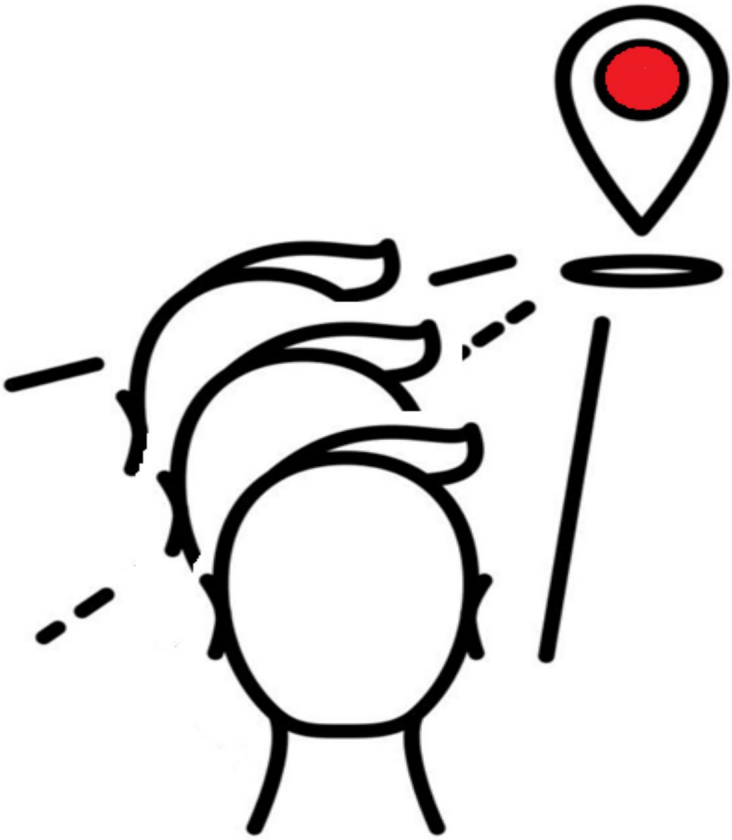
THE JOURNEY OF KINGS



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For Baer, Lois and Koen.

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FOREWORD

This story is about a quest by the nephews Bill, Cass and Sepp and was written during the lockdown of the COVID-19 pandemic in 2021.

The ancestors of the three nephews lived with nature for dozens of generations, driven by the seasons, together with other people in a harmonious community. Thanks to their curiosity developed this community over the centuries the ability that enabled them to do extraordinary things. The basis of their knowledge was the passing on of the findings in the form of stories. The last generation knew how to use computers and had as an adage: 'write down, note down, save'.

The three nephews travel to the land of their ancestors to work in money machines. The nephews are actually robots from Japan with human traits. They are going to spy for their Japanese clan at an American competitor, but at the same time they are also looking for a great-uncle who suddenly disappeared last year. In search of their disappeared great-uncle they found themselves.

During their journey, the nephews experience educational adventures and discover their *Funktionslust.* They also discover that not every journey needs a goal and that most journeys *are a goal in themselves.* They translate the many conversations during their adventurous journey into business concepts with references to the source for further deepening.

STUCK

He looked through a crack in the 40-foot high cube with his sensors container and saw the Northern Sinai. The container ship he was on, the Ever Given, was en route from Manila to Rotterdam. In recent days, they had braved Houthi Pirates in the Gulf of Aden and sailed across the Red Sea. A few hours ago, they had left the Gulf of Suez and entered the Suez Canal. He saw that the desert storm was getting stronger and that the antenna of the navigation radar was unstable and was not rotating evenly but was wobbly. The antenna was covered in guano from the Albatrosses on one side and had become unbalanced as a result. He knew that this meant that the radar could no longer determine the correct distance to the shore and that they could get stuck on the sandy shore of the narrow Suez Canal. He contacted the captain via his sensors to alert him to this potential problem.

Because communication on a ship went through the hierarchy of helmsmen, he contacted them. The 4th helmsman said that it was not possible to speak to the captain because there two Egyptian pilots were on board to navigate the container ship through the Suez Canal. This was of course a way to shield him, he thought, and contacted the 3rd mate who let slip and revealed where the 2nd mate was. He wanted to but our hero was small, but not afraid of the devil. After a short fight about the correct codes of the door he was able to gain access to the wheelhouse.

What he found there was to his surprise: NO ONE was there. The bridge was EMPTY. The ship was navigating on autopilot. He saw that the ship was passing close to the quay and knew that the guano had thrown the antenna out of balance and that this was disrupting the navigation. 'If someone didn't quickly take over the autopilot with manual controls, accidents would happen', he thought. The next moment, the Ever Given's bow ran aground on the right bank of the Suez Canal.

The large container ship continued on autopilot, and its stern then bore into the sandy left bank. The 400-meter-long ship was now lying across the channel and was stuck solid. Due to the pressure on the bow a leak occurred. The pilots ran around in panic looking for the captain. The cook's mate, who was his friend, managed to tell him that the captain was in the ship's shisha bar with the first mate, secretly smoking addictive substances.

After repairing the leak in the bow with slats and polyurethane foam, the Ever could be launched after six days during spring tide and with the horsepower of SMIT from Rotterdam Given are being refloated. The queue of container ships that had formed in the Mediterranean and Red Seas started moving again. However, the ship he was on was held for another 3 months by the Egyptian authorities, who demanded 600 million euros in damages. After an army of lawyers had settled the claim, the Ever Given was able to resume its journey to Rotterdam.

Meanwhile, half the world was watching, because the ship contained 20,000 containers with goods ranging from motorbikes to noodles, school diaries and solar panels, IKEA furniture and sex toys, fruit and vegetables, garden furniture and parasols, bicycles and electronics.
Hundreds of Dutch entrepreneurs estimated the total economic damage at 1 billion euros. Their Just-In-Time[1] model could have been a Just-In-Case supply system. The Japanese at Toyota, his fellow countrymen, had foreseen this after their invention of the JIT system. But as is so often the case, everything had to be more efficient, not taking into account a rare calamity that, if it occurs, could be very expensive.

[1] Just-In-Time inventory system

After this incident, he did not know what to do with the finding about the empty bridge. But curious as he was, he wondered how this could happen. What was the cause of the problem of the empty bridge and what is needed for a proper steering of the ship?

Now that they were heading back towards Rotterdam, he had to think of his grandfather's story about his great-uncle. He had been sent to Europe years ago as part of a money machine. His great-uncle was very smart but not equipped with the software that his generation had. His family had not heard from him for years, which was strange. He published articles in the newspaper under a pseudonym about legislation, the Internet, light, sound and such, but his last article was from years ago.

He wondered if he could find his great uncle in Europe. Little did he know that he would be amazed many times during his journey.

EXPENSIVE TRIP

At the same time that Sepp was on the Ever Given, Cass was on a plane with others of his kind from a factory in Manila to Europe. Cass was big and strong, because he was a cassette that had to guard the banknotes that were in a money machine. He took up quite a lot of space because he was equipped with an empty tray where the banknotes could go. Cass knew that transport is ultimately paid for by volume.

He also knew that transport by ship was much cheaper than flying. That's why he found it strange that Sepp went to Europe by ship and he, who was mostly air, by plane. Together with his fellow creatures, he was stacked on pallets and took up almost the entire cargo space under the cockpit.

At the factory in Manila, Cass had seen that four small parts had been shipped to Born just like Sepp and placed in a container on the ship were set. The cost of their trip was almost as expensive as the parts themselves cost because together they only weighed 20 kilograms and all alone on a pallet. They had enough space in the container on the ship and knowing Sepp they would probably make a party of it that lasted almost 2 months. The crazy thing was that the four small parts were actually urgently needed at the customer, a distribution center in Born, and that sailing took much longer than flying for a few days. The new boss at the customer they were going to, a vice president of the head office from America, had shouted that from now on all parts from the factories had to be transported by ship because it was much cheaper than flying. The small parts could still remember the questions of the packers in Manila. 'Why do only 4 boxes go on a whole pallet in the shipping container?'

Cass was not only strong, but also curious. He and his fellows had been waiting for almost 2 months on the dock in Manila for transport to Europe because they were destined to go on the ship, when they were suddenly put on a plane.

Now that he was in the cargo hold of an airplane, he wondered how this could happen. Was there no one who knew how transport worked in the chain from supplier to customer? Because Cass was curious, he had asked his friends about this booking process for transport via a ship. The order from the customer in Europe went to his Japanese family, who was the supplier. His clan had to make a pre-booking with a carrier who in turn had to make a request with the owner of the ship. These requests required the volume of the shipment because a ship only has a certain capacity. The transport request was scheduled by the ship owner who also had to take into account a berth in the port after which the delivery time was confirmed. Transport via a ship from Asia to Europe took almost 2 months, but was much cheaper than a flight that only took 1 week. For Cass it was therefore strange that after waiting for months at the dock he suddenly had to make an expensive flight. Was there no one at the customer in Europe who knew that he had been waiting for months and what the transport costs were for a cubic meter of cargo using the various modes of transport?

