



Project Marlow

Whitbread PLC's top executives were milling around in the next room at Whitbread's Headquarters, awaiting an update on Project Marlow, Costa Express' new coffee vending system. It was March 14th 2013 and Jim Slater, MD Costa Enterprises, Scott Martin, MD Costa Express, and Eric Achtmann, Program Director & Architect, were reviewing their notes for the presentation. The product had been successfully debuted on January 13th 2013 at the National Retail Foundation "Big Show 2013" in New York as a prime exhibit on Intel's centre stage stand, as well as only a day before to the broader Costa community at Silverstone International Raceway. Slater, Martin and Achtmann were wondering how Whitbread's leaders would receive their presentation.

Project Marlow, an unconventional program headed by Eric Achtmann, an experienced private equity investor and product development expert, had been operating in stealth mode since its launch on April 19th 2012. It had been successful thus far, with a working "Alpha" prototype delivered only 50 working days later on July 10th 2012, an 80% "Beta" prototype on September 20th 2012 and low rate production (LRP) delivery on December 18th 2012. See Exhibit 1 for the Marlow machine. They had succeeded in delivering a completely novel high-end, fresh coffee vending system capable of high volume rollout, and at a record setting pace.

"Having been involved in private equity (PE) and innovation for many years, I believe that focused innovation – driving new value creation – is as important a route to generating high returns as cost-cutting and financial leverage. The vending industry has not been particularly innovative over the past 40 years. Taking insights from venture finance and advanced aerospace product development, I was confident I could offer Costa Express a better way to achieve its goals and simultaneously create new opportunities," stated Achtmann.

Assuming the project got the go-ahead, Slater had to decide what the next phase of development would look like. Having the low-rate production (LRP) underway was good, but ramping to full rate production (FRP) and full-scale operationalization of the product had to be carefully managed. It would not be as simple as emailing an order for machines – there remained a sizeable amount of effort and capital expenditure to optimise the machines for mass production, certification and eventual international rollout. Achieving market success would also require Costa to formalise new partner relationships that Achtmann had spent the past year cultivating. And, it would mean making some choices about how the Costa organisation would manage the rollout of the new product.

Project Marlow had operated independently of Whitbread's normal operations from the start. With the product in LRP, the next phase of its development would require the Marlow team to aggressively ramp production and then pass the baton to Costa operations.

Slater thought about how quickly Project Marlow should be rolled out, how the eventual handover should occur, and what risks could be anticipated:

"We have achieved far more than what many thought was possible – and faster. Team Marlow has delivered a quantum leap, redefining the business in every way. But this race is far from over. How should we integrate Project Marlow into the organisation – if at all? How can I ensure we do not lose momentum or, worse, squander the once-in-a-lifetime opportunity that the team has worked so hard to create?"

Project Marlow – from vision to production

On January 26th, 2012, Achtmann was called to a meeting with Slater and Martin and given the go-ahead to initiate Project Marlow. Achtmann recalled the meeting: "We were at Whitbread's Jermyn Street corporate headquarters. Both Slater and Martin asked penetrating questions after I presented the case. I remember telling them that I was not a consultant, rather that I saw this as a corporate-financed private equity deal we were trying to grow and that we would be taking risk together. Basically, we would be partners in building a new business for Costa. I told them I would have a new system for them within six months of the kick-off meeting."

