Formula 1 constructor – choose a team – ferrari

Technology, Cars



The resources, capabilities and attributes that are required for the success in Formula One (F1) can be looked on a number of dimensions taking into consideration the unique and fast paced context of Formula One. F1 is a highly competitive industry and based in a rapidly changingenvironment, which has been defined by Porter's five forces (Appendix One). Key resources within F1 are both tangible and intangible and can be considered under the following broad categories: Physical Resources: The car and its components such as engines and chassis are vital resources but the technological advancement determines its ability to win races.

Test Tracks are also vital physical resources both in the competitive context and in the ability to test cars, the location of such tracks may also be an important factor. Own testing and development equipment is also important for technological advancement and knowledge gain. Factories are also an important physical resource for constructors. Financial Resources: High start up costs and continued running costs involved with the sport, result in the need for high capital investment, for example a medium sized constructor needs? 30-? 50 million capital investment as a basis for being competitive.

The majority of teamfinanceis generated through sponsorship - a lucrative sponsorship deal can help improve a team's level of performance through cash injection alone. Fans are a huge resource for the sport as they act as a huge funding society for Formula One. At present tickets cost upwards of? 330 per race and for VIP access ? 1700. Revenue is also provided by prizemoneyfrom winning championship points and through shareholders within each constructor. Human Resources: Team Principles are an important aspect to every constructor.

Initially, teams were managed by the founders themselves, but as time has moved on the emphasis has shifted to managers and their ability to run the team in a business manner. The intangible resource of their skills and knowledge is incredibly important in F1 due to the highly competitive environment. For success a team needs a certain level of experience and expertise, either built up over time or recruited from elsewhere. To gather this expertise is expensive and requires investment in personnel as well astechnology. Such gains are provided by the knowledge from other important employees including designers, engineers and drivers. Another crucial factor is themotivation to carry-through the bright idea into detailed implementation" (Cross and Clayburn Cross). Drivers are a key human resource; important attributes of a driver include the ability to drive fast, think strategically while racing on the track, goodcommunicationskills, and motivational skills. Intellectual Capital: Although patents are not allowed in F1, other intellectual capital includes the constructors brand and reputation largely used to gain finances. A key brand in F1 is the Maranello Red used by Ferrari.

Complex business systems are required by F1 teams for managing the large amount of data that flows in the organisation. These resources will not reach their potential purely from existence, the way in which they are managed, used or deployed is essential in understanding strategic capability. See Appendix Two for example of resources and the competencies gained. To be on the F1 grid and compete in the market, capabilities gained through the above resources must reach the threshold level. The F1 constructors

generally function at the peak of resource utilisation and, therefore, manage resources very efficiently.

Hence, almost every resource that becomes a capability for competitive advantage is converted into a competency for competitive advantage. Internal strategic capability allows for successful strategy and is required for survival and success (Johnson et al, 1998). To gain competitive advantage involves adjustment of capabilities, for example acquiring major improvements and advancements in attributes such as technology and from the creation of new opportunities. Stretching and exploiting capabilities in such a way that competitors cannot imitate, results in them becoming a rarity and providing competitive advantage.

Though such advantageous technological strategic capabilities have been required by constructors for competitive advantage, they have also become been a pivotal factor for the introduction of increased legislation designed to reduce uncertainty and increase competition, such as the introduction of generic tyres. The factors responsible for the success of the teams in their respective periods of dominance can be considered through analysis of the organisations core competencies, a form of competitive advantage which s usually a result of " collective learning processes" and are manifested in business and activities and processes. The core competencies are those unique capabilities, which usually p over multiple products or markets. " (Hafeez 2002). Ferrari's dominance in the mid 1970's Much of Ferrari's success during the period of the mid-1970's can be attributed to the ability to build their race cars at the Maranello site without the need to outsource for component parts.

This created centralisation of knowledge and expertise, thus the ability to transfer knowledge between departments without leakage. When Ferrari sold 40% of the company to Fiat, in 1969, providing huge cash injection thus acquiring the Fiorano test track allowing them to test the change in any aspect of the car on the track and observe real time results. This gave a competitive advantage through testing technology and making changes faster than their opponents. This led to the creation of a team dedicated to engine design and development.