Also in the cargo hold was a math whiz named Tran. He was equipped with many circuits and could calculate very quickly. 'Look,' Cass said, 'transportation is paid for by volume, so the bigger you are, the more expensive it is because in the end it's the space you take up.'

'That's why people in economy class are packed like sardines in a can,' Tran said, 'but when you're trying to decide what's the cheapest mode of transportation, you also have to consider the capital costs of what you are transporting into the equation. The longer the transport takes, the higher the capital cost, because the money invested you have to borrow at interest costs or could have yielded a return if you owned it. 'Then it is not difficult to conclude that cheap parts can travel longer, but expensive parts can be transported faster,' Cass concluded. 'I do not understand the statement of that vice president of our customer that all the parts from the Foetsji factories had to be transported by ship because it was much cheaper than flying. So he does not include the capital cost in his calculation. 'It may well be that no calculation was made,' Tran said, 'because not everyone can do math.'

Cass looked up in surprise. He would be surprised many times during his travels in Europe by how things worked the way they did.

QUICK FLIGHT

Bill was also on a flight from Manila to Born. 'Why are Cass and I allowed to travel fast in an airplane while Sepp spends months on a ship?', he wondered. Bill also knew from his peers that flying was many times more expensive than transport by ship and that they were assembled too late due to production problems. A faster flight would partly compensate for this production delay for their customer. The extra costs for the faster journey were paid by the customer. Presumably, he did not know exactly what he was paying for and the transport bills were simply paid without looking at what the performance was. His clan would also
get paid earlier because the customer had to pay within 60 days after shipping.

Due to the COVID pandemic, there were too few containers in Manila and the truck drivers, who were employed by the municipality, wanted to earn more. They held punctuality actions and carried out their work at a leisurely pace. 'Wouldn't they know at the distribution center in Born that flying in cheap and large parts costs more than sailing and couldn't they make better planning and better agreements with my clan?', Bill wondered.

Bill looked out of the airplane window, thinking, at a fleet of container ships that had gathered like a traffic jam on the Red Sea. Hundreds of container ships were waiting at the Suez Canal. 'Would Sepp be in there?', he wondered. They had said goodbye in Japan and agreed to meet again in Born. That way they could coordinate a few things before they went into Europe, because they had a secret mission.

Because Bill had many sensors, he was able to communicate with his nephews. He contacted Sepp. 'Hey Bill, believe it or not, my ship, the Ever Given, got stuck in the Suez Canal.
The antenna was interfering with navigation and the captain was not on the bridge. How are you?'

Inquisitive as Bill was, he wondered how things would work in his plane if a disaster were to occur. With his sensors, he made a fire break out in one of the two jet engines as a test. The passengers at the window were the first to see it.
The cabin crew heard the passengers shouting but knew not what they were supposed to do. They contacted the captain but there was no response from the cockpit. The flight attendants tried to get into the cockpit with the captain, but the door was locked. Now Bill was very curious. He was equipped with the latest software that made this possible, just like his nephews. A little later, Bill had images via his radioactive sensor of the cockpit. There was absolute silence. The captain was asleep as he always did between take-off and landing, and had turned off the alarm system. He was unaware of the malfunction and the impending disaster. Bill then decided to extinguish the fire in the jet engine with the automatic fire extinguisher. A little later the captain woke up because they had reached their destination and had to land. He turned the story around and told the passengers via the on-board radio that he had extinguished the fire himself by turning on the fire extinguisher.

'Strange,' thought Bill, 'that as a passenger you only get to see half of what happens.' He had to think of a story about their disappeared great-uncle Pacc. He was originally an electrical engineer and invented communication systems.

He had been sent to Europe years ago by their clan as an input module for banknotes sent to work for the same company that Bill and his nephews went to. Pacc had always been very investigative by nature and never took anything for granted from others. It always had to be substantiated and logical. After years of working in money machines in Europe, communication with him had suddenly stopped a year ago. Now that the clan had sent his nephews to Europe to work for the same client, they might also be able to find out where Pacc had stayed. 'Surely such a clever uncle couldn't just disappear? Maybe the American company he worked for had found out that he was actually spying for his Japanese clan. Maybe he was caught doing his spying and they locked him in a Faraday cage so he couldn't communicate with his family anymore', Bill thought.

WHAT CAME BEFORE

The three main characters of this story are Bill, Cass and Sepp. They owe their existence to the versatile knowledge developed by descendants of farmers from the Low Countries who developed a chip machine after their studies at ASML.

Bill, the oldest, who can see well with his magnetic sensors. Bill is curious and investigative. His job is to check banknotes for authenticity. Sepp has fine motor skills, is calm and thoughtful, and has an overview. He sorts the banknotes.

Cass, the youngest, is very strong and not afraid. That is why he guards the banknotes against thieves. The three nephews together with other parts form an ATM (Automatic Teller Machine).

Bill, Cass and Sepp were created in Japan in the early 21st century by the powerful Foetsji clan from Tokyo. The Foetsji clan is the largest of its kind in Japan with over 100,000 employees and makes all sorts of smart devices, but at the core are the programmable chips. To the outside world, the cousins look the same as their brethren, parts in the form of modules that make up a larger machine. However, the Foetsji clan has equipped them with special and secret AI algorithms[2] that allow them to even curious. Equipped with the latest sensors and software, they can communicate with people and devices.

[2] Artificial Intelligence

Their unbounded and unashamed curiosity drives them to continuously explore and discover the meaning of 'The road itself is your destination'.[3]

The three nephews have been chosen by their clan leader to go and work in Europe for a major client and competitor, the American multinational SPES. The Foetsji clan wants to know exactly how SPES works in order to earn even more money with this knowledge. In addition, they know from their grandfather that great-uncle Pacc suddenly disappeared a year ago. He worked for SPES in Europe and was last seen in the European distribution center in Born.

[3] Confucius

THE APPROACH

Bill, Cass and Sepp are created in 2020 and are equipped with extra capabilities to do extraordinary things. The boss of the Foetsji clan wants to expand his clan and knows that he needs knowledge[4] to be able to make the right decisions. In order to gain that knowledge about competitors, the nephews are sent to competitor SPES. Their secret assignment is to investigate the affairs of the American competitor SPES. Before Bill, Cass and Sepp leave Japan for the country of their ancestors, they discuss with the highest boss of their Foetsji clan how they are going to carry out the secret assignment. The boss of the clan explains to them the principle of asking questions by asking why each answer they receive is the same, until you have gotten to the core of the problem youngest of the three. 'Then we can use our sensors and self-learning algorithms to collect data and find out the core reason why something happens the way it does[5]. "That sounds like fun," says Cass, the youngest of the three.'

Sepp had also acquired some knowledge about conducting research in his young life. 'Researching the most important things that matter in detail and writing them down so that you can create a complete picture', Sepp teaches, 'because you will only see it when you understand it'[6] .

In doing so, he referred to a statement by Amsterdam football legend Johan Cruijff, who knew nothing about creating a theoretical research framework, but did understand how to master something.

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[4] Francis Bacon

[5] Root Cause Analyse (RCA)

[6] Johan Cruijff, research method

It was convenient that the three nephews had to go to Europe for work, because they had heard from their grandfather that their great-uncle Pacc had disappeared. They had last heard from him last year.
When she tried to contact him, they received no response.
'He was an oddball, but he always enjoyed hearing about his family,' Bill knew. Bill was a month older than his nephews and had seen the TV series about Inspector Columbo. He had become charmed by his clever method of investigating by giving others space and encouraging them to continue. 'If someone wants to withhold something during our investigation, we can use the Inspector Columbo questioning method,' says Bill, 'and ask the big question as we leave, when the person is no longer on guard.' 'In doing so, we have to consult with each other regularly to exchange our findings from our field investigation.' What our nephews did not yet know is that the Foetsji clan for this consultation developed a method in the previous century, the SECI method[7], who also follows Johan Cruijff's philosophy and states that you can only learn and improve something properly by first doing and practicing it yourself.'

After discussing their plan of action, the nephews each set off in their own way from Japan to the SPES distribution center in Europe, to investigate and search for their missing great-uncle Pacc.

[7] SECI model by Nonaka and Takeuchi

FIRST FINDINGS

Bill and Cass were the first to see each other again after their departure from Japan. A quick flight had brought them to the SPES warehouse in Born. Cass with many of his peers in the plane and Bill with the sleeping captain in the cockpit. A little later Sepp arrived. He told his nephews about the empty bridge of the ship and the subsequent blockade of the Suez Canal.