Achtmann laid out the requirements for project success. The project would operate under "Phantom Works"¹ rules, based on Achtmann's defence-aerospace experience. It would be a highly decisive environment and the pace of work would be 'uncomfortably high' - three to five times normal industry pace. The ground rules were laid out:

- Maximum core team size: 6 – 8 people
- Direct reporting to the Board
- Relentless focus on total system cost, performance, quality and delivery
- Design to functional requirements, rather than technical specifications
- World class team, without exception
- Inextricable linking of responsibility, accountability and authority
- Decision-making autonomy (i.e., "asking forgiveness rather than permission")
- Rapid decision-making (< 24hrs)
- Frequent and rapid communications (< 5 minutes responsiveness)
- Systematic win-win creation for all partners
- Relentless focus on results, not activity; "First Time Right", special operations culture
- Strict keeping of commitments, having a Plan B, and giving credit where due

"If this is unattractive, then we should not proceed as we will not succeed," emphasized Achtmann. For the first two months of the project, to show that he was serious about his commitment, he would charge only a fraction of his time spent on the project. "Thereafter, if they were convinced, we would have to have a discussion".

At the end of that meeting, Achtmann, Martin and Slater shook hands in agreement. The total production target for the programme of 200 to 2,000 units was set. At a time when Costa Express had less than 900 machines in the field after 11 years, this seemed ambitious. Agreeing these numbers was critical for partners to gauge the opportunity and risk, as well as make design choices. "Slater and Martin might have thought I was crazy, but they took the risk. Both are successful entrepreneurs meaning that we had a common bond among us for challenging convention and tolerating risk. We then retired to the picturesque town of Marlow on Thames in Buckinghamshire. We dined at the historic hotel, Compleat Angler, overlooking the river and the famous Marlow chain bridge - a twin of the famous Széchenyi Bridge spanning the Danube in Budapest. Over whiskey and in front of the fire, we toasted to our new endeavour: Project Marlow."

Later that evening, Achtmann took time to reflect that he had secured the green light to prove his thesis – he would aggressively inject innovation via the project into a quasi-private equity investment to drive value creation and organisational change. One question from that day lingered: "If we trust you, can you really pull this off?" Martin had demanded of him, bluntly. Achtmann answered: "Yes."

Developing the design requirements – February 2012

In February 2012, Achtmann met with Slater, his marketing team and Martin to get a better understanding of the consumers' hierarchy of needs and where past machines had fallen short. He learned that customers were looking for drink "quality", "speed", "hygiene" and "customisation". From these meetings, he drew up a functional specification for Project Marlow. Martin briefed the Project Marlow team on wisdom gained through Coffee Nation's 11 years in the field.

"Fresh coffee vending is deceptive", noted Martin. "In comparison with traditional vending, dealing with perishables like fresh milk and coffee presents significant design, logistics, operating and regulatory challenges, which many underestimate. One of the things contributing to Coffee Nation's segment leadership has been the fact that, as market pioneers, we were the first to face and deal with these challenges. Many competitors are only now repeating the same painful mistakes we made years ago".

Achtmann had a clear vision how the new product would look like:

"We want the new machine to recreate, as much as possible, the experience of visiting a real café through a fully-immersive 5-sense user experience ("UX"). The new system should be instantly recognizable as a Costa product from afar. As a potential customer approaches, he or she will hear the sounds of a real café - the light chatter, the tinkling of spoons being stirred, coffee being ground - and will sense the aromas of the café environment. The digital interface will be enticing – like a walk to a café - and intuitive, facilitating easy selection and painless payment for users of any age and education. And, perhaps most important of all, the machine must consistently deliver a premium quality drink, as good in quality as one made by your favourite barista".

"The design and architecture for the machine was in my head, so most of the next few weeks was spent seeking out the best partners," recalled Achtmann. A typical coffee

vending machine had a shell that was designed around a stock coffee machine. The fact that the coffee core was “locked in” meant that such machines were difficult to service, requiring on-site technicians who spent half of their time in transit and then worked while the machines lost revenue. Further, legacy designs were limited in their functionality, certify-ability and scalability. With a lack of a platform concept, implementing modifications and new developments was often prohibitive and increasingly added complexity in the fleet.

Project Marlow would derive inspiration from Achtmann’s experience in fighter jet design and construction. Going against industry convention, Project Marlow’s system would be fully modular, so that self-contained modules could be easily “hot-swapped” in minutes by untrained staff without the use of tools. Once swapped, the modules could be serviced offsite in qualified “engine shops” while the machine remained “in the air” satisfying customers. This modular, “always up” aerospace operating model promised to maximise revenues, minimise costs and optimise logistics.