A much needed management discipline was also imposed upon the organisation with the appointment of Luca di Montezemolo as team principal in 1974. Luca restructured the management, added focus to the organisation, and enabled the team to reach its collective potential. Montezemolo defined strict areas ofresponsibilityin order to reduce the amount of interference and internal politics. In 1973, along with the arrival of Mauro Forghieri as the technical director, Niki Lauda was recruited. He provided the team with driving skills and racing experience. McLaren's domination in the late-1980s

McLaren's domination can be attributed largely to theculturecreated under Ron Dennis'leadershipand the recruitment of personnel matching this culture. Dennis' obsessive attention to detail coupled with John Barnard's ' technical excellence' created an atmosphere where new ideas and innovations in technology could thrive. Consequently, McLaren differentiated themselves from other Formula One teams by taking bold steps into unchartered territories both in their strategy and their design of cars, for

example by using carbon fibre instead of metal for the chassis of their successful MP4 car.

Prahalad and Hamel (1989: Page 64) argue that gaining leadership in any given industry requires a 'strategic intent' to guide operational direction and its resource allocations. For example, when Canon sought to 'beat Xerox' in the photocopier industry, it was able to do so over a period of years by incrementally attacking all of Xerox's 'loose bricks', the criteria left unfulfilled by its competitors. Similarly, Ron Dennis built an 'intent' of having the 'smartest and the best presented car' in Formula One despite the risks of failing in its races.

This attitude evidently became entrenched in the whole organisation as the element of fear was removed, helping McLaren achieve success even after Barnard's departure. Although many strategists argue that a company's core competence cannot be derived from a single person, Tampoe (1994: Page 69) argues that a leader with a personal core competence such as a 'strong vision and enormous energy to expand' can help an organisation sustain competitive advantage. Ron Dennis, with his perfectionism and 'legendary' marketing and management abilities, was considered by many the best manager in sports.

McLaren's core competence, therefore, appears to have been Ron Dennis' vision and his skills through which McLaren won 15 out of 16 races in 1988. Tampoe's (1994) model for 'Market Survival Strategy', shown below in Figure 1, explains how companies competing with their core competencies can gain higher competitive advantage. Figure 1: Tampoe (1994): Market Survival Strategy Patents Low High Profit Low Competitive Advantage High Competitor Response Hard Easy New Product Know How Sources of Market Strength

Price Place Core Competence Tampoe (1994) shows that competing on the basis of lower costs and technical know-how is easier for competitors to imitate. As patents are not allowed in F1, teams need to compete on the basis of their core competencies to sustain their competitive advantage. Dennis' abilities could not be imitated or substituted by McLaren's competitors as he achieved success by synthesising McLaren's budget, designers, engine, drivers, and sponsors to create a perfect ' overall package'.

McLaren achieved success on the race track through an overall strategy that was invisible to its competitors. This included long term partnerships with sponsors such as Marlboro and TAG, a design team led by John Barnard, and possibly the best management in sports. These core competences are evident as Dennis applied them successfully in other areas including a marketing consultancy operation to help smaller teams find sponsors, while also launching the McLaren F1, the world's most expensive and fastest road going car.

McLaren's sponsorship partnership with Marlboro cigarettes, lasting 22 years, was particularly helpful as Marlboro were responsible for Ron Dennis' recruitment when McLaren were struggling against their competitors. Furthermore, McLaren's relationship with Honda was a key reason for success as the engine makers had recently split from rival constructor Williams and had some of the most talented engineers and expertise. This

relationship produced the MP4, Honda powered car which became the most reliable and fastest car on the track in 1988.

William's success in the mid-1990s Perhaps the most important factor in the success of Williams during this period was the relationship between Frank Williams, the founder and owner, and Patrick Head, the designer. The partnership provided the combination of " entrepreneurial energy and technical excellence needed to succeed in F1". Williams' autocratic and frugal approach, paired with Head's ability to develop good ideas, led to the team becoming leader of the "technical revolution" during the 1990's.

This long standing relationship is unique to a sport where personnel changes frequently, and gave stability to the organisation leading the team to gain its competitive edge. Another key partnership leading to Williams' success during this period was with the engine supplier Renault, lasting 10 years. Its success led to the development of the Williams FW15 and FW16 cars powered by the Renault V10 engine, still widely regarded to be the most technologically advanced car of the time. It assisted in the team winning 56% of their races between 1992 and 1994, as well as winning the constructors title in 3 consecutive years.

Ferrari's return to winning ways from 1999-2003 Since Ferrari's success in the mid 1970's, much change led to a move towards revamping the management, technical department and design development. Appointing British technical director John Barnard led to a change in attitude of the organisation as they were now prepared to imitate the British constructors with a base in Britain. Luca Di Montezemolo, team manager of Ferrari during their dominance in the mid 1970's, returned as CEO in 1993 to restore Ferrari's dominance. Jean Todt was appointed to handle the overall management of the team.