'There's no cheese to be made of it yet', says Bill. 'It seems like it's just happening the way it's happening without anyone asking why', says Cass. 'The commonality between our initial findings is perhaps that no one really understands how it works and takes responsibility', says Sepp, who draws their conclusion from this as a provisionally summarize. As agreed in Tokyo, all findings noted for later consideration.
As agreed with their clan boss in Tokyo, they would investigate the actual cause of each incident.[5] They will discuss all their adventures together in order to understand the underlying causes and to explain why things are the way they are. Only then will ways be devised to make even more profit for Foetsji.

In order to better understand the way of working at their client SPES, they would translate this into existing concepts, which were already elaborated theories that they could use as a framework. If they knew how SPES worked, they could perhaps also follow the route that their great-uncle had followed.

That way they could find out what happened to him. Did he still exist?

'If we want to follow Pacc's route, we have to put ourselves in his shoes', Sepp said. 'This is an important part of an investigation', Sepp knew 'and is called 'imaging'. 'We pretend to be Pacc with everything hanging on and on it and we imagine the route he took.' In the meantime, Sepp had talked to other parts in the warehouse about the goings-on at the distribution centre in Born. 'For example, he will have gone from the distribution centre in Born to a service engineer who installed him in a machine. He worked there until he broke down and had to be replaced by a working part. Then Pacc has been returned as defective to the distribution center and from there sent to a repairman. After repair, it was sent back to the distribution center and the cycle can start all over again.'

'We now have a general idea of the problem that we are going to investigate', says Cass. He was a real go-getter who did not shy away from anything. 'As we dig further, we will more and more information about how the system actually works. We should never just assume anything, because reality often looks uglier than you are initially presented with.'

Sepp was a bit more thoughtful and also more classically educated and had a nice thought about the name of the company they were going to work for. 'The Roman god of hope was also called SPES, but the ancient Greeks didn't like that so much, there it was Elpis who came out of Pandora's Box as an expectation as the last evil item.' But Sepp was convinced that this adventure would bring them a lot of good and knowledge and was very much looking forward to their adventure in Europe. Sepp also had to think of an industrial leader who had once said that you have to think in concepts and also 'think big'.

This was a good approach according the three nephews because they had to substantiate their analyses because they aspired to a scientific approach to their problem and wanted others to be able to use their thoughts. The latter was in line with the philosophy behind Think Big[8] .

'From now on we're going to do what SPES bought us for, namely, do our work in their money machines', Cass predicted their immediate future. 'In addition, we're going to keep our ears and eyes open as to how SPES works', Bill added, referring to the secret mission of their Foetsji clan leader. 'And of course we have to find out what happened to our great-uncle PACC', said Sepp, who couldn't wait to tell his grandfather what had happened to his brother. In short, there was work to be done, but the three nephews knew what they wanted.

[8] Think Big

TOO LATE

Immediately after arriving at the SPES distribution centre in Born, Cass is forwarded to a customer who had been waiting for him for some time. 'Why are there too few of my kind in stock?' Cass wonders aloud. 'That's not necessary, is it?' Cass soon made a friend at the planning department of SPES. He told him that he had only been asked to come to Born when there was already a shortage of his kind. This was because they had not properly anticipated what would be needed in the coming months. As a result, orders were far behind demand. Their clan made its kind according to Foetsji's own production plan. For reasons still unknown, Cass could not take the ship to the largest inland port in Europe in Born, but had to make an expensive flight.

Cass used his communication chips to find out why he had to fly to Europe in a hurry instead of the cheaper way via a container ship. The scheduling of the parts was done with a multi-million dollar scheduling system. That system was operated by people in a low-wage country, Serbia, who were not really trained to work with supply systems. They were trained as forklift drivers or stewardesses but now worked as a stock planner at multinational SPES because they could earn a good living there. Because they had no knowledge of forecasting methods, they did not look ahead at all to what the future demand for a component would be. In addition, the complicated planning system also turned out to be used for cheap disposable items whose orders could be calculated much faster with a simple Excel sheet, but no one could calculate the safety stock or order quantity.

Their boss didn't know anything about it either and never heard of Camp's formula and hadn't logged into the planning system in years. 'This one is a master at managing expectations,' Cass knew.

Cass also wondered how the chartering of ships worked, because the intention was to make less expensive air travel, but after years of trying, it just didn't get off the ground. The transport manager didn't know exactly how the entire supply chain worked, because each department in the chain did its own thing. 'We just have to work cheaply per department, but we don't know how something flows through the different departments', he said. 'So you work efficiently, but not effectively', Cass translated this finding into business terms.

Cass heard from his friend in the planning department the purchasing department was also moved to a low-wage country, India. These Indians also did not know how ships were freighted. They did know that messages often came in from the carrier that shipments were sometimes not large enough to ship. They had also heard from a new vice president that all shipments from the Foetsji factory in Manila had to be shipped to the DC in Born because this was much cheaper than flying. Cass went to consult with Sepp. 'Then I don't understand why Bill and I flew to Born', Cass wondered. 'I wasn't needed directly by a customer', Sepp knew, 'But that still doesn't make us understand why you sent with the ship.' 'Now that you mention it, Bill and I stood for two months after we were ready to leave for Born wait before we flew in.'
'WHAT, they made you wait at our factory in Manila for TWO months, why would that be now?' Sepp contacted a planner at Foetsji in Tokyo.

He looked up Cass and Bill's itinerary and orders. SPES had planned enough time for their trip by ship and they were ready in time to be shipped to Europe, but in Manila they were so used to having the products delivered by plane that all products were shipped by plane, including the products that SPES had requested to be shipped by ship. 'And how come we didn't notice this?' Sepp asked his contact in Tokyo. 'Because we outsourced the logistics after the factory in Manila to a third party,' was the answer. 'They didn't know any better either.'

In summary, not only the minimum volumes but also how the delivery and freighting system worked were unknown. Often shipments were at a freighter for weeks without anyone from SPES knowing about it. Further investigation showed Cass that the promised delivery time was extended for almost half of the purchases, but no one looked at the reason. The result was that most shipments that had to go by ship from the factories in Asia to Born were sent by a more expensive flight in order to arrive in Born somewhat on time.

Later, Cass would also hear about parts being over-ordered because their older brothers were not being repaired. This cost SPES millions a year, but more about that later.

IN THE WRONG BOX

Upon arrival at the customer's premises, the technician placed Cass in the ATM, but the technician replaced his new lid with the already set lid of the broken cassette because then he did not have to reset the height of the banknote holders.

In the morning, Cass and his friends in the ATM didn't have to work, because most customers were still asleep, so they could discuss what happened when sending them back to the distribution center if they were broken. According to Escr, a smart robot that checks all the notes in the ATM and throws the counterfeit notes out of the ATM, returning parts often goes wrong. When the broken part arrives at the distribution center, the people who have to book this part in for identification only look at the name on the lid, which is Cass's. As a result, the defective part is put in stock under Cass's name. Even if Cass's lid had not been replaced, his broken part would have been booked in under his name, because the name on the packaging box that Cass was sent to the mechanic in is used for booking. There was a system to prevent this[9], but the boss of the mechanics thought they were just repaired and did not have to do any administration. As a result, 1 in 4 broken parts were mislabeled when returned to the distribution center. This affected many millions of dollars worth of parts annually.

Cass heard that a few years ago a distribution center manager had come from America to solve this problem.

[9] Part swap when returning a broken part

The parts had to be identified upon arrival, but the people who had to do this had no experience or examples. However, the instruction from the distribution center manager to identify parts was simple: 'If it looks and sounds like a duck, it is a duck' [10].

Since then Cass has called this method a duck test, but because the people who had to perform the inspection had little information and knowledge, the result of their guesswork was that no correct identifications were made at all. Escr had heard about the inspector Columbo method from Cass. When the manager of the distribution center was no longer thinking of a question, Escr asked while leaving, in passing: 'Hey, what's the deal, why isn't every part checked?' 'It's too difficult to remove heavier parts from their packaging' said the manager, realizing he had been duped. No one at SPES knew this except Escr who told Cass.

The result of the wrong part in the box was that planning parts to the repair shop based on the wrong name they were stored under. Fortunately, the repair shop had the knowledge to identify the part correctly. They then politely asked SPES if they could throw away the part with the wrong name. 'Mind you,' said Escr, 'the repair shop does not always do that. Sometimes older parts are still usable in Africa or Eastern Europe where they have older machines. In that case, these parts are not thrown away but repaired and sold on the black market to competitors of SPES. They use the older parts, because that is legally allowed because they are in older machines, but at SPES they did not do this because the order system went to the newer component.' Cass had to think of his lost great-uncle Pacc. 'Would he have followed this path too?'

[10] James Whitcomb Riley

BONUS SYSTEM

The next day Cass went to SPES to ask about the mechanics of throwing away parts. Imagine if he could track down their great uncle Pacc this way.

