renault's continued custom, or continue with our outdated technology and become irrelevant to their business.

Fuel efficiency lay at the heart of Renault's power train strategy, and when we discussed this matter with Mercedes-Benz they confirmed that small hybrid engines would indeed form an important part of their future product planning. Ferrari was initially highly sceptical, but even for a luxury sports car manufacturer the need to meet emissions legislation and fuel economy targets in key markets reflected the need for Formula One to take heed.

The decision to move to an entirely new set of technologies demanded a great deal of resources, but the objective was to keep Formula One road-relevant in order to maintain these key customers, as well as to attract new ones. Honda's decision to return to Formula One in 2015 has been driven by their enthusiasm for the new power train units, vindicating the advice given by Carlos Ghosn, and the decision by Jean Todt at the FIA to legislate for their mandatory introduction in 2014.

The wider implication of this significant change was also to address another complaint from existing and potential customers about our sport: that it was ecologically damaging and did not promote environmental sustainability. Burning large amounts of fossil fuel in front of a live global television audience was not going down well with multinational companies whose own corporate social responsibility and environmental programmes were regarded as sacrosanct. The new power trains, producing the same performance with a reduction in fuel consumption of almost 40 per cent, not only address that issue head on, but arguably promote the capability of Formula One to engineer energy-efficient solutions that can benefit wider society in the longer term.

Considering the initial resistance within our industry to these recent changes, the advantages are very clear, even if for many people the positive effect has only become evident with hindsight.

I have also seen the resistance that comes from major changes in process such as the adoption of an enterprise resource planning (ERP) system such as that offered by SAP or Microsoft Dynamics. At Cosworth this added several layers of bureaucracy, it seemed, and, since not everyone was prepared to input the data required within their area, not surprisingly the output data were neither accurate nor useful. Staff used to working with manual systems, or at most using spreadsheet planning, resisted the adoption of an ERP system because of the complexity and 'clunkiness' that it added to an environment where we were already working on time pressure to fixed deadlines.

The reality, however, is that an effectively implemented ERP system can be enormously effective in driving efficiencies, reducing costs and achieving precisely the outcome from which everyone will benefit. But without the necessary engagement, education and communication of such a system's adoption it is impossible to get staff to accept such a change and optimize its use.

So this is the key thing about change: getting people to accept it, understand the reasons for it and embrace it. If you can show a Formula One team that a change will produce a winning car, making their lives richer in the process, naturally it's not such a hard sell. But a change such as happened following the 2008 financial crisis included having to downsize some of the teams and, in some cases, close entire departments. That's a much harder sell, especially for those being made redundant. But for those remaining in the business isn't it better to change and survive than to do nothing and risk complete collapse? Again it comes down to how the communications are handled; change should only become a problem if poor communication means that a change of course comes as a nasty surprise.

LESSONS IN CHANGE MANAGEMENT

Considering the complexity of modern business life, effective change management is an important ingredient for any successful company, and 'change' in all its forms needs to be embraced and understood. It is striking how often change is resisted, although this is often driven by fear: employees frightened at the prospect of a new technology, system, process or organizational structure that might upset their happy routine.

Technology is ever evolving, and as we accelerate towards the mid-part of the 21st century that is going to continue unabated. Wave after wave of technological developments and innovations will continue to crash over us. We either stand up, watch for them coming, and ride the waves of change, or we turn our back on them and receive constant surprises and shocks to the system.

Consider how the internet has revolutionized commerce, forcing industries to reappraise every aspect of how they work internally and externally, and creates a world where 'mobile' is no longer the generic term for a device, but the means of production, delivery and consumption. Those who saw the opportunities, seized them and met the challenge have thrived. Those who resisted, were complacent about their current capability and found it hard to innovate into the future struggled.

In Formula One we have seen how change has driven success, starting with the way that Bernie Ecclestone repackaged the entire sport in the 1970s and 1980s to build a made-for-TV offering that would attract sponsors and car manufacturers in their droves. This resulted in a raft of internal changes to meet the goals of attracting, sustaining and developing customers.

We have also seen how an external factor such as the anti-tobacco advertising and sponsorship legislation came about and forced a seismic shift in the commercial realities of our industry. Legislation and compliance commonly bring about change, and in Formula One we have had to learn how to adapt our business accordingly.

WITH RESPECT TO THIS TOPIC, MY TAKEAWAYS ARE AS FOLLOWS:

- ***Change is not an option.*** Whether we like it or not, change is not only inevitable but in fact an essential part of business. The debate should not be about its merits, but how to evaluate, drive and embrace change for the betterment of our business and its employees, suppliers and customers.
- ***Avoid a bunker mentality.*** In an ever shrinking world, and whether we are 'local' or 'global', our businesses will be affected by what happens elsewhere. We need to keep our eyes on the horizon, looking for the changes that are coming from within our industry, competitors, suppliers and of course the wider economy.
- ***Plan for continuous technological innovation.*** Technology is going to continue evolving at a meteoric rate, giving our customers ever greater choice, enabling new processes and systems to be developed, and empowering new competitors. Our use of technology cannot be a static condition; plan for evolution and improvement, but expect revolution.
- ***Compliance, like quality, is a foundation stone.*** It's essential if we are to compete effectively; we all have to meet the same sets of rules, whether governed by industry-specific regulation or by legislation. And since this can vary from country to country, region to region, we have to build flexibility into our strategies to accommodate changes when they come.

- ***Resistance to change is natural.*** That negative reaction among staff, suppliers and customers needs to be understood. People like predictable outcomes, and fear uncertainty. So in managing change we need first of all to put ourselves in the position of those affected, and understand what is going to drive their objection.
- ***Engagement, education and communication are key to generating buy-in and securing alignment from those affected.*** This is especially the case when management wants to implement changes to technology, systems, processes or structure, and thus has the opportunity to plan. But, even when change is enforced, sudden or unexpected, management should work hard to create the time for effective communication.
- ***Customer-driven change – such as when key automotive clients demanded Formula One put energy efficiency at the centre of its future technical regulations – requires special sensitivity.*** In a customer-centric business, make time to listen to what customers want, examine how their demands are changing and find out where we can add future value.
- ***Change needn't be frightening.*** By listening to those around us, particularly our customers and suppliers, and watching the competition closely, we can take much of the fear factor out of future plans.