A Connection with Space – Werenbach Watches¹

Christian W. Scheiner

Patrick Hohmann

Patrick Hohmann is in his forties. He is in a long-term relationship with Andrea, who is also the mother of his second child. Back during his childhood and teenager days, he was known for being a people person. Friends and acquaintances appreciate his reliability and loyalty, something which he himself appreciates most of others. At the same time, he has shown his temper, impulsiveness, and stubbornness.

Coming from an entrepreneurial family where his father started a sustainable textile company in 1983, Patrick, along with his two brothers and his sister, were quickly exposed to the positives and negatives of being an entrepreneur.

Despite pursuing a marketing career in the airline industry after studying business administration and marketing, it was a common truth that he would sooner or later start his own business. One option would be to succeed his father in the family business. Another option was to start a completely new company all on his own. While Patrick saw the benefits of both, he wasn't entirely sure which route to take. From that point on, Patrick was constantly looking for promising business opportunities.

Sustainable Fashion Brand

His first idea was related to the existing family business and it focused on the development of a sustainable fashion brand. Patrick immediately went to his father seeking advice, but he challenged the idea and questioned its value, as well as the likelihood of success. Patrick did not accept his father's opinion and wanted to pursue the idea, nevertheless. After a series of heated discussions, Patrick came to the conclusion that this idea was probably not as good as he first thought and



abandoned it reluctantly. These discussions with his father weren't, however, without consequences. The dispute impacted the father-son-relationship negatively and damaged the relationship between Patrick and his siblings who had taken the side of his father.

Watches

One day, while enjoying his weekly run, a new idea came into Patrick's mind. The owner of an Omega watch himself, he was wondering why there weren't watches made out of genuine F/A-18 or rocket material. Some watchmakers offered watches with an air or space motive, such as the famous OMEGA "Speedmaster Moonwatch," but watches made out of these materials were not known to him. He went out to conduct some research just to be sure, but still couldn't find a single watchmaker that used this material to construct their watches.

Space Industry

Patrick found the idea of rocket material especially exciting as astronomy and space exploration hold a special fascination for many, and it seems like humankind is always striving for a connection with space. From purchasing space exploration memorabilia products, to simply enjoying learning about the final frontier, people are truly fascinated with space. A study by PEW Research Center found 45% of 2,451 randomly selected people would like to go to space in order to experience something unique. 29% would like to see Earth from space (Statista, Space Report, 2019). Companies such as Virgin Atlantic and Blue Origin are leading the efforts to introduce those possibilities to a broader audience. Space tourism is, however, just one area of the space industry.

Within the last few decades, the space industry has undergone dramatic changes. While being dominated and led by governments and their agencies, such as NASA, Roscosmos, or ESA, private companies have started to enter the industry and are destined to reshape its face dramatically. Curt Nickisch argues that "the socalled "Final Frontier" is fast becoming the arena of private enterprise" (Nickisch & O'Sullivan, 2019). This

negotiations. While the case study is based on the actual events, some names had to be changed.

1

¹ Two phone interviews with Patrick Hohmann served as major sources of information for the reconstruction of the

development has ignited a high and enduring growth phase. The global turnover has climbed from US \$216.6 billion in 2009 to US \$414.75 billion in 2018 (Statista , 2019a), and it is estimated by Morgan Stanley that it will triple its size by 2040, ultimately surpassing a \$1 trillion valuation (Morgan Stanley, 2019). The Bank of America Merrill Lynch sees an even higher growth, upwards of US \$2.7 trillion throughout the same time period (Sheetz, 2017). The upcoming value will come mainly from services that provide internet and consumer broadband (Statista, 2019a), and will be created and driven by private companies.

According to Sinead O'Sullivan, the space industry has to be separated into two distinct economies (Nickisch & O'Sullivan, 2019). The first economy is focused on generating benefits for the Earth economy. This can be achieved by technologies that deliver something to space or by having something in space with the purpose of creating, supporting, or enabling technologies for the Earth economy in areas such as television and geolocation, navigation, or timing services. The second economy concerns the exploration of space and interplanetary existence in space. A major field of activity in this context is space mining. Space mining is the process of extracting minerals and element content (Garside, 2019). The value of the asteroid belt of Mars and Jupiter is estimated at US \$700 quintillion. Therein, the asteroid "Davida" has been identified as the most valuable one. Its resource value is estimated to be somewhere around US \$27 quintillion. In comparison, the market for Earth's annual production of raw metals is about US \$660 billion (Desjardins, 2016).