In order to investigate the disposal of parts by the repairer from A to Z, Cass followed the Six Sigma method[11]. The problem was first described well and then investigated in detail and everything was written down. A manager from America who had a lot of contact with repair vendors could tell him more about the disposal or scrapping. Because parts could no longer be repaired for the agreed repair price, millions of dollars were scrapped every year. The head of the purchasing department receives an annual bonus if the repairs become cheaper, but the associated scrap was not measured. The reason given was that there is always scrap, which is also true, but better monitoring and control of the scrap could save SPES many millions of dollars. However, the purchasing management was not waiting for this measurement and could now collect a nice bonus every year.

Cass also wondered why he, as the youngest and newest, was sent to the mechanic and not his older counterpart that had broken down and could have been repaired and used. There are a lot of these older counterparts in Born in the distribution center to do nothing.

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[11] Six Sigma

One day there was again a few million dollars available for a so-called restructuring scrap and they were taken out of their packaging and thrown in a dumpster. 'This is going wrong' thought Cass, knowing that 25% of his kind were booked under the wrong name because they were sent back to Born in the wrong box by the mechanic and they were not registered by the people in the distribution center

re-identified. At that moment Cass saw a mechanic friend,
who also knew that his colleagues did not change the name of the part on the box, and that something would go terribly wrong. Together they climbed into the waste container in Born and looked for the actual name of the part. This was simply on the frame of the part. She found that there were tons of parts in the waste container that were still in demand because the higher version was in the box. The mechanic reported the incident to his boss, but he thought that the mechanics did not need to spend time changing the name on the packaging box that was going back to Born with the defective parts. The planning boss did not want anything to do with it either, because space had to be made in the distribution center and his job was to get the millions of dollars that had been set aside out of the inventory figures as quickly as possible. No one at SPES wanted to be blamed for these blunders.

'How on earth can this happen?', Cass wondered. There seems to be no internal control. The boss is too far away from the actual work. Department heads have their own little shop that they optimize.

Cass would pose this question to Sepp and Bill when they got back together. How would they be doing at the moment?

HOW LONG CAN YOU WORK

Shortly after Cass, Sepp was also sent to an engineer to replace an alternative fellow member on the red light district in Amsterdam.
Sepp was an adjuster who had to distinguish the different banknotes in the money machine and place them in the correct compartment.
His fellow man had only worked there for 6 months and then died. He had been very busy, because most tourists soon found out that the ladies of The Red Light District had no slot for a debit card and that they wanted money for their services. Because a cash machine did not issue Meiers but Bankoes, the cash machine often had to be refilled. Our curious Sepp wondered why he had to do the work of his simpler counterpart and why this one had to go back to the repair shop within months. 'This way the engineer can keep working' Sepp thought, 'And the customer doesn't like this, but the repair shop has a lot of work this way and earns more.'
Sepp wondered how long parts in the machine could work before they were broken again and as a first step in his research he went to talk to other parts that were in the machine on the walls. Sepp heard from a fellow kind, who transported banknotes from one module in the machine to another module, that they were often broken within 6 months because by that time another part of their module malfunctioned.

From another Foetsji component in the machine Sepp heard that when Foetsji repaired the broken components themselves they underwent a complete renovation after 5 years so that the component was as good as new and would last for years again.

Because SPES reported good figures every quarter had to show to the shareholders and therefore had to be cheaper in the short term, the repairs were outsourced to a cheap country just outside Europe where they had a weak currency that systematically devalued in order to reduce the national debt measured in euros. There a break-fix repair cost only half of a complete renovation of Foetsji. The manager who agreed on the lower price did not take into account the lifespan of the repair and the total costs[12], because he received a bonus for lowering the repair price

sec. The time interval between two repairs was measured by the repairer as an indicator for the operating time at the customer, but that is incorrect. Because of these too long measurement moments, the following were also included: the time that the parts were in transit between the repair shop and the machine, the time that the repaired part was at the mechanic before it was put in the machine, the transport time of the broken part to Born and the time that the broken part was in Born before it was repaired. All this time was included in the operating time at the customer, and that is incorrect.

'How can I determine how long this whole process will take?', Sepp wondered out loud. Fortunately, Tran, a small electrical component, was in the machine that knew Ohm's law and was related to the Little[13] family. 'You can think of the voltage as the capacity, the current as the amount that flows through it and the resistance as the inventory', Tran said.

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[12] TCO

[13] Little's Law

Mathematically, you can then calculate the lead time or storage time in a warehouse in days according to Ohm's law by dividing the inventory by the flow through the warehouse. Because Sepp knew how many parts were in transit and in stock and how many parts were shipped per day, he could calculate using Tran's formula that this was often three months. Many people thought that the time between two repairs indicated how long a part would last at the customer, but that was wrong and in reality 3 months shorter. 'But it is much worse', Sepp heard from Tran. 'Many parts do not come directly from the repair shop, but have already been repaired on site by the mechanic or have been to countries outside Europe in between and have also been repaired there.' These possible routes are not included in the way of thinking when measuring the interval between two repairs at the repair shop for Europe. With Tran's insight, Sepp was able to create a Markov model[14] with a graph that showed that the defined interval between two repairs was often months longer than the part had actually functioned in the machine. It was also not difficult to see that successive repairs lasted less and less because another small part broke down more and more quickly.
The information that the repairman needed for a complete renovation was not provided by Foetsji because this is seen as intellectual property. As a result, defective modules had to be repaired earlier and earlier, and for that new parts are needed that are purchased from Foetsji, and that was good for their turnover. Sepp would share the information about the lifespan of a repair with his boss in Tokyo. The bonus system as a driver of the short lead time by means of a low repair price came to light here as an evil genius.

[14] Markov model

PERVERTED BONUS SYSTEM

It was morning and not yet busy on the red light district. Sepp was chatting with a friend in the vending machine. During this socializing Sepp heard that over the years it was becoming cheaper and therefore
easier to repair. The repair shop received less and less money for the repair. As a result, it was increasingly impossible to carry out the repair for the agreed price. The part was then thrown away, at least on paper. They called this scrapping. Would that be the fate of their disappeared great-uncle? However, the amount of scrap was not taken into account, because money had already been reserved for that. The person who forced the lower repair price received a bonus for the so-called savings. However, the total costs over the entire lifespan of a part were not taken into account. The result was that in the hustle and bustle of the day, repairs were made cheaper and cheaper and if the part could no longer be repaired for the agreed price, they were thrown away by the repair shop according to the agreement with SPES. Sepp had to think of an air cushion that he had often played on with his friends. This was also a closed system, and if someone was sitting in a hole and someone else made another hole by jumping on the air cushion, the person who was sitting in that hole would fly into the air. 'Hey', Sepp thought out loud, “I see an analogy with communicating vessels.

Repairing is not only an economic system, but also a closed system[15]. As costs in this system we have not only the repair price, but also the cost of the discarded parts, the quality of the repair, and the profit of the repair shop.

[15] Communicating vessels

So if you change a cost type to a closed one, you have to keep a close eye on the other cost types, because they will also change because they are connected to each other.'

Cass heard another example of how the perverse bonus system was abused. The managers of the distribution center were supposed to receive a nice bonus for a certain service level. One day, the planning manager was suddenly pressured by the director to achieve this target. He came up with the idea that this could be done by having a very high service level for cheap parts and a very low service level for the more important and expensive parts. This allowed the target to be achieved with the available budget, and the director was able to collect a hefty bonus. Fortunately, this target was adjusted the following year, but operational objectives are still the driving force that is pursued at all costs, especially at the top of SPES.

Another example of misguided objectives was the abolition of a system of cooperation with a repairman that had existed for 15 years.
The parts for this model were not sent via Born but directly from the mechanic to the repairer in Slovakia and after they were repaired directly back to the mechanic instead of via the distribution center. In order to keep track of the parts, the order and payment flows did go via the ERP system of the distribution center in Born. The repairer had become a partner and thanks to the short-circuiting of the distribution center, the mechanics could always be supplied with parts with little stock in the chain. A slightly higher price was paid for this than for the repair itself, but the total costs were cheaper because part of the stock, transport and handling was saved.
Until a manager found another way to earn a bonus and the vendor managed inventory system was abolished.
Because no additional stock had been built up for the longer lead time that the part needed to go via Born, the mechanics did not receive their parts on time and the customers had to wait.

In the end, extra stock had to be purchased, and because the parts that can be repaired do not disappear from a closed system. To make matters worse, more stock became redundant and had to be thrown away because they were replaced by a higher version by the system. No one had yet learned anything about family management, but also this could be worse.

'Too bad that every boss was rewarded for a different cost category and nobody had a total overview. The point with the lowest total cost does not necessarily have to yield the most', said Escr, Sepp's friend on the red light district, who sometimes overheard conversations from his customers. This remark made Sepp think that the cost system also had a revenue side. The revenue side was the satisfaction of the tourists and the owner of the machine. However, the value for the customer was not taken into account at all, which meant that nobody had insight into the optimal cost point for SPES.