After Barnard left in 1996 the role left was split up between Rory Bryne and Ross Brawn, and between them they built a new design department based in Italy. Ferrari entered into a commercial partnership in 1996 with tobacco company Marlboro. Phillip Morris, in charge of the Marlboro brand, agreed to pay for the team driver's, Michael Schumacher's, salary. They also made a contribution to Ferrari's annual operating budget. In Schumacher, Ferrari had one of the best drivers in the business, who was able to lead them to success.

Schumacher was not only a talented driver, but also a motivator with the ability to communicate effectively with the team, demonstrated by learning Japanese to communicate with an engine technician recruited from Honda. The change in Ferrari as a constructor is evident. Jeremy Clarkson, a well know auto-journalist, documented this fact: 'In the olden days they (Ferrari) used to build their cars with a lot of passion and enthusiasm. And then, on lap 3, as often as not, they would explode in a passionate and enthusiastic fireball.

But a few years ago they started building their racing cars withscienceand math and since then, as we know, they've been top of the tree'. Reasons forfailureFerrari Ferrari, unlike other competitors in F1, made all parts of their car, including the engine, themselves. Although, this resulted in huge success during the mid 1970s, Ferrari's uniqueness was also the reason behind their failure. Ferrari's failure due to technological negligence can be explained using the Quantum Hypothesis: 1. The pursuit of efficiency

increases internal consistency and cohesion. Ferrari had developed a unique engine-gearbox combination using their 'flat-12' engine and a transverse gearbox and applied it in their 312T series of F1 cars. Ferrari chose to develop this combination further and with this revolutionary configuration they were able to stay ahead of the competition from 1975 to 1979, winning the constructor's title in 1975-1977 and 1979. 2. Overtime, configurations ' change to adapt' OR alternatively, match poorly with the environment as it changes (the overtly cohesive ones). * In 1980, new innovations in the aerodynamics brought the 'ground effect' revolution.

This was developed by Lotus and guickly adopted by Williams and Brabham, but Ferrari was not able to adopt this new technology as their engine design was different. 3. Overtly cohesive configurations resist change for as long as possible. * When the 'ground effect' technology was developed, Ferrari knew that their cars would not be competent enough to keep up. Instead of finding a way of incorporating the new technology in their current cars, they chose to concentrate on a longer term project of developing a V6 turbocharged engine.

In essence, Ferrari made a crucial trade-off between the current and the future plans. 4. When such configurations change it tends to be sudden and relatively rapid (and often painful). * Although the change for Ferrari was neither sudden nor rapid, it was guite painful. When Ferrari did eventually come out with their new car sporting a V6 turbocharged engine and employing the 'ground effect' technology, it was perhaps too late. Ferrari was not able to win a single driver's championship between 1980-1999, and didn't win a constructor's championship between 1984-1998.

In Ferrari's case, the flow of the stages of the Quantum Hypothesis can be easily seen. Ferrari was overtly cohesive and resisted change in 1978 when the 'ground effect' technology was developed. Enzo Ferrari's autocratic leadership style lead to a political environment, causing rivalry and confusion. Good management is of paramount importance in any industrial context and this was proved by the turnaround in Ferrari's fortunes achieved by Luca di Montezemolo's restructuring. Furthermore, in 1977, Niki Lauda ended his partnership with Ferrari.

This was a major blow for the team as Lauda had the ability to translate what he wanted in the car to the technical team. Reasons for failure McLaren McLaren's main reason for failure came when Honda pulled out of F1 racing in 1992. Ron Dennis failed to respond to widespread speculation that Honda would be leaving. Due to such failure, Ayrton Senna left McLaren for Williams, taking with him his great ability to motivate designers with valuable feedback. McLaren seemed to have lost their focus on their car's design, evident in 1995 as both their drivers failed to fit in the new ? 0 million MP4/10, ultimately leading to Nigel Mansell's departure. Other reasons for failure include the departure of John Barnard, whose presence was seen by many as the reason behind their developing dominance. Despite their poor relationship, the partnership between Dennis and Barnard had been highly successful and held potential for even greater success had it been sustained for a longer period. Another relationship problem leading to failure was the fierce rivalry between two highly competitive drivers, Prost and Senna.