One of Achtmann’s operating principles in selecting the team was that all team members would be true partners. Each partner was expected to commit R&D investment and resources out of their own pockets to deliver the requisite cost, performance and quality. In exchange, each partner would receive, initially on Achtmann’s word, an exclusive long-term deal to supply the program. This emphasis on target costing and exclusivity was as uncommon for Costa, a company dealing primarily in volume commodities, as it was for some potential partners. While some potential partners jumped at the opportunity, others were threatened by it and preferred a traditional RFP process with fixed specifications. The latter were disqualified from participation in Project Marlow, as were those who could not respond or decide quickly, because, in Achtmann’s view, speed and decisiveness had to be part of the Marlow team’s DNA from the start.

Selecting a prime contractor – February 2012

Starting late January 2012, Achtmann began assembling a team from across different industries. First, he approached Thermoplan, the industry’s leading industrial coffee machine manufacturer, based in Switzerland, to be the prime contractor for final assembly. Achtmann recalled:

“We sought a prime contractor to perform final integration, as Boeing/McDonnell-Douglas does for an F-18 fighter jet. We approached Thermoplan based on their modular system, reputation for excellence and entrepreneurial culture. Their founder, Domenic Steiner, built the company from scratch and was a celebrated entrepreneur in Switzerland. The deal was sealed with a handshake over dinner at the picturesque edge of Lake Lucerne.” Work started the next day, even if a formal development agreement was only completed months later.

The designers and scent experts come on board – March 2012

Next, Achtmann approached Pininfarina (“PF”), the Italian design house, which had given shape to most Ferraris over the past 60 years, Maserati, Alfa Romeo and others. PF also

provided the aesthetics for the Coke Freestyle™, a revolutionary new soda fountain, as well as many other high profile designs. A deal was consummated by handshake and closed contractually 10 days later in record time at PF's Cambiano headquarters, together with Slater and Martin. Again, work started immediately.

"It was a remarkable boost to the team to win a design icon like PF for the project", noted Slater. "Just spend a few minutes in their museum, surrounded by the World's most famous cars and designs...it is nothing less than awe-inspiring."

Next, Achtmann approached an acquaintance, Michael Carlos, President of Givaudan's Geneva-based scent division and convinced them to join the team. As the world leader in flavours and scents spending ca. €400m per year on R&D, Givaudan would support the delivery of complementary scents. Shortly thereafter, Mauricio Graber, President of the Zurich-based flavour division joined the team to help develop an entirely new line of all-natural optional espresso bar flavourings (e.g. vanilla, hazelnut) to supplement Costa's premium coffee. Thermoplan's unique milk frothing system also meant that Team Marlow could add an entirely new line of chilled milk drinks using the all-natural flavours developed as part of the project. The development work for the flavours also allowed Marlow to take the system one step further, by offering the option of serving piping hot tea drinks.

When asked to support the project, Graber inquired: "Good people are precious and we are very busy. Why should I give you one of my best teams?" Achtmann recalled: "I shared with him the vision, who was involved, and gave him my personal word we would drive it to success. From that day on, we never looked back."

Christian Miccio, former Google Earth and Google Mail team-member, and founding team member of Shazam Entertainment², a mobile phone music identification service, also joined the team to support the digital development. "Eric contacted me through a mutual friend. We met four hours later at Zurich main station, where he told me what he had planned. I was sold." recalled Miccio.

Shortly thereafter, a two-day workshop was held in London to give partners a flavour for Costa coffee, its culture and legacy. Slater personally led the team through "The Roastery", and from shop to shop. With key people from the partner companies on board so quickly and standing together in London, Project Marlow was starting to take shape. The evening was capped with Pizza at Santa Lucia and a Chelsea-Benfica Champion League game at Stamford Bridge.