So that was not at the lowest costs, but at the point where the difference between the revenues and the costs is the highest. Sepp could only discuss this with his nephews because the people in the office just did their work within their defined function. For the total cost picture was nobody responsible. Escr had also heard from a customer on the red light district that the lowest costs did not yield the most. Escr did estimate that this customer who excelled because of her beautiful appearance knew what she was talking about. According to her, the most was earned with a slightly higher stake and ditto costs, which yielded a longer time between two treatments. There the yield was also correspondingly higher, and the profit maximum. This would therefore also apply to the repair of parts.

The result of the simple and wrong bonus on cheap repair and the associated short time between two repairs at the same repair shop caused the mechanics to replace the same type of part in a machine several times a year. The bosses who pocketed the bonuses and their bosses didn't care about this. They were judged on a low repair price and thought that was fine, even though they knew that the total cost of the repair per unit of time and including the costs of the mechanic and the bad publicity with the customer was higher with a lower repair price. The bonus did the wrong measuring but this target mentality was a nice pocket money for the mostly English-speaking bosses.

Cass discovered that when calculating the percentage of repairs that had to be repaired within 1 year, the comparison was not made with the total number of repairs but with the total number of repairs offered including the 15% scrap, which meant that the denominator of the fraction was larger and it seemed that fewer products broke again within 1 year. 'Why wasn't this adjusted then?' Cass asked the assistant of the quality manager. 'Assignment from the boss' was the answer from him. It was therefore common knowledge within this department that the measurement was actually too low and that the boss and therefore also his employees could receive a nice bonus year after year.
to iron on.

'Why are bonuses so important then?', Sepp wondered. After some inquiries within SPES, it turned out that many American employees children who went to college or university. The average annual tuition in America was $20,000, but at the top universities you spent $60,000 for a year of study. The annual bonus for the SPES managers was in fact used entirely for the education of their children. The underlying idea is that the education of the children was more important than the measuring the right thing for their company. As a result, optimizations in business operations were neglected.

'This seems to be driven by the nature of people' Sepp thought, and reminded him of Geert Hofstede's 6 cultural dimensions[21] that differ from country to country. After some further study he learned that the Rhine model applied in the Netherlands, and the relationship between employers and employees was called a 'polder model'. Further study of social accounting taught Sepp that especially in Scandinavian countries people pay close attention to each other and have extensive secondary employment conditions. Although SPES had an ESG policy for Environment, Social and Governance, no one from HR could give examples of arrangements for employees as they apply in Northern Europe in particular.

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When asked further, an American who was in the Mensa and was familiar with the concept of social accounting said: Sepp, you know, we work for the dollar.'

This culture explained the sacred bonus system. In Sepp's family and clan, this would never work.

FAMILY TROUBLE

Cass was reminded of his missing great-uncle Pacc. The last sign of life was that he had been sent to Turkey for repairs.
Because Pacc was in the wrong packaging of its successor, it would be recognized upon arrival as an older version that was redundant for the European market. Cass had heard that the version that great-uncle Pacc van was still being used in Russia. Cass also knew that the repair shop in Turkey, ambivalent as the Turks were, had a branch in Moscow. The geographical location on the border between Eastern and Western Europe and the commercial spirit of the Turks made Cass think. Had their great-uncle not been thrown away because he was too old, but were transported to Russia?

Cass heard of a cash cassette system in America called BNR which, according to the British OEM, had been replaced by a higher version. More than a thousand older parts of $2,000 each were supposed to be thrown away, but the technical department of SPES saw that the 2 year older part could still be used 1 on 1 for the higher version. However, the scrap process at the repairer had already been started and because there was no reporting of the stock at the repairer, millions were wrongly thrown away for this part alone. To make matters worse, the older version also turned out to be better than the newer version, because it lasted twice as long. No one at SPES knew this, except the supplier, who of course now earned much more.

It will come as no surprise to anyone by now, but the nephews would encounter even more things on their search for their great-uncle Pacc. Would this one have suffered a similar fate and been scrapped?

IGNORANT

One Sunday morning Sepp was talking to Enpa. Enpa was an improved version of Pacc and therefore distantly related to their uncle. Enpa had been to the repair shop in Turkey before. 'I know Pacc, because we have been to Turkey together.' Sepp now knew that Pacc was repaired in Turkey every year and would share this information with Cass and Bill. 'I had a long talk with Pacc because we had to wait months before we could be repaired. A small feather from your clan was not available' said Enpra.

Sepp could not imagine that his Foetsji clan could not deliver a simple feather, so he, curious and without shame that he did not know something, went to investigate. Without realizing it, his 'ignoramus' was an important condition for his investigative nature. His friend in planning looked up the feather in the planning system and discovered that the orders from another repairer were not included in the planning system, which meant that the spring was always out of stock at the distribution center. This resulted in escalations to the Foetsjie clan, who always put the ferry on the plane instead of the cheaper ship.

Another family member was stuck on the dock in Manila for months. The confirmation of the booking on the ship was accidentally not sent to purchasing. There was no system so the communication between the charterer and SPES was solely by email.

According to the purchasing department responsible, it was a one-off blunder, but Sepp investigated and discovered that delays often occurred because there was too little volume to ship and no system to manage the shipments.

MILLSTONE

Bill was sent to Veldhoven to check banknotes for authenticity. The cash machine he was in was mainly used for depositing cash by small independent entrepreneurs. These small independent entrepreneurs worked as ZZP-ers in construction during the day, mainly in the Randstad, where most people worked in an office and could not hammer in a nail themselves. Because these Brabanders lived in the border region with Belgium, they knew from their ancestors how to earn money with side activities. They used to smuggle sugar, butter and cloth from Belgium, later tobacco, and when this was no longer profitable, they distilled alcohol illegally. Now they secretly make pills that kept you awake so that you could keep dancing for a long time. A lot of money was earned with their XTC and later meth laboratory. This cash sometimes contained counterfeit banknotes and that was deposited in the cash machines and Bill had to validate that for authenticity.

During his work, Bill heard from the other departments that the top boss of SPES had a completely different method of making a lot of money. Every year, the top man received a lot of shares of the company as a bonus for achieving the goals. After a few years, the boss wanted to stop working, but the shares had only become less valuable during his tenure. A Jewish friend, who worked at the loan shark company 'Zwarte Steen', was asked to come up with a plan to increase the share value. They called this 'creating value' to the other shareholders and they were happy to hear it. The plan was to use the borrowed money to buy a company that was good at developing software, something SPES itself could not do, but where a lot of money could be made in the new economy.

At the same time, a budgeting system would be set up to control costs. The new budgeting system would no longer blindly take the amount from the previous year, but first it was examined which activities were necessary at all. This new budgeting system, Zero Based Budgeting (ZBB[16]), is actually a way to reduce costs and that is something shareholders like, because they want to make a profit with their shares. The loan shark company 'Zwarte Steen' invested almost 1 billion dollars in SPES to increase its equity. When other shareholders heard that an investor had invested so much money in SPES to do more in software, the share rose by half in 1 year. The big boss sold the shares after this increase which he had received every year as a bonus and was going to retire on.
At the same time, 'Zwarte Steen' also sold half of its shares against all agreements and the other half was converted into preference shares on which dividends had to be paid every year. From then on, SPES had to spend hundreds of millions on this dividend, a real millstone around its neck. This share deal could be called fraud. In the years that followed, it turned out that the acquired software companies did not make a profit. When the corona crisis broke out, SPES employees had to give up salaries in order to be able to pay the annual dividend to 'Zwarte Steen'.

Sepp found Bill's story about this stock transaction interesting. A better name would be 'Millstone' according to Sepp, but in fact the company changed its name to 'Black Rock'. Why is the money lying on the street?

This reminded Sepp of the past when he helped out an uncle as a little boy.

[16] Zero Based Budgetting

PROFESSIONALS VERSUS AMATEURS

When Sepp was still small, he sometimes helped out on an uncle's land. After work, they would drink coffee on the farm and play cards. 'The money is on the street', his great-uncle who was a farmer would say. 'Boy, you will learn until your fingers are all the same length', was said when someone asked how much longer he had to go to school. 'By applying what you have learned in practice, you can create value, but you have to select the right ones from the many opportunities', he said.

From his long-lost great-uncle Pacc, who was an engineer, Sepp knew that knowledge only gets a boost at university, where competent and passionate professionals teach. But his great-uncle Pacc had also said: 'But put your respect for people with a passion into perspective, they also have to be competent and create value.

Sepp thought that the three dimensions mentioned: competence, passion and value creation, had to be in balance for an optimal result. A competent and passionate person who does not add value is a hobby. On the other hand, a passionate person who creates value but is not competent is an amateur. If you create value and are competent but not passionate, then you have a so-called nine-to-five job.

Expanding on this idea, Sepp came up with the idea that you should not 'try not to lose' but that you should always 'play to win'. This is especially true in mature companies, not in young companies, where you have to avoid fatal mistakes. Johan Cruijff is said to have said: 'The best defense is to attack.'