Competition in space is fierce. Organizations are mainly competing around the idea that space – like Earth – also has a finite amount of resources (HBR inside, 2019). The organization occupying all available space will win the competition. This is exactly why companies such as Amazon announced to launch more than 3,000 satellites as part of its project Kuiper, or why SpaceX will put almost 12,000 satellites into orbit as part of their program Starlink (Nikisch & O'Sullivan, 2019). However, not only US companies compete. The Chinese start-ups have entered the market. Alone, from 2018 to 2019, the number of Chinese companies operating in the space economy has increased from 30 to around 100 (Beall,



2019). This development has led to a secondary market where existing satellite spots are sold.

Most of those activities can only be observed from outside and visiting space is still restricted to a small group of highly wealthy people. Patrick wanted to offer people the possibility to participate in the development of this new economy directly and on a feasable level. He wanted to create a connection with space that anyone could engage with – not just a wealthy individual. Having a watch made of genuine rocket material would be his approach.

Watchmaking Industry (Worldwide)

Similar to the space industry, the watch industry is undergoing a dramatic change and companies have to withstand a fierce competitive environment. Worldwide, the market is growing stagnant, with only moderate growth expected. Global revenue increased only slightly from US \$118.666 to \$122.211 million from 2010 to 2018 (Statista, 2019b), and the yearly growth rate from 2018 to 2023 is forecasted to be between 0.2 to 1.8 percent (Statista, Watches, 2019b). Between 2012 and 2018, the revenue share of luxury watches was almost unchanged (2012: 19 %; 2013: 22 %; 2014: 23 %; 2015: 23%; 2016: 23 %; 2017: 23 %; 2018: 24 %) and is expected to stay on that level until 2023, where the revenue share will be around 25 % (Statista, 2019b). Within the non-luxury watch segment, the demand for smart watches is rising steadily, ultimately cannibalizing the revenue share in the non-luxury segment of Quartz watches. In 2015, smart watches were, for instance, largely negligible in Germany and in 2019, they've gained a total market share of 13% (GFK, 2018). According to Allied Market Research, the success of smart watches is based on the growth in demand of wireless fitness and sport devices, increasing health awareness amongst consumers, further market exploitation, and a rise in investment of building connected ecosystems (Allied Market Research, 2020). China is the most important market in 2019 (US \$72,509 million), followed by the United States (US \$9,387 million), India (US \$4,628 million), Japan (US \$ 3,824 million), and Hong Kong (US \$ 3,408 million) (Statista, 2019b).



Througout the world, Swiss watchmakers enjoy a high reputation because they've been known and renowned as the symbol for innovation and technological supremacy (Sobel, 1996). This reputation is founded in a history where Swiss watchmakers dominated the industry in terms of quality and design for more than 200 years (Donze, 2011). Only with the emergence of guartz watches in the 1970s did this domination come to an end (Raffaelli, 2019). Holding more than 50% of the world's export market in the 1970s, the percentage dropped to less than 30% in the 1980s. This decline led to a wave of and dismissals within the Swiss bankruptcies watchmaking industry. Less than 50% of companies survived the downturn, and the workforce shrunk to 1/3 to its former size (Perret, 2008). In contrast to the highly pessimistic forcasts that had predicted the end of the mechanical watch industry, the Swiss watchmaking industry began to recover from this crisis and reemerged to its former glory (Raffaelli, 2019). From 2000 to 2008, Swiss watchmakers saw massive growth and by 2008, had amassed more than 50% of the global watch export value (Raffaelli, 2019).

In 2018, the value of Swiss watch exports was CHF 21.2 billion, with an increase of 6.3% in comparison to 2017. Wristwatches accounted for 95% of all exports by value, increasing by 6.1% in 2017, ultimately reaching CHF 19.9 billion. The quantity of watches decreased, however, in comparison to the previous year by 570,000 pieces or 2.3 %. This decline was directly related to the consideration that quartz watches are still viewed as mechanical watches, which also showed an increase in volume by about 3.9%. By prince range, watches below CHF 200 showed a decline of 3.8% in value and 5.6% in volume. Watches between CHF 200 and 500 declined by 3.4% in value and 2.6% in volume. The segment between CHF 500 and 3000 increased in value by 7.4% and in volume by 8.2%. Watches with a price above CHF 3000 showed an increase in value by 7.5% and in volume by 7.9%. Precious metals with a sold unit value of around 2% accounted for 33 % of value exports. Steel with a share of 59% in units contributed 42% to the value. Bimetal with a share of 5% in units had a share of 17% in value (Federation of the Swiss Watch Industry, 2019a). In 2019, Hong Kong had become the most important



market, with an export value of CHF 2,261.8 million, followed by the United States (CHF 1,970 million), China (CHF 1,605.2 million), Japan (CHF 1,361.6 million), and the United Kingdom (CHF 1,173.3 million) (Federation of Swiss Watch Industry, 2019b).