This could be attributed to the fact that, rather than applying the usual team ethics of havingprimary and secondarydrivers to support each other, McLaren recruited two top drivers and did not give either driver 'first' priority. This left both drivers competing for top position, causing friction within the team even when it had the best car in the sport, the Honda MP4. Notably, McLaren were able to sustain their success by substituting John Barnard with Gordon Murray, and McLaren's success was not greatly affected by Prost and Senna's conflict.

Therefore arguable the only factor that led to their complete failure was the lack of a contingency plan for the departure of Honda. Reason for failure Williams The Williams team's failures, like McLaren's, show the bargaining power of engine suppliers and drivers, as well as talented designers in the F1 industry, proving to some extent that Ferrari had a degree of advantage by producing their own engines, despite the technical issues. In 1988, Honda's departure from Williams, like their departure from McLaren left the team reliant on off-the-shelf engines, leading to the departure of their main driver, Nigel Mansell.

The importance of a good driver was signified during the early 1990's as Williams went from winning only two races in 1990 to dominating the races in 1992 after the return of Nigel Mansell. However, the Williams team remained steadfast in their belief that the driver was not as important as the car's design process, despite the valuable contributions a good driver can make towards this process. Placing a lack of importance on the driver, as well as the 'masculine' approach of Frank Williams led to many successful drivers leaving the team.

Due to their technologically competitive car, Williams retained their constructor's title in 1994 despite Ayrton Senna's death. With only a more advanced car, Williams' competitors were soon able to catch up as Benetton used the expertise of Ross Brawn, formerly a junior designer at Williams, to design a car replicating the innovations from Williams. There have been instances in Williams of their knowledge being transferred to competitors as their employees left to join other teams.

This shows a fracture in the culture of the team with little sense of belonging. Furthermore, Renault, ambitious in becoming a top engine supplier in F1, had decided to supply Benetton with engines as well, and therefore, by pairing a similar car with a better driver in the form of Michael Schumacher, Benetton were able to break Williams' three year domination period in the sport by leaving them with no unique competitive advantages. Proposed strategies for maintenance of dominance of each constructor Ferrari: The Crescendo Model of Rejuvenation

Ferrari was a team driven by the ambitions of one man - Enzo Ferrari, when Luca di Montezemolo was appointed the opportunity to rejuvenate should have been taken due to several important signals: * Even after the considerable cash injection by Fiat, the team had not been able to perform very well. * Enzo considered the most important part of the car to be the engine almost neglecting the importance of other parts. * Enzo's autocratic style of 'divide and rule' had created much confusion and rivalry within the team. There was a huge supply of talent at Ferrari and it had not always reached its collective potential, mainly due to Enzo's management style. There was clearly the need to start a fresh and Montezemolo had this opportunity when he joined the team along with technical director, Mauro Forghieri, and a new team driver, Niki Lauda. Baden-Fuller and Stopford (1994) argue that the obvious thing to do at the start of a rejuvenation process is to establish measures that heighten the sense of urgency to deal with emergent problems before they become serious.

Luca could see the problem, which is why he made some managerial changes in the way the departments interact, but was not able to make the problem evident on a broader scale. It can be argued that if Montezemolo had realised the team needed an organisational turn-around and would have started a rejuvenation process, using the Crescendo Model, the team could have started the 1974 season with an alternative strategy and would have been able to sustain its period of dominance by adopting the 'ground-effect' technology in 1978.

This process had to be initiated by Montezemolo as "Rejuvenating a mature organisation is impossible without commitment from the top" (Baden-Fuller & Stopford, 1994). This eventually took place, but at a much later stage in 1992 when Montezemolo was called back to Ferrari as a CEO, to take Ferrari to the top again. SECI - Strategic Knowledge Creation Recent work by Chou and Te (2004) sought to empirically test the roles of knowledge assets in the promotion of SECI outcomes, finding some support for hypotheses which asserts the presence of knowledge assets.

For example organisational routines which can have a strong impact on certain SECI outcomes. Such a model can be transferable to Ferrari. In 1978, after the launch of the revolutionary ' ground-effect', Ferrari should have started a SECI (Strategic Knowledge Creation) within different departments,

particularly in the engine development department. Discussion of the possible solutions to overcome the threat posed by the new 'ground effect' technology and the ways of quick implementation, without disrupting undergoing future developments was essential.