"In the introduction session, to their surprise, I told my team and our guests that we were all working for Eric", recalled Slater. It was a clever move. "In one sentence, Jim had established authority and accountability, a key prerequisite for Project Marlow's success. I now had everything I needed – and Damocles' sword dangling above my head", said Achtmann with a smile.

In mid-March 2012, Costa Enterprises engaged dedicated intellectual property lawyers in anticipation of the creation of protectable IP assets. Less than four months later, over 100 new patent claims were filed.

The kick-off: April 19th, 2012, in Switzerland

With the core team in place, Achtmann organised a kick-off meeting at Thermoplan's production facility in Weggis, Switzerland. There were 20 people in attendance, primarily from Costa, Thermoplan, PF and Givaudan. At this meeting, key delivery dates were set: an "80%" Alpha prototype would be delivered July 10th 2012. The "95%" Beta prototype would be delivered by September 20th 2012. Low rate production (LRP) would commence by Christmas 2012. The challenge was laid down: to deliver one billion cups of coffee via Project Marlow in three to five years. "This requires us to have 10,000 machines in the marketplace delivering 100 cups per machine."

Achtmann recalled how the Project Marlow team members were committed to the project: "Steiner had a million Swiss francs invested in Project Marlow before we even had a contract. It was all about honour and integrity. He is an entrepreneur, a risk-taker, and he just believed in it. His team was exemplary - it was 'Switzerland at its best'. We never spoke about the personal cost, only about getting the job done. There was a lot of mutual respect and the fierce desire not to let one's team mates down. It was like we were playing a World Cup final."

"The day after the kick-off, we started exercises to crystallise in peoples' minds what a fully immersive, five-sense user experience (UX) could mean."

Building the user interface team – April

With the core team in place, focus was turned to the user interface (UI), a key element of the UX. The Team approached a number of the world's leading digital designers to help implement a comprehensive UX. Despite significant effort, the team had difficulty finding the right combination of capability, price or chemistry, and time was running short. Achtmann recalled:

"Few [potential UI partners] had a real vision for what we wanted to achieve and those who did proposed doubling our total budgeted spend – for the entire program. Others would have been impossible to integrate with the team. One even tried to usurp leadership of the project."

In words that would be immortalised during the project to signify an unacceptable situation, PF lead designer, Antony Margiasso, lamented: "... I'm depressed."

It became clear that the team was running out of time to complete a working UI – a task at least as complex as building the mechanical system. After careful deliberation, it was decided that a parallel team to the one developing the concession would be formed to fill the gap left by the absence of a comprehensive UX partner. This meant doubling the program management complexity and workload – and adding risk, as the team had never worked together before and there was an artistic-technical gap to bridge. Achtmann described the new arrangement:

The team comprised Ron Ashtiani, MD of Atomhawk, lead developer for Xbox and Playstation, as well as online designer for Harry Potter; Christian Miccio; Kevin Pfister of

MPC Data/Bsquare and Alan Green from Perspectives. Pfister and Green were valuable additions with proven track records. Pfister had previously twice won Microsoft's internal programming competition. Green had programmed control and test systems for Rolls-Royce Aero engines, giving him a skillset and fault-intolerance that was probably unique in the vending world. PF, in their first digital engagement of this type, rounded out the team, giving artistic guidance and ensuring digital-physical design continuity. Achtmann would provide the architecture and team leadership.

The last member to join was Steve Belgrave of eMixPro, sound technician for bands such as the Rolling Stones, U2, and Cold Play. "When the company I was previously working with turned down Project Marlow for organisational reasons, I decided to do it on my own. The concept, team and approach were just too good to pass up," said Belgrave.

With world-class sound, the ingredients for the vending world's first 5-sense UX were put in place.