Pursuing The Idea

Patrick was new to the watch industry, and he didn't exactly have first-hand insight into the market, nor did he possess any relevant know-how or experience in this field. With that in mind, he decided to visit the watch fair "Baselworld" in Basel. Baselworld is considered one of the most prestigious watch fairs in the world. Major watch brands use the fair regularly as a marketing platform to present their newest collection to an international audience (MCH Messe Schweiz, 2020). Hence, visiting the fair would bring him into contact with both watchmakers and potential customers. At the end of his visit, he wanted to achieved two things. First, he wanted to gain insight into the watch industry. Second, he wanted to hear the opinion of watchmakers surrounding the idea for his brand. To his surprise, all watchmakers shared useful information with him. Concerning his idea, their opinions were rather divided. Some liked the idea and encouraged him to pursue it. Others were skeptical. One watchmaker was especially critical and saw the idea as a pure pipe dream. This single assessment discouraged Patrick greatly.

Walter

When the first disappointment of the negative feedback had been vanished, Patrick started to work again on the idea. First on his list was finding a way to source F/A-18 material, which he knew someone who could be of some help. An acquaintance of Patrick, Walter maintained F/A-18 airplanes of the Swiss Army. Walter found the idea interesting and offered to bring Patrick into contact with decisions makers. He outlined, however, that gaining access to F/A-18 material would be rather challenging. F/A-18 material is considered for military use only and is covered by the War Material Act. The War Material Act requires the military to keep detailed records of each part from production to disposal. It also cites strict limitations for its usage. In order to buy and use this material for civil use, Patrick needed to have a license. Patrick perceived saw this as less than an obstacle and

more of an opportunity. If he would be able to get this license, he would then be able to secure this material easily and legally, with a certificate of authenticity.

After first contacting Walter, it took a year before Walter called Patrick again to inform him that there might be a chance to purchase F/A-18 material. Walter knew of 500 kilograms of Titan and heat-resistant steel, which might be available for purchase, and he expressed that he could potentially set up a meeting between Patrick and decision makers. Patrick began researching immediately, and found that Titan and heat-resistant steel have major disadvantages. Titan cannot be melted as easily, because the process is highly energy intensive. Only a few melting furnaces exist in the world with the ability to melt Titan. These furnaces are located in China and Africa, where energy prices are competitive. In addition, the furnaces are laid out for huge amounts of material. Heat-resistant steel contains a large part of nickel as well. Nickel is often linked to allergic skin reactions, which made it an undesirable material to work with. An adjustment would be necessary in order to use it for watches. Despite all these disadvantages, Patrick decided to seize the opportunity and meet with Walter and the decision makers.

The meeting did not go as intended. First, Walter cancelled his participation on short notice, which meant that Patrick had to represent himself with no middleman to assist during his meeting with complete strangers. Second, Walter had not only invited decision makers from the Swiss army, but Patrick was also facing representatives from a watchmaker company. Even worse, the representatives of the Swiss army and of the watch company had not been informed Walter of Patrick's intentions beforehand. Patrick tried to make the best out it and tried to take the lead in the conversation. Under these circumstances, the meeting turned out be a disaster with the worst possible outcome. The decision makers told Patrick that he would not get any material and that they did not like his approach and attitude during the meeting. In the aftermath, Walter let Patrick know that he should not contact him again in the future. Patrick needed to recover from this setback.