The managerial implications of such knowledge in a new climate of learning and innovation required collaborative learning and task sharing. Vital questions such as: How great a threat does the new technology pose? should we adopt it?, and if so, in what context? needed to be considered. Ferrari should scrutinize their own motive force mechanism on the basis of defining its objectives, not only considering the intended results but also setting up colony incentive mechanisms to strengthen corporate cohesion. It must be realised that unlike competitive environment within the team, all members should strive towards the same goal, to win the races. Ferrari's success is gained through their 'team' culture and therefore such knowledge transfer may be deemed easier to extract in this environment. The authors of this assignment argue that the transfer of SECI principals to Ferrari are suitable to not only change the team dynamics but also create knowledge that may be turned into suitable technology (Wei, 2007). Introduction of a Project Orientation

Following the knowledge creation process, knowledge development is needed; it would benefit Ferrari to assign a small team of engineers to the same task – more like a project. The main advantage of adopting a project orientation in this matter is that with this method no major changes need to be introduced in the management of the team. If a separate team is assigned for this aim, then the current developments are not disrupted. This newly assigned project would come under the category of an ERD project (Exploratory R&D project) as the main objective would be to find a way to improve the current technology at Ferrari to remain competitive.

The only possible conflict could be the common resources, solved by giving the project team a clear preference in the need to regain competitive edge, and the project team is dedicated solely to accomplish that objective. It is important to note the need for SECI and Logical Incrementalism within the project team as well. Quinn (1978) argues that 'Logical Incrementalism allows organisational actors to modify the idea behind the reorganisation as more is learned', hence, giving the option of developing a flexible platform for the project team to work on. McLaren:

McLaren's core competences, as mentioned earlier, lay in Ron Dennis' management abilities as a leader and his success in fulfilling all necessary criteria to create a perfect 'overall package'. McLaren had all the components, such as good designers, drivers, and sponsors required to sustain competitive advantage. According to Mintzberg (1978), organisations need to have a 'peripheral vision' to achieve strategic learning not only from their competitors' successes but also their failures. McLaren's failure resulted from absence of a contingency plan and lack of strategic learning rom the Williams team, who suffered similar experiences with Honda's departure. The Deliberate-Emergent Pendulum Due to Honda's departure, McLaren's intended strategy to compete in partnership with Honda as an engine supplier was unrealized in 1992. Although an emergent strategy did come about in a successful partnership with Mercedes, it was three years too late. McLaren had lost not only their dominance in F1 but also their main driver,

Senna. Dennis could have sustained McLaren's domination by planning prior to Honda's departure, creating an emergent strategy involving a different engine supplier.

This is demonstrated in Figure 2. Figure 2 Intended-realised strategies by Mintzberg (1978) Unrealized Strategy Emergent Strategy Realised Strategy Intended Strategy Deliberate Strategy McLaren's partnership with Mercedes has been highly successful but could have been achieved earlier, avoiding the organisational inertia following Honda's departure. Mercedes has made a substantial investment in McLaren, acquiring 40% equity, tying them into the alliance, showing that McLaren learnt from their experience with Honda by negotiating a more secure alliance.

An approach that may have better managed McLaren's success was the relationship between Barnard and Dennis which, despite its success, was not maintained. Ikujiro Nonaka (1998) writes about the concept of 'Ba', a shared place for emerging relationships. The space is described as being physical or mental or any combination of the two. The most important differentiator of ' Ba' from ordinary human interaction is the platform provided to enhance both individual and collective knowledge.

The relationship between team principle Ron Dennis and John Barnard provided an environment that would lend itself well to the creation and sharing of tacit knowledge. Williams: According to Voelpel et al. (2005) the Red Queen effect, as coined from Lewis Carroll's Alice in Wonderland, is essentially: " a comfort trap" where " running harder is easier to do, it is of an analytic-benchmark nature, it shows short-term success and is less risky in the near horizon, but ultimately holds long term downfall. " The Red

Queen effect illustrates that in Williams' case the organisation walked into a dead-end which moved them faster to failure.

They just worked harder to improve traditional industry and organisation success factors rather than looking outside their core competencies. The need for management at a strategic level was to be creative and come up with new strategies to challenge their core competencies. According to Voelpel et al. (2005) " reinventing old ways, will provide a wide range of options to choose from in dealing with the uncertainty of the environment. " Whilst the industry is a closed environment in terms of technological revolutions, continuous development will push industry boundaries and help keep the organisation on top.