FAMILY RELATIONSHIPS

The family relationships can be complex. For example, Bill, Cass and Sepp technically come from different families. Each family has its own task. Within a family, you have successive generations where the most recent generation or version is slightly modified compared to its older version, but the functionality is often the same. There are few people who have insight into the family tree of the Foetsji clan.

Bill is the latest and greatest of its kind for validating banknotes and can calibrate itself and sends the banknotes straight in. Its predecessor could not send the banknotes in so straight and its predecessor could not calibrate itself. The functionality of components in a family is basically the same, but the latest version can often do just that little bit more. This means that the components are not moved up in the hierarchy are interchangeable, only downwards.

Sometimes parts within the family are one-to-one interchangeable, and sometimes the repair shop can upgrade an older version to the newer version with a small intervention. In addition, it is not mandatory to replace a broken part with the latest version. However, Bill saw that this does happen in practice at SPES because the newer version is often better and it is easier for the mechanic to only have the very latest version with him and it is difficult to have multiple versions and have to figure out which version should go in a certain machine.

So Cass, while he was sitting in the ATM on the Wallen one morning, got talking to a cassette from a previous version. 'I have two banknote guides in my car that are a bit too thin which sometimes causes banknotes to get stuck between the guide and the cassette itself, and then pile up and cause a malfunction.' Cass heard from the head office in Tokyo that a Kaizen event[17] had been held to implement improvements. Out of it came 26 spare parts for 15 modules. The renewed parts that Cass has are 3x thicker banknote guides that have been made available to SPES free of charge, as they have almost 100,000 of the older version in operation. Foetsji had promised to sell the higher version of the cassette, of which Cass is one, only when all older cassettes are upgraded with the 3x thicker guides.

When the older family members broke down, they were returned to the central distribution center as usual to be repaired. The planner had no knowledge of parts and did not know that some parts would be mandatory upgraded with the free ticket guides from Foetsji. Because the older cassettes were not repaired and newer ones like Cass were used, the demand also went to the very latest generation. Automatically, the next time the very latest version was requested, and not the older generation that could also do the job.

Because the SPES system always prescribed the newer version with stock, the hundreds of older, defective Cass counterparts remained in the central distribution center in Born, to be eventually thrown away.

[17] Kaizen Event

When our three nephews were together again, Cass told them about this problem.
'Doesn't anyone at SPES have knowledge of all the facets of the entire supply chain from supplier to user for a particular part?' Bill asked.
'They are lucky that the often lower version is marketed under the name of the higher version. 'returned' says Sepp, referring to the return to Born under the wrong name.
'How would our great uncle Pacc have been returned?' asked Cass, 'also under the wrong name?' 'He definitely went to the repair shop in Turkey, and he was a lower version that could not be upgraded to the higher version', Sepp concluded.

'I will ask my buddy in the planning department what should happen to Pacc when they see who he really is in Turkey', Cass said. His planning buddy had an answer ready: 'He is on the list to be thrown out because they can't get the information from Foetsji in Turkey to upgrade him to the higher version. It would be a sad thing for such a good man to end up in a dumpster', Bill said, 'But we don't know for sure at this point.'

They did know that their great-uncle Pacc could still work if the mechanic had given him the right name, or if the duck test in Born had gone well and the family relationships had been managed well so that the demand had not gone to the higher version.

[18] Kepner and Tregoe

'Hey Bill, have you heard about those parts that had to go to a repair shop in Poland but didn't arrive?' 'That's right', says Cass, 'at a certain point more and more card readers didn't arrive at a repair shop in Poland. On departure from Born and arrival in Poland, photos were secretly taken of the pallets and compared with each other, without the people who transported the goods knowing. From this research using the problem-solving method of Kepner and Tregoe[18] Cass learned that certain parts were taken off the pallets by a local carrier on the last leg of the transport and sold on the black market to a company in Russia.' 'But then there must also be a repair shop in Russia that can make broken parts', Bill pointed out.

They let it question for a while but would return to it later. Tijl Uilenspiegel would say, 'Where there's smoke, there's fire'.

SHOP DAUGHTERS

Sepp had learned that only a few people at SPES knew how the relationship between the part used and the part to be delivered was done by the planning system. He understood that there was hardly any knowledge transfer was between the employees and managers from other departments had other interests and were not interested or found it difficult to understand. The people who made the repair orders far away in a cheap country and only knew that they had to press a button to repair parts or order new ones. When hiring staff, their knowledge or interests were not taken into account, these people only wanted a job with a large company to build up a livelihood for their family. Bill knew that the orders were not checked and that each planner had his own budget. There was no consultation within the department and the responsible manager was far away in another country. Knowledge was not consciously built up[7] and there was no overview. The work was functionally organised for the sake of efficiency and everyone only did their own part in the chain.

Cass thought it was crazy. He had to think of De Sitter[19] who, as a hip professor with his surfboard on his VW Golf, came to give lectures to his grandfather. He was the counterpart of Constant Botter who adhered to the scientific management theory of Frederick Taylor. For the sake of the well-being of the working individual, De Sitter preferred complex tasks in a simple organization than simple tasks in a complex organization.

[19] De Sitter: sociotechnics

The planner who had to make sure that the cassettes like Cass were always in stock in the American distribution center was different from the one for the European distribution center. None of these planners had in-depth knowledge of the parts that had to be planned, and the family relationships were not managed. Cass wondered what the result was and was reminded of a saying of an uncle who used to say: 'A flying crow always finds something', and he did some research. He found that if the lower version was temporarily unavailable and a higher version was delivered, the new version was always requested and the older version was no longer requested. He was reminded of 'Who Moved My Cheese'[20]. The result was that thousands of defective parts of a lower generation were not used. 'Do you know what they call this stock?' Cass asked Sepp. 'Shop daughters' said Cass, 'because they only stay behind in their parents' shop.' 'I see a connection' says Sepp, and mentioned an earlier metaphor. 'Here too is there is no one on the bridge and the first mate is also in the shisha bar. The planners were not interested in the detailed family ties.' Cass knew from the distribution centre in Born that sometimes there were so many older conspecifics that were no longer used that they took up an entire aisle of 50 metres long and 6 metres high. In the corridors this was named the 'wall of shame'.

Sepp was new and would last for years, but he would not be replaced by his lower-end counterpart. New parts for the higher version would be bought from their Foetsji clan in Japan. 'We have to pass this on to HQ, because this allows us to sell more higher versions to SPES than they actually need,' Sepp said.

[20] Spencer Johnson

OUTSOURCING ACTIVITIES

Sepp and Cass were still talking about what they had picked up.
Cass had heard from a fellow member of a part from another clan that had been thrown away in America for millions. The planning had been outsourced to the repairer, as with many parts, and the stock was not visible to SPES. 'That's what happens when you don't manage the family relationships', Sepp knew, 'As a result, lower-quality members are thrown away and newer versions are bought.' 'So other suppliers also know that this is not under control', concluded Cass.

Sepp knew that the background of this virtual inventory system was to be able to deliver faster with less inventory, while also reducing the chance of store dead stock. Years ago, a system called 'smart exchange' was introduced. In this system, the inventory is no longer with SPES but with the repairer. In America, this virtual inventory model has only been introduced halfway, because only the defects go more or less directly from the customer to the repairer, the repaired parts were stored again in the central distribution center in America. However, the planner had no insight into the inventory movements, because the planning of these was done by the repairer and the data about the inventory movements came to SPES with a delay and via traffic jams. 'We need to investigate this further', said Sepp, 'because a lot of money is involved here.'

On a drizzly day Sepp was sitting in an ATM chatting with the department that issues the banknotes, a presenter. 'How come you are always quickly replaced by the same generation, and not like us often not available or replaced by a new higher version?' Sepp asked casually. Coincidentally, this presenter knew about the underlying virtual inventory system. 'This is because we are not in the distribution center come to Born and are planned by SPES like you. If we break down, we are sent from the ATM at the customer directly to the repairer in Slovakia.' This virtual stock model was set up years ago in Europe with the repairer who also saw that it was a win-win situation that was cheaper for both parties in the chain. The separator also knew that very skilled people in Slovakia carried out the repair because they had received the right training. Sepp could confirm that in this region the people were well educated, because Pacc had once done an internship at the Faculty of Electrical Engineering and Communication of the Technical University in Brno.

With the skilled people of the repairer in Slovakia, the virtual stock model was implemented in its entirety. The defects went directly from the mechanic to the repairer and after repair directly back to the mechanic. The repairer could predict well what the demand was because there was no delay in the form of intermediate storage in a distribution center. The goods movements are exchanged by means of EDI messages between the central computer system in Born and the ERP system of the repairer Slovakia.

In Slovakia, however, the presenter had also heard that the virtual stock model would be abolished because a manager of SPES only wanted to see lower repair prices because he was bonussed on this. He didn't care about the total cost because he wasn't being held accountable for that, but more about that in the next piece.