ILA Berlin

A visit to the ILA Berlin was the next chance for Patrick to pursue his idea. The ILA Berlin is the largest space exhibition in Europe. More than 65,000 trade visitors and 115,000 members of the public attended the fair in 2018 (ILA Berlin, 2020). More than 300 suppliers from all over the world present their products (ILA Berlin, 2020). Patrick had not gone through the list of exhibitors beforehand or had made a list of people he would like to talk to. He hadn't prepared a questionnaire to guide his conversations either. Instead, he had planned to seize the moment and talk to everyone who might be of help - doing it all with an open mind. First, he went to the exhibition site of the US Army. During a guided tour, he asked the tour guide where he could buy old F/A-18 material. He did not get a direct answer, but was connected to a public relations employee of the US Army who told him that this issue would have been handled via the Swiss Embassy. With the contact information of a particular individual at the Swiss Embassy, he was optimistic that he would be able to purchase the material.

Next, he wanted to talk to a representative from NASA, only to realize that NASA was not part of the ILA Berlin. However, Arianespace had an exhibition stand. An employee of Arianespace told him that the rocket boosters were recovered after each launch. Knowing this, Patrick figured this could potentially be the first opportunity to get access to rocket material. The employee of Arianespace asked Patrick to talk in two weeks, as his request needed to be evaluated first. He promised to call him.

Both approaches led to nothing. He never heard again from the Arianespace employee and the request via the Swiss Embassy led to no result. At this point, Patrick's enthusiasm had dipped dramatically. High hopes had been disappointed. Patrick needed to recover again from another major setback.

Kazakhstan – Part 1

Despite all the drawbacks, Patrick did not abandon the idea of building watches out of genuine rocket material. While researching on the internet, he became aware of the documentary "Space Tourists" by Christian Frei. The documentary covers the experiences of space tourists in their preparation for a space visit, as well as the hunt of scrap dealers for rocket material. This was the first time where Patrick finally received a direct hint as to what happened with used rockets, and where he could find genuine rocket parts. Patrick began searching immediately for the contact information of the film director and was able to contact him shortly after. Christian Frei told him that it would probably be best to talk to Bastian, a crew member, who had organized everything for the shooting in Kazakhstan and gave him his contact information.

Patrick called Bastian and told him about his idea and that he needed his help. Bastian liked the idea and agreed to come with Patrick to Kazakhstan. Bastian spoke Russian and English, and at the time, was working as a rickshaw-driver. He knew the country and the people, but did not possess any relevant experience in doing business in Kazakhstan. He knew, however, the scrap dealer from the movie, and was able to arrange a meeting with him. For Patrick, that was the most important thing. Next to Bastian, Patrick asked his oldest and best friend, Marco, to accompany him on the trip. Marco was a psychologist by profession and had been an important source of support and help throughout much of Patrick's life. Marco also agreed to come with Patrick and Bastian to Kazakhstan. While planning the trip, Patrick was convinced that the negotiation with the scrap dealer should not take longer than 2.5 days. With that in mind, he figured there would be some time spare time for tourist activities.

When they arrived at the scrap yard, the owner was not there. Instead, an employee and the brother-in-law of the owner welcomed the group and gave them a tour. Patrick was happy to see that the scrap yard did not only have used parts of the Soyuz launch vehicle, but also of the bigger Proton rocket, which was, so far, unknown to Patrick.

The Soyuz rocket is a medium-class launcher. It belongs to the renowned family of Russian launch vehicles and has been in use for more than forty years. It has been steadily improved and is one of the most reliable launch vehicles in the world. It is also the successor of the famous Vostock launcher. The Vostock launcher is



famous for carrying Yuri Gagarin into space. The Soyuz rocket is used for human space missions. The European Space Agency calls the Soyuz respectfully "the workhorse for Russian human space missions" (ESA, 2019a & b). The Proton is Russia's largest operational launch vehicle. It is used in unmanned space missions to put heavy spacecraft into orbit. It is also known for reaching unusually high altitudes. It has a length of 57 meters, with a total mass of 700 tons. Like the Soyuz rocket, it is highly reliable (ESA, 2019c). Both Soyuz and Proton rockets are launched from Baikonur Space Center. The Baikonur Space Center is the first and largest rocket launching site in the world, and is named after the city of the same name, located close by. The Baikonur Space Center covers an area of 6717 km² and consists of nine launch sites, four of which are meant for testing, along with thirteen assembly and testing facilities, one oxygenfacility, 600 nitrogen production transforming substations, two airfields, 470 km of railways, 1281 km of roads, 6610 km of transmission lines, and 2784 km of telecommunications lines (Roscosmos, 2019). Russia has leased the area from Kazakhstan through the year 2050 (Roscosmos, 2019).