Had Williams analysed their business model, they could potentially have moved away from being design led (their core competency) to focus on areas of the organisation in need of improvement and development, whilst still making the technological advancements and improvements that led their dominance initially. Voelpel et al. (2005) provide a practical sensetesting tool for developing and adapting new business models to avoid the traps of the Red Queen principle. According to the theory, a comprehensive and cohesive understanding of a business model and its key elements can provide an important source of sustainable competitive advantage.

Figure 2 shows that there are four sense testing dimensions displayed as: infrastructure, business System technology, customers. and economics/profitability. By analysing the different components of their business model from the four elements, management can determine the feasible business models that possess acceptable success probabilities.

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Applying this tool would have helped to sustain Williams' advantage by encouraging development of the organisation outside of their core competencies.

Figure 3: Business Model Reinvention by Voelpel, S. (2005) With regards to a business model, a clear understanding of the nature of the business and its core competencies creates a situation where change and development can take place. The sense-testing tool helps companies grasp the concept of adapting and creating business models for strategic inflection, enabling managers to discern where competitive advantage could be achieved and eventually leading to the constructor prolonging their period of dominance.

Williams' competitors imitated aspects of their race car design realising the advantages that a Renault powered engine had in gaining a competitive advantage. Barney (1991) suggests that a firm should aim to have " causal ambiguity when the link between the resources controlled by a firm and a firm's sustained competitive advantage is not understood or understood only very imperfectly. " The competition should, in an ideal situation, find it difficult to duplicate a successful firm's strategies through imitation of its resources, it should be impossible to know which resource is giving a constructor the advantage.

According to Barney (1991), Williams' competitive advantage was not sustained because their methods could be duplicated due to their competitors realising the link between the resource and its advantages enabling them to acquire the same resources taking away Williams' competitive advantage. Knowledge Management When talking about Knowledge Management (KM) Satyadas at al. (2001) argue that there are

challenges in the "people" aspect of KM outlining several factors that make up these challenges. In the case of Williams, the most disruptive element of knowledge retention is the affinity and sense of attachment felt towards the organisation.

A lot of talent departed Williams, which shows the lack of affinity towards the organisation held among the employees. " Concerns around intellectual capital in a highly competitive environment need to be balanced with social capital benefits. " (Satyadas et al. 2001). Perhaps Williams was not able to provide these social capital benefits which ties in with Maslow's hierarchy of needs (Appendix Three), Williams might not have been able to satisfy the higher level needs and therefore, their employees tried to fulfil these needs with other teams.

The suggested solution for Williams would be to modernise their management style and steer away from the current autocratic style. There is a need for a more democratic management style - where the manager allows the employees to take part in decision-making: therefore everything is agreed by the majority, making the employees feel more valued and bringing a sense of belonging to the team. The Future Ferrari won 5 consecutive championships from 1999 - 2004. Schumacher played an important role towards Ferrari's success.

Hence he has been brought back as Jean Todt's assistant linking to knowledge retention. In 2007, Ferrari returned to top form by winning both the drivers and constructors championship. McLaren has evolved as a business by applying their core competences in marketing and technical excellence successfully. They have gained finances from Abu Dhabi and Bahrain governments, along with sponsorship from Vodafone among others. McLaren has also developed an Electronic Control Unit that has been deemed mandatory by the FIA to be used by all other constructors for the 2008 season.

Recent news speculates the retirement of Ron Dennis with Martin Whitmarsh, current CEO of McLaren, as his replacement (Appendix Four). It will be interesting to see if McLaren retain the successful culture created by Ron Dennis. In 2005, Williams had to rely on off-the-shelf engines once again, when BMW, their engine suppliers, created their own team. This shows that Williams failed to learn from their experiences with Honda and Renault, repeating the same mistake for the third time. This can be attributed to a lack of managerial focus and the inertia to change.

While other teams are being managed by professionals, Williams has stuck with its orthodox ways, a major factor for Williams' poor performance. In 2007, Williams ranked 4th in the constructor's championship, no longer being a threat to McLaren and Ferrari. References Journals Baden-Fuller & Stopford (1994) The Crescendo Model of Rejuvenation from rejuventing the Mature Business. HarvardBusiness School Press [In MLQG: pp. 189] Barney, J. (1991) Firm resources and sustained competitive advantage, Journal of management, Volume 17. Constantinides, E. 2006) From strategy to estrategy: Lessons from two success stories, handbook of business strategy, Emerald Group publishing limited. Cross, N. Clayburn Cross, A. (1996) Winning by design: the methods of Gordon Murray, racing car design, Design Studies, Volume 17, number 1. Hafeez, K. Zhang, Y. Malak, N. (2002) Core competence for sustainable competitive advantage: A structures