TOTAL COSTS

Although Cass did not have many moving parts, after many money issues there were still several parts that showed signs of wear.
Because the repair costs were set lower and lower because of the bonus for the manager, the repairman only replaced the parts that were really broken. This break-fix repair did not last long, so the repaired cassette had to be replaced again quickly. When comparing the total cost of repair (TCO) per unit of time and including the costs of transport and the mechanic, it turned out that the repair was much more expensive than the total cost of a new cassette. This was mainly because a repaired cassette only lasted 1 year and a new one lasted 5 years.

When deciding between repairing or buying new, this was not considered and Cass wondered why not.

During a quiet moment, Cass thought that in addition to the cost types[12], there are also various cost types for repairs . For example, there were variable and fixed costs. A characteristic of fixed costs was that they are depreciated over their useful life and are typically used for long-term decisions. Variable costs are typically short-term. Because shareholders do not look beyond the next quarterly figures, many decisions are based on the short term only, which is why variable costs are the main focus is looked at and not the total costs. As a result, parts were repaired that could actually be better replaced with new ones.

THE PROBLEM SUMMARIZED

A year after their arrival in Europe, our three nephews were reunited because they broke down at the same time and were sent back to the distribution center in Born. They were close to each other in the distribution center and enjoyed seeing each other again and being able to spar with each other about their findings.

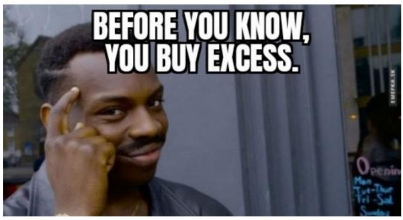
Sepp took the lead. 'We have shared our separate adventures with each other in between, but what do you think are the biggest common denominators of the failures we have seen?' he asked his nephews. They reviewed their adventures during their trip to Europe and their first work contacts in the machine and the stories of their peers. Cass suggested that the Internal Control was insufficient. 'There is no countervailing power in the 'like-knows-like' culture. Just like in our Japanese culture, the American and Arab culture is very masculine and practical, but the American culture, unlike our Japanese culture, is short-term and individualistic[21]. As a result there is little communication and few ideas are communicated bottom-up. Due to the lack of communication, there is only knowledge of one's own part and no possibility to gain tacit knowledge and to convert it to explicit knowledge with the SECI model[7]. No research is done with RCA5 into the actual cause of problems.' Bill complemented that with 'As a common denominator he saw few internal Checks and Balances.'

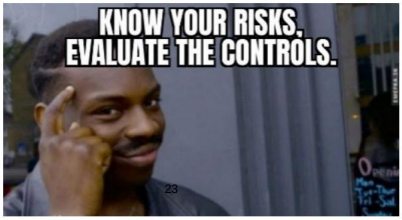
[21] G. Hofstede

'That's right', says Sepp, 'the bridge was empty and the boss didn't take responsibility. There was no one to say 'no' or 'stop'. The organization is large and complex. Every function has to be efficient, but because of that there is hardly any consultation with the next step in the process, which means that effectiveness is lacking.' Cass had also noticed something, namely that the systems used were already 20 years old. 'There are no new types of databases that can process all the collected information with AI. I have seen a 20-year-old Data Warehouse system that is fed by relational databases of the same age. As a result, it is very difficult to do research into how the processes work and the best decisions are not made.' He knew how they worked with Machine Learning on a Data Lake at Foetsji and sold this to customers as a product. After all, our nephews were equipped with AI skills themselves. These transparent and honest human-oriented AI solutions were completely lacking at SPES.

'You know what I've noticed too', says Bill. Not only is there little communication within the various departments, but there is also
There was also hardly any discussion about managing operational matters. The business operations are audited internally and externally, but the intermediate level, the so-called second Level of Defense, with Risk Management and Compliance, which normally results in advice for the department, I don't see happening anywhere. 'SPES appointed a Chief Risk Officer last year', Sepp knew, 'and an Enterprise Risk Management analysis showed that the largest cost item is 25 M$ for Excess and Obsolescence (E&O).' 'So what was actually done with this finding?', Cass wondered. 'I have seen an internal analysis in the form of a Root Cause Analysis of the largest factors of E&O at the distribution center', says Sepp, 'and these appear to be Final Buys for parts that have become redundant due to changing technology.' The three nephews looked around and saw pallets full of parts that had already been were on the shelves for a while, because there was a layer of dust on them.

Family management and installed base information were hardly not used in inventory management. Controlling the flow of goods requires in-depth knowledge of the business and the management systems before sound advice can be given to operational management. 'No one here knows the components of Internal Control and the underlying principles', said Sepp, who did know about internal controls and principles.[22] Cass had seen a few memes in a report about a dashboard of a friend who works in the finance department.





[23]

Unfortunately, according to management, there was no time to read this report with a proposal for a second Line of Defence (2nd LoD) as an advisor to the operational management (the 1st LoD). 'Yet there was time, because you can also do that in the weekend when you are in your beach house', Sepp noted subtly.

[22] COSO

[23] Yuval Noah Harari

According to Cass, you can also read Sapiens[23]: 'It explains how information exchange works and in which cultures ignoramus, the source of Scientific Management, does not work.'

It was the same director who said years ago: 'If the external auditor is satisfied, then I am too.' So it seemed more like there was no interest at all in how something functions. Bill was now getting into his stride: 'My people are destroyed for lack of knowledge', he quoted the prophet Hosea. 'I have encountered little knowledge of concepts during our espionage assignment in the company. In addition to interest, there is also a lack of knowledge.'

The nephews had not encountered any responsible persons during their adventures who could stimulate a system of interaction and goal-oriented work. Cass summed it up as follows: 'I do not see an overarching point of contact at the distribution center in Born who can stimulate processes and who can submit general matters higher up in the organization to SPES.'

His nephews wholeheartedly agreed with him.

CONTROLLING POWER

During their trip to Europe, the nephews often came across the image of the empty bridge. They had also noticed that there was no controlling power. After all, a manager also consists of 80% water and needs an advisor as a countervailing power to keep him sharp. A bank has a Risk & Compliance department as a countervailing power. At SPES, this role should be fulfilled by the internal audit department, but the nephews had noticed that it often has no substantive knowledge of the subject. At the top of a company, the interests are large in the form of stock options and bonus systems. The external consultancy firms see what needs to be done, but they cannot get past the interests that prevail in the organization. Bill had heard a director say to an improvement suggestion: 'If the auditor is satisfied, then I am too.' To read a report with a proposal for a second Line of Defence (2nd LoD) as an advisor to the operational management (the 1st LoD) was, according to the management, no time. According to Bill, this reaction can also be seen as disinterest, because this manager did have time to go to his beach house to go deep sea fishing. 'A typical case of Peter's principle [24] and that is a shame for the people from those departments who do want to', said Bill. Setting up internal controls and advice must therefore come from the top of the organization. Bill heard that a Risk Committee had been set up at SPES in 2020. A year later, Bill read in the annual report that this was not based on advice from the external auditor, but was driven by the global COVID pandemic.

[24] Peter's principle

An 'Office of Risk Management' was set up with the aim of Enterprise Risk Management to work out. After two years it is mainly about ESG (Enterprice, Social and Governance) with mainly diversity and inclusion and mainly measuring how many women are employed. 'Too bad' says Bill, 'a missed opportunity to set up a second Line of Defense.' At the end of the corona pandemic, the head of Internal Audit gave a presentation in which the 3 lines model of the Internal Auditors was also mentioned, including the 3rd LoD of the Institute of Internal Audit department. Bill wondered how this is possible without any knowledge of the matter. Because his friend in the finance department had not received a response to his white paper, Bill had to conclude that something essential was missing.

'Perhaps that is because the organization at SPES is already complex. It is completely functionally organized', says Cass. 'That brings me to sociotechnics[16], says Sepp. 'Instead of a complex organization with simple tasks, you can organize the work more simply, but the execution of the work is then done with more complex tasks. 'Do you know what is a condition for this?' asked Sepp.
'That the people in the organization must have a lot of knowledge to perform the complex tasks. But those people are scarce and to keep them for an organization a Management Development system is needed that is used by a Human Resources department', said Sepp. There was no MD system, because the personnel department was no match for management, which used the much simpler blue-eye system. Bill had heard that even the Human Resources department of SPES was organized so globally that it was not a working system.

Vacancies were posted on global sites and in a foreign language. If there was a response, it was from migrant workers who did not speak Dutch, while this was the main language at the distribution center. Our nephews were therefore not surprised that when thousands of people were laid off at a car factory 1 km away from the distribution center, they could not find a suitable candidate at SPES. There was no one from HR who was actively involved with this, resulting in under-staffing and overworked people who were no longer productive were.