Patrick decided immediately that he would not negotiate for the Proton parts. He felt that they didn't exactly pique his interest, nor would they generate interest from his prospective customers. He only wanted to have Soyuz parts that were used in manned space missions. During the tour, Altaj, the brother-in-law of the owner and his employee, told them that the rockets were collected in a military protection zone and then dissembled at the scrap yard within one day. Afterwards, the material would be recycled and sold to customers who bought the recycled material in large quantities. Patrick was enthusiastic about future purchases, so he asked Bastian to document the whole day with a camera. The material should be used later in marketing campaigns and activities.

There was, however, one important obstacle. The owner, Murat, was not there and he was the only person who could sign the deal. With about a day and a half left for negotiations, Patrick was optimistic to close the deal. Later that day, he learned that Murat would not come to the scrap yard at all. He had a meeting in Almaty and would be staying there for next few days. Altaj suggested that there could be a chance to meet him back at the Kazak capital city, Astana, right before the return flight to Zurich. This seemed too risky for Patrick, and his travel companions. In the event that the owner would not keep his promise, the whole trip would be a complete failure. Therefore, they decided to visit Murat in Almaty. Almaty is the biggest city in Kazakhstan, and it is located in the mountainous area of southern Kazakhstan near the border with Kyrgyzstan (Wikipedia, 2020), which meant a long and burdensome travel for Patrick and his group. When Murat had agreed and ensured to meet with Patrick and his friends, the travel to Almaty was organized.

Before they left, Patrick went back to the scrap yard and took some rocket material for testing and prototyping. He also wanted to know whether there would be problems at the airport or the border. When they arrived in Almaty, the moment had finally come to start the negotiations. But before the negotiation could take place, Murat wanted to get to know Patrick and his friends. As Patrick did not speak Russian or Kazhak, Bastian had to translate. In Patrick's opinion, the conversation went quite well. He learned that Murat owned several companies, which were operating in different industries. Concerning the rocket material, he possessed an exclusive contract with Roscomos to collect, recycle, and sell the rocket material. Given the limited time, Patrick tried to speed up the process, striving to close the deal rather quickly. He suggested purchasing the rocket parts based on the market price for recycled material, plus surcharges for handling selected parts of the Soyuz rocket. In addition, Patrick offered to cover all further costs that would occur due to his order and to pay a small quantity surcharge. Murat seemed to be pleased with this offer and returned to other conversational topics. Patrick did not know how to interpret this behavior; he had assumed that they would fix the deal with a signed contract, but Bastian assured him that a verbal agreement would be completely sufficient. Slightly skeptical, but quite excited overall, Patrick thought he had finally have achieved his goal. Clarifying the last details, finalizing the deal, and sending Murat the specific instructions for the material was the last step for Patrick, which he had [planned to complete upon his return back to Switzerland.



Back in Switzerland

As it turned out, bringing rocket material back to Switzerland was not as complicated as Patrick had feared. In fact, there were no problems or any queries when checking in the luggage at the airport or at border control. Back in Switzerland, Patrick started to drive the development of his new watch brand forward. Patrick had to find a way to use the rocket material for the production of the watches. While speaking to experts and analyzing the material, he learned that the steel was not stainless. Even if it was surprising at first glance, it seemed logical at second thought. The purpose of the rocket steel is to withstand the forces of one launch, where corrosion is completely negligible. Corrosive steel was, however, not suitable for the production of watches. As a consequence, the steel had to be remelted to stainless steel before he could begin experimenting with the design and construction of his new watches. This was certainly an increase in production costs for Patrick, and it was guite significant. Given Patrick's limited financial resources, this illustrated a problem.

Next to the usage of rocket material, a design concept for the watches was still required. After conducting some research, Patrick had four options. First, Patrick could hire a highly experienced watch designer from Switzerland who had developed the design for the IWC Pilot's watch and the Zenith El Primero; two famous luxury watches. This option would bear the advantage of working with a highly experienced designer, but would also be very expensive. Hiring a Swiss design agency that had developed design concepts in the past for Tissot was the second option. This would also give Patrick the advantage of having an experienced partner on his side, but it would also be just as cost intensive as the watch designer. Working with a watchmaker and designer from Salzburg illustrated the third option. The designer had a reputation for professionalism, and for designing excellent watches. Still expensive, this option would be cheaper than the first two. Being located in Salzburg, Austria, Patrick feared that communication could be aggravated. The recommendation of an acquaintance led to the fourth option. A highly promising design student who had already developed design concepts for other products had been recommended by an

acquaintance. This option would be the cheapest, but when it came to watches, the design student simply didn't have any relevant experience. Weighing the advantages and disadvantages of all four options, Patrick decided to work with the design student. In order to compensate for his lack of experience, he asked the designer from Salzburg to accompany the development in an advisory capacity. This should ensure that the design concept could be realized.