Working through organizational issues

One of the key issues Achtmann had to manage was how to secure the Costa organization's commitment to the project. "One of Scott's admirable strengths has been the openness to revisit decisions taken in the past in the search of a better solution for the future. He was a strong supporter", said Achtmann.

"In one tense meeting where not-invented-here manifested itself, I told my managers: 'We tried it our way. This is green field. We are doing it Eric's way'", recounted Martin.

"This is not to say things were always harmonious", notes Slater. "In the leadership team of Eric, Scott and myself were three strong personalities, each passionate, each with different backgrounds and approaches. Debate was often intense – maintaining an environment of constructive confrontation was definitely part of the Marlow process".

"Few MD's would have had the confidence and open-mindedness to foster as much change to the business as Scott has," said Achtmann. "There was push-back, but the Marlow strategy was to be faster at delivering solutions and first-time-right on everything. Having a working solution on the table quickly can really focus a discussion. That said, there is no better way to succeed than to give people an opportunity to benefit from the change".

"The fact that Whitbread was involved in the development of an innovative machine was highly unusual. The company's strengths lay in standardising processes and procedures across a large chain of service businesses so that a healthy profit could be earned, consistently, year to year. There was a strong focus on incremental improvement, not radical innovation. The last patent filed by Whitbread was in 1991 for 'Boddington's Widget' – a device to manage the head on canned beer", recounted Slater.

In addition, allowing an outsider to essentially control every aspect of the process was, in itself, a leap of faith for the organisation. Many standard functions and processes were

bypassed and it was routine for Achtmann to draft or close agreements on the same day, or even personally finance expenditures – before they were formally approved – to maintain momentum. “Clarity, speed and precision are our key assets”, Achtmann regularly impressed upon the team.

Achtmann recalled presenting the Marlow idea, for the first time, during a senior strategy session led by Andy Harrison, Whitbread’s CEO. When asked by Harrison what could derail the project, Achtmann answered: “Running at this speed? Sticks and stones in our path.” Turning to the group in front of him, Harrison intoned slowly: “Do you see any sticks and stones here?” Harrison had effectively signalled his support for the project and that he would be following its progress. “Setting the tone early on was very important. It did not mean the road would be easy, but it did alleviate some potential sources of friction”, noted Slater.

Cementing support for the project

Keeping the team motivated and on track was Achtmann’s challenge, to which he would devote practically every waking hour following the kick-off meeting. It was common for team members to be working around the clock, even on weekends. One of the ways Achtmann engendered commitment to the Project was to be in constant personal contact, demonstrating his own passion and commitment to the team and venture, and ensuring people were getting credit for their achievements.

“Most of my time was spent on the road working hand-in-hand with each team member. These are great people doing their absolute personal best to fulfil a vision. People are making this happen, not institutions. We are unleashing passion and emotional energy. Contrary to the old cliché that ‘its only business’: Marlow *is not* ‘business’, it *is completely* personal. If the project is de-personalised, it will fail.” said Achtmann.

Achtmann recalled how design icon Paolo Pininfarina intervened to help keep Project Marlow on track: “At one point, we were running into challenges with design-engineering integration. Issues inevitably arise at this pace, exacerbated by stress and lack of sleep. Emotions were high and the relationship was at risk. I went to see Pininfarina at a press conference in London. He stepped away from a photo session to greet me, and without introduction said that he believed in what we were doing, he would give it his full support, and we would succeed together. We shook hands. The next day his deputy, Francesco Lovo, joined the team³. It was a win-win. Thereafter, we expanded the relationship, starting additional work streams. It was all very personal and inspiring. Overcoming challenges together builds relationships and loyalty. Working with Paolo Pininfarina and his team has been a personal highlight.”

The Alpha prototype is delivered

On July 10th 2012 a fully functional Alpha prototype, featuring modular aerospace construction, was delivered to Costa by the Project Marlow team. The prototype was unveiled in dramatic fashion: emerging through simulated fog, wrapped in the Union Jack,

to Queen's rendition of God Save the Queen. It had been 50 working days since the project's kick-off date, beating the target by 10 days.