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Ikujiro, N. & Hirotaka Takeuchi, (1995), The Knowledge-Creating Company; How Japanese Companies Create the Dynamics of Innovation, Oxford University Press, New York Johnson, G., Scholes, K., Whittington, R. (1998), Exploring Corporate Strategy, 7th Edition, PearsonEducationLimited, Essex Mintzberg H, Lampel J, Quinn J B and Ghoshal S, The Strategy Process, Concepts Contexts Cases, Fourth Edition, Prentice Hall, 2003. Appendix Appendix One: Porter's five forces Threat of New Entrants: A new entrant to the Formula one industry faces many barriers. * High start up cost Excessive running cost (The total spending of all 11 teams in 2006 was estimated at \$ 2. 9 billion) * High level of resources required, also act as a barrier for potential new entrants to the industry. * Certain level of experience and expertise is necessary which requires investment in personnel and technology * Sponsorships and a lucrative sponsorship deal can help improve a teams level of performance * The rules and regulation that exist regarding the design and construction of the car Bargaining Power of Buyers: The buyers in F1 enjoy high power.

They play a vital role in the popularity of the sport as well as a considerable contribution to the funds for various teams. * Fans * Media * Sponsors Competitive Rivalry within the Industry: Formula One is, like any other sport, a highly competitive industry. Each constructor places emphasis in different capacities on a number of variables. * Engineers * Drivers * Management * Sponsorships * Designers * Technology Bargaining Power of Suppliers: The

primary suppliers of F1 constructors have a lot of power. So much so that in a few instances, suppliers have been the cause of the end of the period of dominance of some constructors. Drivers * Engine manufacturers * Designers * Technical team Threat of Substitutes: All the other popular racing and sporting events can be considered to be a threat for F1 as they may take away resources such as money, drivers, sponsors, popularity, etc. from the F1 industry. *Soccer* Cricket * Olympics * Le Mans * BTCC * WRC * Moto GP Appendix Two: Resources and competencies gained Appendix Three: Maslow's hierarchy of needs Appendix Four: Speculation of Ron Dennis Leaving the McLaren Team Source: The Guardian, Monday March 3 2008, pp. 15 Appendix Five: Minutes

Minutes were taken at every meeting since October, meetings took place either weekly or fortnightly depending on work load and no meetings were held over the Christmas vacation. Meeting 1- Pret a Manger Minutes 15th October 2007 * Introductions to the group * Confirmation of group members * Vanessa Barnes * Laura Bentley * Ankur Dawar * Aashir Agarwal * Sagib Munir * Joe Abernethy * 2 people were assigned (or chose depending on personal preferences) which company they would like to be responsible for initially researching. * Ankur and Aashir: Ferrari * Laura and Vanessa: Mclaren Joe and Sagib: Williams * Arranged a set time and day for the meetings: Tuesdays 11-1 * The task for the next meeting: * Each read the article * Print off background information about our particular company (from the website) * All think about how the guestions could be answered Next meeting: Tuesday 16th October in the Library Meeting 2- Library Minutes 16th October 2007 * Group discussion of how the essay should be structured

* Each member of the group gave feedback about their company and interpreted the competitive strategies adopted by each company. * Question one

Attempt to answer it using the model of porters 5 forces to firstly analyse the general industry of formula one * On a large piece of paper- we mapped out all the key issues that need to be considered in each aspect of porters 5 forces model and related them to Ferrari, Williams and Mclaren. Tasks for next meeting * Each member has been assigned one of porters 5 forces discussed and the individual has to relate the discussion to the three companies and bring a copy of the written up notes for the next meeting. * Find any relevant information to your 'force' e.g. e-journals etc

Next meeting: 23rd October 2007 in Library Meeting 3: Library Minutes 23rd October 2007 * Feedback to the group our individual pieces of work from last week and make key points for improvement * From thecase studymade a list of all the apparent resources, capabilities and attributes of formula one * Linked all of the information to the strategies of each constructor Resources * Capital Investment * Money * Manager * The car * Sponsorship * Research facilities * Raw materials Capabilities * Skills * Extensive driver training * Engineering * Design * Performance * Racing tactics Different strategies for every track Attributes * Technology * Corporate Identity * Design * Tactics * Strategy * Track knowledge * Constructors have different strategies for different tracks therefore the design of the car changes with the track Discussion of case study: Amazon * Read the article and picked out key points Things to do for next meeting * In our constructor groups, identify the resources capabilities and attributes of Ferrair, Mclaren and Williams Next