While making progress in the development of the watches, the negotiations with Murat had not proceeded. In fact, the contact had been completely lost. Bastian had tried several times to reach and talk to Murat or Altaj, but it seemed that they had been swallowed up by the Earth. Although Bastian was still convinced that the deal was valid, it dawned on Patrick that his first feeling became a nightmarish reality.

There was no deal and there was no rocket material. Still, Bastian seemed determined to make it happen, and kept contacting Murat and Altaj. Many unsuccessful tries frustrated Bastian over time. He not only stopped trying to contact Murat or Altaj, but he even withdrew himself from the project. Patrick had lost an important supporter and more importantly, the only source for rocket material that he was able to find.

Kazakhstan – Part 2

Even if the situation seemed hopeless, Patrick decided that this could not be the end of his dream to build watches out of genuine rocket material. The development of the watch design would soon be completed and he would also get the rocket material. The only way to achieve this goal was to visit Murat once again in Kazakhstan, to sign a contract, and bring back material to Switzerland. This time, however, he would be better prepared and he would plan ample time for the negotiations. Nothing should be left to chance.

Having lost Bastian, and not being able to speak Kazhak or Russian himself, he hired two women from Kazakhstan, Nathalija and Marija, as translators. Nathalija was 30 years old, spoke German fluently, and was well connected and highly experienced in negotiations. Marija was in her forties, spoke English, and was a seasoned negotiator. Patrick had also



researched that it was necessary to have an export permit to transport the material in larger quantities from Kazakhstan to Switzerland. In order to ensure that the permit could be submitted, he would bring a computer, a printer, and paper to the negotiations. He would also have US \$12,000 in cash to pay for the material on the spot, with some extra as a small gesture or gift of appreciation for Murat.

Patrick also had a concrete idea in terms of what he wanted to achieve in the negotiations. He wanted to buy only selected and predefined parts of the Soyuz rocket. Some parts should be melted and shipped as bars. There should be an exclusivity clause ensuring that only Patrick would be able to buy material for the production of watches. The contract should set up a long-term relationship combined with a secure number of shipments. The price of each shipment should be oriented to the given market price. Murat should be liable for any problems concerning the material. In the event that the material would be contaminated, Murat should have to cover the costs and bear all legal consequences. In return, Patrick would cover all costs related to selecting, handling, and shipping the preselected material. He would be willing to pay a surcharge for small quantities and would guarantee the acceptance of goods for the predefined number of shipments. He would also be willing to support Murat in obtaining the export permit.

When they arrived at the scrap yard, Altaj welcomed Patrick, and Murat awaited Patrick in his office. Altaj and Murat seemed to be genuinely happy to welcome Patrick after eight months back to Kazakhstan. Patrick returned this hospitality and expressed his delight to meet them once again. Patrick had decided not to rush the process this time. He would wait until Murat initiated the negotiations himself. To his surprise, Murat steered the conversation directly toward the rocket material right away.

Murat declared that he would be willing to sign a cooperation agreement on the spot. Patrick seemed to not have heard this idea and offered politely to set up the contract for the material right now. Having a cooperation agreement could lead to a long-term commitment, which he was not willing to give. He

strengthened his suggestion by arguing that a truck had been ordered to bring the material to Switzerland in seven days from now. As soon as the material and all documents would be read, the truck loaded would be loaded and sent on its way. Only upon this moment, would Patrick pay. Murat agreed and wanted to obtain the export permit that very afternoon. In the course of its application, it became clear that it was not possible to export Titan to Switzerland. It was, in addition, necessary to have the material tested by the State Testing Laboratory and to provide a certificate of origin. Both seemed completely manageable and realistic. With this knowledge, Patrick went back to Murat to finalize the agreement.