Achtmann recalled: "When the Alpha prototype was revealed, the Costa team were amazed. They had expected a paper presentation with, at most, a coffee module or a non-working coffee machine shell. What they saw was a functioning Alpha prototype, with drink selection increased six-fold from the current 38 drinks to 240 drinks. And, with brand standard drink quality, as well. Some present said that the Alpha even served Irish- and French Coffee that day."

To inaugurate the successful delivery of the Alpha, the names of the team members were engraved on a bronze plaque and hand-riveted onto the prototype. This tradition endured with each subsequent product release. In order to have a place on the plaque, one had to make "*an exceptional and enduring contribution to the program, above and beyond the call of duty*". A unanimous vote of the team was required for someone to "make the plaque". Thirty-eight participants would ultimately be included. As a permanent part of Marlow's body tooling, the plaque –and the names on it–would become an indelible part of every Marlow machine ever produced.⁴ Exhibit 2 shows the text engraved on the plaque.

On the back of the successful Alpha, another Marlow tradition was established in the spirit of "live up to your failures and celebrate your victories". It was announced that Team Marlow would be holding a "mandatory technical meeting" in Munich, coincidentally, around the same time as Oktoberfest.

Final members join Project Marlow

On August 18th, 2012, Intel joined Project Marlow as the computing hardware partner, agreeing to materially support the team. Rod O'Shea, Intel's Director, Embedded Retail (EMEA), saw the potential in Project Marlow:

"This was one of the most extraordinary opportunities we had come across. We thought it could be a game changer design in the vending industry. I recall going to a conference in the second quarter of 2012 on future technology and capability in the vending industry. Vending as a landscape for innovation is not the most obvious for anyone. Change happens slowly in this industry. It's known for its measured pace, wafer thin margins, not really the place one would go look for innovative ideas. Vending has only had two prominent innovations in the last 40 years: toughened glass and a spiral delivery system.

Project Marlow's objectives were in sync with our key strategies. We're looking at the Internet of "things": everything can be connected. We wanted to enable a coffee machine vendor to work in a connected environment, to have real time data, to be able to change their offering, and to understand demand cycles. Achtmann had a maniacal focus on vision and on delivering the goods. Give him credit, he was even able to track me down late one Saturday night to ask me a question."

"I remember meeting Rod the first time at Eden McCallum's offices in Kensington where he joined our UI meeting. We spoke for an hour. The deal was a simple one: Intel would support Marlow with best in class products and pricing. Marlow would give Intel a world-leading platform to test and market its capabilities. We would deliver a billion cups of coffee together. We shook hands to close the deal. Four hours later, a team of Intel managers joined the meeting with blank notebooks in their hands asking, "What do you need?" The team was shocked; it was like Christmas. They took down a shopping list, which was promptly filled. The race was on", reminisced Achtmann.

Intel worked with the Marlow team to deliver a brand new, bespoke industrial computer in record time. O'Shea described Intel's contribution:

"First, we had to figure out, given the project's requirements, what was the optimal combination of equipment that could work in a passive cooling environment and still deliver on the goals. Second, we looked at the connectivity of the solution. Our AIM (audience impression metric) Suite places a camera on the machine, allowing it to get a feeling for the environment, gender, age and volume of consumers approaching the device. We can build models that change the offering displayed, providing information back to the cloud. Third, we have a strong view that the real breakthrough over the next decade is for these devices to become more connected, more managed. Achtmann talks about running a fleet of concessions like a fleet of aircraft. We want to provide the computer engine optimized for this solution, provide analytics and audience management, and management of that device by a centralized enterprise."