After the corona pandemic, SPES employees were allowed to return to their offices. Because most people were working from home more pleasant was often only 'one and a half men and a horse's head' in the office. When Bill happened to speak to someone from the office once, he noticed a false satisfaction about working from home due to corona. Working from home was seen as a right by employers, and the company had noticed that the offices remained empty after the corona pandemic. The company management in America came up with the Collaborative Work model to only work from home on Mondays and Fridays, but no one stuck to it and it was not enforced either. Some miss the interaction with colleagues, which results in reduced creativity and innovation. 'This reminds me of the SECI model[7] of our clan', says Sepp.

'I see intellectual poverty here due to a lack of dialogue and networking', Bill observed sharply.

SYSTEM IN PROBLEM

In their search for their uncle Pacc, our nephews have come across important issues. 'What if something magical happens and an overarching point of contact is established at the DC of SPES in Born', Cass asked Bill and Sepp, 'How can the important issues we have encountered be made visible?' Sepp was always sharp on these kinds of strategic questions and thought that it was best to build a process to prevent the current failure. He called this a superpower. At the same time, he realised that the current systems at SPES were 20 years old and not flexible. Bill, Cass and Sepp were equipped with AI themselves and their machine learning skills had not been encountered anywhere at SPES. The large amount of data was fragmented across old relational databases that were only available to users via manual interfaces. The smarter users of this data could only establish relationships between cause and effect with great difficulty.

Research was therefore hardly done, so it was also understood hardly what was happening. Cass then asked his friends at SPES why no investigation was done into the actual course of events. Self-interest and the pursuit of the annual bonus surfaced as improper arguments. 'What are your annual objectives as derived from the joint objectives?' Cass asked several times. No answer could ever be given.

It seemed as if the antagonistic goals of the leaders were seen as a common enemy and served as invisible internal cohesion for the unconscious ingroups that had formed within SPES. Bill and Sepp recognized their findings in this analysis and felt it was time to contact Tokyo.

END OF MISSION

'What can we conclude about our uncle PACC?', Bill took the lead. 'The last we know is that he was sent to the repair shop in Turkey under the wrong name, and that he's on the list to be thrown away the moment they see him there', Cass knew. 'But he can still function perfectly well in the older machines that are still in use in Russia,' Sepp said, 'so we can assume that on paper he was thrown away for SPES, but in reality he was repaired and sold to a third party in Russia.' 'His communication chip was erased to prevent him from contacting his family, so it looks like he was deported to a gulag,' Bill thought, 'and I don't think they executed him, he's too smart for that.'

After their discussion, the head of the Foetsji clan contacted the nephews. He decided that they had done enough research and arranged for them to return to Tokyo. There, their adventures were reviewed with the head of the clan and a few advisors. By working together as a team, the head of the clan expanded his brain. He not only learned from the nephews' espionage activities, but also had espionage activities going on at other companies. With the knowledge he gained, he could make Foetsji even smarter and more powerful. It was clear to the clan boss that the nephews had found their Funktionslust and they were offered an internal Management Development program to further develop themselves in Business Intelligence. They would go on more adventures and learn much more.

EPILOGUE

During the corona pandemic, the stock market value of the Foetsji clan doubled. It is not known what influence the research of the three nephews at competitor SPES had on this.

In order to create more shareholder value, SPES was split up in 2023 against the advice of external experts. During the split, there was no information down- and upwards because of bonuses for the directors of up to 50 times their annual salary. The split resulted in the implementation of cloud-based systems that were only implemented after the split and were still not working properly months after the split. Because processes and reporting had not been adjusted, the two split-off companies sailed blindly and rudderless for a year. By divesting factories and downsizing departments, the ability to grow autonomously decreased even further, and with it the stock market value. The company went to hell with the inflexible systems in the cloud. The dehumanization of the organization was further driven by the failure to fill vacancies. A few years later, Foetsji took over SPES. Thanks to the reporting of Bill, Cass and Sepp, structural improvements could be implemented.

10 years after their research in Europe, the nephews received a registered letter from a notary Boris Utkin from St. Petersburg.
Their great-uncle Pacc had been to him years ago and had deposited a legacy for his nephews consisting of securities. According to Boris, this legacy could best be accepted under benefit of inventory, because he knew nothing concrete about Pacc's life. The most likely scenario seemed to him that Pacc's ICs, who himself was actually a conscientious objector in the 1980s, were used to pimp up the old T-62 tanks for Putin's war industry.

REFERENCES IN FOOTNOTES

1. Just-In-Time inventory model is delivering exactly what the customer or chain partner, a logistics method for inventory control belonging to lean manufacturing that originated in Japan.

2. Artificial Intelligence (AI) consists of algorithms, but these are by definition not curious.

3. Confucius was a Chinese philosopher from 551 BC to 479 BC 'He who knows his destination, will find the way.' loosely translated: 'It's not the destination that counts, but the journey there.'

4. 'Scientia potentia est' is a statement by Francis Bacon. The sentence means 'knowledge is power' in Dutch. This states that knowledge and/or education is one of the most important things in life.

5. Root Cause Analysis by using the 5-why method to get to the core of the cause.

6. The core of a research model as a guideline for research is a theoretical framework or conceptual model (see the flash lectures by Piet Verschuren and Hans Doorewaard (RUG)), because 'Only theories make an observation possible' (Popper), aka 'Man sieht nur, was man weiß' (poet Johann Wolfgang von Goethe), or as football legend Johan Cruijff said: 'You only see it when you understand it.'

7. SECI model from Nomura and Kametsu (1999) adapted from Nonaka and Takeuchi (The Knowledge Creating Company, 1995) to Socialize-Externalize-Combine-Internalize knowledge. This is about creating innovative knowledge by making intangible knowledge explicit at various organizational levels.

8. Think Big, a concept that requires taking time to think deeply, without distraction, with full dedication, goal-oriented, in steps, realistically, together with others, about things that others can do best to help.

9. Part swap when returning a broken part by a mechanic to SPES if the part to be returned is different from the installed part. Not applied because the management of the mechanics believes that this administrative function should not be done by mechanics and is therefore a matter of conduct.

10. James Whitcomb Riley, 1849–1916: ‘When I see a bird that walks like a duck and swims like a duck and quacks like a duck, I call that bird a duck.’

11. Six Sigma is a method for increasing the efficiency and effectiveness of a process, or in other words, doing the right things and doing things right.

12. Total Cost of Ownership (TCO) includes not only the purchase costs but also the operational costs over the entire life cycle and the costs of cleaning up. Total Cost of Ownership (TCO) is about the total costs including transport, labour and stock, often per time unit and cost type. In listed companies, under pressure from shareholders, only the variable costs are considered in the short term and the fixed costs for the long term are not included.

13. Little's Law to calculate lead time based on inventory and throughput (time (days) = inventory (#) / throughput (#/day)).

14. Markov model: stochastic model, property states that 'the future given the present does not depend on the past'.

15. Communicating vessels, aka the natural law of communicating vessels translated to economics: all possible costs of an activity are related to each other; input = output. In repair: the costs for repairing
itself, if not repaired the cost of the discarded parts, if repaired poorly the quality costs due to the shorter lifespan, any additional costs for parts or testing, the warranty costs of a poor repair, the profit of the repair shop, etc.

16. Zero Based Budgeting (ZBB), a budgeting system that assumes a 'zero situation' and only actually expected activities instead of incremental budgeting. Often used to economize (see page 586 of the Handbook of Logistics Management by Jos Veelenturf and Andries Higler).

17. Kaizen Event as part of Six Sigma is a short workshop in which small groups spend all their time finding root causes for a problem, formulate solutions and implement them immediately.

18. Kepner and Tregoe, Problem solving technique for finding the cause of a problem by isolating the who, what, when, where, and how of an event in order to determine its defining elements.

19. Lamoraal Ulbo De Sitter: When the need for regulation and the ability to regulate are not in balance for a working individual, alienation (inner resistance/ absenteeism), dissatisfaction and stress in the organization arise. By well-applied sociotechnics, flexibility of companies is realized, among other things, by means of entire task groups and self-learning teams (see 'On the way to new factories and offices, 1982, Kluwer').

20. Spencer Johnson: Who Moved My Cheese, a parable about dealing with change.

21. Geert Hofstede's theory of 6 cultural dimensions to explain the difference and better understand the cultures in the countries.

22. In addition to 5 components of internal control and 17 principles ICIF also 20 COSO-2017 principles in table 3.1 on panana 46 of Risk management (Noordhoff, Sonja Janicijevic, Paul Claes, 7th edition, 2021).

23. Sapiens: A Brief History of Humankind van Yuval Noah Harari

24. Peter's principle by Peter Drucker: someone is promoted to the level at which this person is unsuitable for the job.

Life lessons from unskilled middle class and experiences at a multinational, elaborated with academic insights and translated into educational business concepts.

This story is about an educational journey of the nephews Bill, Cass and Sepp who go in search of their missing great uncle. During their journey the nephews experience educational adventures and they discover their Funktionslust.

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