Up to that point, they had not spoken about the price and Patrick feared that Murat would name a completely unrealistic price, which would be beyond any market price, let alone any price expectations of Patrick. The first quoted price was, indeed, not acceptable, as it lacked any legitimization. This high, it would not be economically viable for his business. Given that the material was already sold to customers, the price definition should be based on a market price for recycled goods. Finding a fair and legitimate price would also be an important building block for the establishment of a trustful long-term relationship for Patrick. Murat did not disagree, but emphasized that each shipment could differ, as each rocket launch was unique. As a consequence, the quality of the rocket material and of the useable material would vary each time. Additionally, Patrick wanted to have shipped only predefined parts which would further impact the quantity and hence the price. Just setting the market price as a reference point would not be acceptable in his opinion. He needed to ensure that each shipment would be lucrative. Existing customers bought the material by fully loaded trucks. Hence, the value of a fully loaded truck would be an acceptable price to Murat. This meant approximately 20 tons. Patrick assumed that each of his purchases would be around 4 tons. If the reference price per ton would be somewhere near recycled material, he would be willing to pay this surcharge for small quantities and agreed. Next, Murat wanted to have all costs covered for collecting, handling, and shipping the material. In case there would be further costs upon entering customs, Patrick should also pay for it. Patrick agreed, as he had



already anticipated this suggestion. The day came slowly to an end. Both Murat and Patrick were satisfied with a common understanding regarding their agreements and decided to celebrate.

The next step, would be to draw up the contract. This would take a few days. Patrick was not unhappy about it, as he could use that time to travel to the State Test Laboratory in order to obtain the material documents for the export permit. According to Nathalija, going to the State Test Laboratory directly would be the only way to avoid delays and to get the documents in time. At the laboratory, Nathalija used her negotiations skills to convince the employees to conduct the test right away and to certify the results for the application of the export permit. Marija used the time to solve the other so far important problem. She would use her network to find and hire a logistic partner who would pick up the material at the stated day and bring it to Switzerland. They succeeded with both. The export permit could be obtained and the shipment was scheduled. Signing the contract was the last thing before Patrick would have achieved his goal.

After returning to Murat, Patrick examined the contract and noticed that all details which had not been discussed were now in Murat's favor. He was not happy about it, but did not want to endanger the agreement. He also did not want to accept it without any return. He demanded that the contract must contain an exclusivity clause. No watchmaker should be allowed to buy rocket material from Murat. This exclusivity could be cancelled after the twentieth shipment. In addition, Patrick demanded that Murat would be liable for all consequences and costs should the material be contaminated. Marija translated those demands to Murat, who listened closely. A long pause followed, where he did not show the slightest emotion. Then he nodded. The contract was adjusted and signed. Finally, Patrick had his deal and the security to receive his first tranche of material. Again, it was time to celebrate before Patrick flew back.

Epilogue

Back Switzerland, Patrick eagerly awaited the arrival of the material. With some minor delays and minor problems at the customs, the material was in his storage facility by January 11. The finalization of the design concept and the start of production took longer than expected. Two things led to the delay. First, the suggested design concept could not be produced in its current form and needed to be adjusted. Second, the intended mechanical clockwork could not be obtained as easily as expected and more important in a timely manner. Using his network Patrick found a solution. He found an intermediary who buys overstocks of watchmakers and sells it to a higher price. He contacted the dealer and bought the clockwork.

Patrick had gone on to found his watch company, Werenbach, one year after the successful negotiation in back in 2011. Werenbach watches are made out of genuine rocket material, and are sold on an exclusive online shop, in addition to a watch boutique in Zurich. With his second watch edition, he achieved a Swiss record on the international crowdfunding platform kickstarter.com. The goal on kickstarter.com was achieved within just 20 minutes. Patrick is still following his dream to offer watches as a connection to space.

References

Allied Market Research (2020). Smartwatch Market by Product (Extension, Standalone, and Classical), Application (Personal Assistance, Wellness, Healthcare, Sports, and Others), and Operating System (WatchOS, Android, RTOS, Tizen, and Others): Global Opportunity Analysis and Industry Forecast, 2020-2027. Retrived from

https://www.alliedmarketresearch.com/smartwatchmarket on June 29, 2020.

Armstrong, M. (2019). The Colossal Untapped Value of Asteriods. Statista. Retrieved from: https://www.statista.com/chart/8093/the-colossaluntapped-value-of-asteroids/ on November 17, 2019.

Beall, A. (2019). China's Private Space Industry is Rapidly Gaining Ground on SpaceX. Wired. Retrieved from: https://www.wired.co.uk/article/china-private-spaceindustry on November 10, 2019.

Desjardins. J. (2019). There's Big Money to Be Made in Asteroid Mining. Visual Capitalist. Retrieved from: https://www.visualcapitalist.com/theres-big-moneymade-asteroid-mining/ on November 22, 2019.