Two weeks later, on September 5th 2012 Scentys joined the team. Recommended by Givaudan, Scentys provided scent dispensing via a patented encapsulation technology. A dispenser designed into the Marlow concession would waft natural café scents over the customer standing in front of the machine. Clément Jeanjean, founder of Scentys, remarked that Achtmann made an impression from the very start:

"Eric contacted us in August 2012, when almost the entire company was on holiday. What really struck us was how ambitious the project was, how tight the development times were scheduled, and how impossible it looked. I must admit we were a bit confused during our first face-to-face meeting in September. We had never had someone come into our office, talk for an hour, make a phone call, and design-in our product on the spot. By the end of the meeting, the diffuser had been redesigned, concession design changes were in production and the key commercials had been addressed. It was dizzying. That's Marlow."

A major change occurred in the team when Verwo AG, supplier of the chassis components to the prime contractor, was elevated to partner. "It was clear that Verwo was adding significant value to the program – not only in quality and dedication, but also in innovation. They could not be viewed as a mere supplier, even if it meant going through the pain of adding relationships and reshuffling responsibilities within the Marlow ecosystem", notes Slater. "It was a delicate issue".

Around the same time, SIX Payment Systems, the payment systems of the Swiss Stock Exchange, joined the team followed by the Data Display Group (DDG), the systems

integrator for Marlow's main electronics module. A member of SIX's sales team responded immediately to a meeting request at 18.45. NDA's were exchanged at 23.00 for a meeting at 10.00 the next morning. "Having the Swiss Stock Exchange on board ended a lot of internal debate around payment security and gave Marlow a world-class cashless payment system". DDG was a similar story, as Achtmann recalled: "We met on short notice. One of their field engineers spoke up with a light of enthusiasm in his eyes: he had a 'vision' of what the assembly could look like – and he knew his stuff. The project was his. In the mean-time, both have been promoted in their respective organisations as a result of the Project."

The last partner was Mauri Poliuretani. Introduced by PF, Mauri was a supplier to Ferrari and an expert in polyurethane moulded parts needed to bring PF's curvaceous design to life. "PF's designs, while stunning, presented a manufacturing challenge, as they were "free form" and had no straight lines. Further, given the limited time, the parts and tooling would have to be first-time-right without a prototype – a highly risky approach," recalled Achtmann.

"Even a minor error would result in months of delay and significant additional capital expenditure, bringing our black program into the limelight of scrutiny. Only based on the team's unbroken track record of first-time-right to date could we have responsibly attempted this. Even with this foundation, there was a huge gap to bridge between the more spontaneous and artisanal Italian approach, and that of the highly structured and systematic Swiss and Germans. At times, the parties were at the limits of their patience."

Three unique sets of tooling were ultimately delivered – each first-time-right. Marlow's LRIP body parts would be manufactured by the same hands and on a parallel line to those manufactured for the Ferrari 458 *Italia*.

With the addition for Mauri and completion of the team, Project Marlow comprised 120 active participants from over 20 companies, spanning 7 countries on 3 continents and working in 6 languages.

Beta, LRIP and NRF

On September 20th 2012, the Beta was presented, surpassing the functionality and performance of the incumbent Compact machine, and Marlow was put into field-testing. Results were promising, even if they highlighted the impact of a modular system and requisite operational changes.

On December 18th 2012, five fully functional and uniquely branded Marlow concessions were unveiled to Costa and 60 senior guests at Thermoplan's facility. Only one had been promised, but the Marlow team voluntarily forewent their pre-Christmas festivities in favour of pizza, working late into the December nights to make a point. Marlow was in production. Team Marlow was taking orders.

Rod O'Shea announced that Intel would feature the Marlow concession on its stand at the National Retail Federation "NRF Big Show" in New York, the world's largest retail event,

taking place only 4 weeks later.⁵ Another “mandatory technical meeting” was scheduled, this time on Times Square.