meeting: 6th November: Bistro Study Area Meeting 4: Library Minutes: 6th November 2007 * Main emphasis of the meeting was on question 2 Divided the work up between the team: Ankur and Aashir: Ferarri success in the mid 1970's Joe and Saqib: Mclaren and Honda 1980's Vanessa and Laura: Williams 1990's * Decided on the word counts for each section * Set deadlines for each section Next meeting: 20th November in Bistro Study Area Meeting 5- Bistro study area Minutes 20th November 2007 * Incorporate the crescendo model into the assignment, particularly in questions 2 and 3. Link this to logical incrementalism and how was it implemented? * The next task is to focus on question 3 and look at each F1 constructor and find their reasons for failure.

Some of the problems were then discussed in the meeting: * Breakdown in relationships * Unreliability of technology * Alliances pulling out * Drivers leaving * Discuss the possible reasons for each of the above factors and then in our teams, produce a document which states the reasons for the failure of each F1 team. * Ferrari: Ankur and Aashir * Williams: Joe and Sagib * Mclaren: Vanessa and Laura * It is also important to consider why and how Ferrari have sustained success!! Tasks for next meeting * Each team member should be responsible for finding e-journals and bring at least one journal on competitive strategy to the meeting. Competitive advantage * Competitive Strategy * Formula One * Is it possible to get hold of any financial statements for any of the companies? * Conduct a PEST(LE) analysis of your particular team to go into the appendix of the assignment. Next meeting: Tuesday 4th December at 12pm in Bistro Study area. Meeting 6 in Library Minutes 4/12/2007 Tasks for after Christmas * Look at the reading list

and pick an item each * Got through the lecture notes so far and highlight what needs to be included in the assignment. * Find 2/3 journals each on our selected topics: read, highlight and make notes. Highlight the reasons for failure for each constructor and type up (300 words) * Do a PEST analysis for each constructor E-journals to look at: Vanessa and Laura Porters 5 forces and the value chain Critique of Porters five forces Sagib and Joe Emergent, intended and realised strategies Ankur Resources and capabilities Aashir Focus differentiation Cresendo model Constructors to look at reasons for failure: Vanessa and Laura Mclaren Joe and Sagib Williams Ankur and Aashir Ferrari Next meeting: After Christmas meet 6th Feb due to exams Meeting 7 in library Minutes 6th Feb 2008 Discussion of previous work that has been done over Christmas * Identified the need for theory to now be integrated into the guestions * Discussion of peer assessment- decided to give each other equal marks * Discussion of question 4 and the theory that needs to be built into it * Discussion of the basic strategies for each constructor Theory for question 4 * Growth strategies: Alliances Alliances with suppliers and sponsors To gain sponsors and get more money the company needs to pitch a strategy if they are not already achieving success. * Imposed strategies

The constructor doesn't want to do it but the environment imposes change: e. g. legislation * It is difficult to innovate due to the imposed limitations on industry * Quantum Hypothesis * Cresendo Model * Logical Incrementalism Used generally throughout Formula one, small changes being made all the time * Red queen principle After Ankur and Aashir have sent the first draft of question 4 to the group- we all need to go through it before the next meeting and have some improvements on it and things that we need to add to it. Tasks to be done for 8th Feb * Format question 1: Laura Type up the minutes: Laura * Put question 2 together from everyone's answers for each constructor: Joe * Put guestion 3 together from the reasons for failure for each constructor: Saqib * Do a first draft of question 4 taking into account the notes and discussion that was produced today: Aashir and Ankur. * Send all questions to Vanessa, she will format the questions and make them into ' one voice'. * All look at previous lecture notes and the review of semester 1 to see what else we need to include in the questions What needs to be in the Appendix? * Porters five forces model * Minutes Maslow's Hierarchy of needs * Resources and the competencies gained Discussion of the unipart and Sony Case studies Next meeting: 22nd Feb Meeting 8 in Library Minutes 22/02/08 * Cutting down the word count from 7000- 5000 * Checking all theories used and adding any relevant material * Reading the Guardian news article and discussing it's relevance Tasks to be done * Front cover of assignment: Aashir * Word count- cutting words out: Vanessa, Laura, Saqib, Joe, Aashir * Formatting: Laura * References: Laura * Proof reading: Laura * Printing: Aashir * Compile appendix: Aashir, Laura, Vanessa