Donze, P. (2011). History of Swiss Watch Industry: From Jacques David to Nicolas Hayek. Bern, Switzerland: Peter Lang AG.

ESA (The European Space Agency) (2019a). Soyuz. Retrieved from: http://www.esa.int/Enabling_Support/Space_Transport ation/Launch_vehicles/Soyuz on November 17, 2019.

ESA (The European Space Agency) (2019b). Facts about the Soyuz. Retrieved from_ http://www.esa.int/Science_Exploration/Human_and_R obotic_Exploration/MagISStra/Facts_about_the_Soyuz om November 22, 2019.

ESA (The European Space Agency) (2019c). The Launcher. Retrieved from: http://www.esa.int/Science_Exploration/Space_Science /Integral/The_launcher on November 17, 2019.

Federation of the Swiss Watch Industry (2019a). The Swiss and World Watch Industries in 2018. Retrieved from:

https://www.fhs.swiss/file/59/Uhrenindustrie_2018.pdf on November 11, 2019.

Federation of Swiss Watch Industry (2019b). Worlddistribution of Swiss Watch Exports – January – October2019.Retrievedhttps://www.fhs.swiss/scripts/getstat.php?file=mt3_190110_a.pdf, on November 11, 2019.

Garside, M. (2019). Space Mining – Statistics & Facts. Statista. Retrieved from: https://www.statista.com/topics/3279/spacemining/#dossierSummary_chapter1 on June 29, 2020.

GFK (2018). Uhrenmarkt: Entwicklung und Trends -Tradition trifft Moderne - der deutsche Uhrenmarkt ist in Bewegung. Retrieved from: https://www.gfk.com/de/insights/news/uhrenmarktentwicklung-und-trends/, on November 3, 2019.

Hohmann, P. (2018). Werenbachs Uhr. Zurich: bilgerverlag GmbH.

ILA Berlin (2019). ILA Berlin – Innovation and Leadership in Aerospace. Retrieved from https://www.ilaberlin.de/en on November 22, 2019.



Thompson, C. (2016). Space Mining could Set Off a StarWar.Wired.Retrievedfrom:https://www.wired.com/2016/01/clive-thompson-11/on November 18, 2019.

MCH Messe Schweiz (Basel) AG- Baselworld (2019). About Baselworld. Retrieved from; https://www.baselworld.com/en/the-show/about on November 6, 2019.

Morgan Stanley (2019). A New Space Economy on the Edge of Liftoff. Retrieved from: https://www.morganstanley.com/Themes/globalspace-economy on November 6, 2020.

Nickisch, C. & O'Sullivan, S. (2019). Understanding Space Economy. HBR IdeaCast. Episode 684. Retrieved from: https://hbr.org/podcast/2019/05/understanding-thespace-economy on January 28, 2020.

Perret, T. (2008). A Canton under the Influence. In: Bujard, J. and Tissot, L. (eds.): The Territory of Neuchatel and Its Horological Heritage: 301-306. Chezard-Saint-Martin: Editions de la Chatiere.

Raffaelli, R. (2019). Technology Reemergence: Creating New Value for Old Technologies in Swiss Mechanical Watchmaking, 1970-2008, Administrative Science Quarterly, Vol. 64 (3), 576-618.

Roscosmos (2020). Baikunur Space Center. Retrieved http://en.roscosmos.ru/479/ from on January 28, 2020.

Sheetz, M. (2017). The Space Industry will be Worth Nearly \$3 Trillion in 30 Years, Bank of America Predicts. Retrieved from:

https://www.cnbc.com/2017/10/31/the-spaceindustry-will-be-worth-nearly-3-trillion-in-30-yearsbank-of-america-predicts.html on November 6, 2019).

Sobel, D. (1996). Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time. London: Fourth Estate.

Statista (2019 a). Space Exploration. Statista Dossier on Space Exploration.

Statista (2019b). Watches. Retrieved from: https://www.statista.com/outlook/13010100/100/watc hes/worldwide# on November 17, 2020.

Scheiner, C. W. (2019a, September 16). Phone Interview with Patrick Hohmann.

Scheiner, C. W. (2019b, September 18). Phone Interview with Patrick Hohmann.

Wikipedia (2020). Almaty. Retrieved from https://en.wikipedia.org/wiki/Almaty on January 28, 2020.