In the rush to get the machine to the Manhattan Convention Center before Christmas, Achtmann called Intel’s Project Marlow account lead, Philip van der Mortel. Van der Mortel, who had been “in the trenches” with the team for months earning his name on the plaque, replied with a notable swagger in his voice, “Just leave it outside by the door. We’ll get it there.”

Slater’s thoughts

The buzz in the next room was audible, even through the thick walls. Slater put his notes away and thought about the future of Project Marlow. In a sense the journey had just begun, hectic as the past 12 months had seemed. Achtmann had proven his point: he could deliver a system with the power to revolutionise the business. On the back of positive testing, and demand generated at NRF and shows that followed, Marlow was already looking very promising. Initial interest already exceeded the total production numbers established at the outset of the project. But, there were many considerations to weigh. In the context of a larger organisation, things seemed to be going too fast.

“What should be done with Project Marlow?” thought Slater. “Should we focus only on the UK market? Should we continue to tweak and adjust the Costa Machines that are already in the field, or should we replace our entire fleet with the Marlow machine? Will Marlow cannibalize orders currently being filled? How quickly can we deliver machines in volume and what if there is a delay? Should we broaden our scope to have Marlow spearhead our expansion efforts internationally?”

Shooting for high growth numbers was not the only goal, as there were other stakeholders to consider. A major concern was how to manage the rollout within the context of Costa’s coffee shop business. “Costa is known primarily as a high-end coffee shop, ahead of Starbucks and all others in the UK, and with an increasing international presence. So any rollout plan for Project Marlow has to consider this. We do not wish to do anything that would threaten our premium position. One question was, should Costa Express ever precede the entry of Costa into a new market?”

Moving from low rate production into mass production would present an additional set of issues. Here was a high performance team, assembled and managed outside of the organization. It had been operating under a set of rules unsustainable in a large established organisation with a fundamentally different DNA. Was it possible to normalise the frenetic pace at which the Project Marlow team had been working? Would it be possible to unhook the links and reattach them to a development team within Costa? How would this process be managed to minimize the disruption? Should or could it be done at all?

While Achtmann had completed written agreements along the way, there had been many deals and commitments (explicit and implied) that had yet to be formalized. At least some of these verbal agreements would not have worked out if a traditional corporate legal approach had been taken. Slater wondered how to ensure these agreements were

honoured, even in the face of potential objections from the organisation. Similarly, the Marlow team members needed formally, at least, to become suppliers. How would this work in an organisation more experienced in working with commodities? How would they react to a “90 days payables” negotiation? How could he ensure they would continue to be treated as partners?

And then there was a question of Eric Achtmann’s involvement. Was project Marlow really over? How much of the system in his head was understood by others? How should a transition to operations be made and to whom? What future role could or should he play? Would he want to be involved and, if so, under what conditions?

On top of all these concerns, Slater was worried about any risks he had not considered.

“The biggest risks are the ones that are not on the horizon,” he thought. He wondered what other issues he should consider, in his analysis of Project Marlow’s future strategy.

Exhibit 1

Project Marlow



Exhibit 2

Project Marlow Plaque (Mounted in the inside of each machine)

Honour bestowed upon special individuals “*who have made an extraordinary and enduring contribution to Marlow, above and beyond the call of duty*”.

PROJECT MARLOW

CEM-200 “Marlow” Intelligent Supervending System

CORPORATE SPONSORS

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NOTES

¹ http://www.boeing.com/boeing/bds/phantom_works/index.page

² Top 10 Apple iPhone App of all times and Winner of the Queen's Innovation Prize

³ Francesco Lovo, Pininfarina's Head R&D, is credited with designing and building the Torino Olympic torch, among other things.

⁴ The final plaque would be engraved in the tooling of the final production units, ensuring that the names of the team members would appear on each machine.

⁵ Unbeknownst to the team in December, at NFR one Marlow machine (serial number 000 001) would serve 800 cups of coffee to over 2,000 guests and 13,000 onlookers during 2 days, as well as become the topic of significant press.