

# Aldebaran Again

## Is this the end of Pepper?

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2 November 2022

### Abstract

Softbank Robotics sold their Nao and Pepper robots to the United Robotics Group (URG) which reversed the name of this business back to its original “Aldebaran”. In this episode Dwain Allan and I discuss the uncertain future of Nao and Pepper based on direct correspondence with URG. We try to answer the question whether you should still invest in this robotic platform. Is Aldebaran another zombie robotic company?

## 1 Introduction

Transcript of the Human-Robot Interaction Podcast Episode 24. Published on 2 November 2022 by Christoph Bartneck at: <https://www.human-robot-interaction.org/2022/11/02/aldebaran-again/>

CHRISTOPH: Hi Dwain

DWAIN: Oh, hi Christoph

CHRISTOPH: Are our Nao robots already repaired?

DWAIN: Ah, that would be a hard no. Haven't you heard?

CHRISTOPH: Heard what?

DWAIN: Softbank robotics sold its robot business.

CHRISTOPH: But they already sold to Boston Dynamics.

DWAIN: Yes, and now they sold what used to be Aldebaran to a German group.

CHRISTOPH: Das ist gut.

DWAIN: Well, that depends. It might make many current and prospective owners of Pepper and Nao a bit nervous.

CHRISTOPH: Shall we talk about it?

DWAIN: Yes, I would say we have to.

## 2 History

CHRISTOPH: Before we get started with the recent events, could you maybe remind us of the history of Nao and Pepper?

DWAIN: Sure. Aldebaran Robotics was founded in 2005 and the first Nao robots were sold in 2008. Nao quickly became one of the go-to robots for HRI researchers for number of reasons - it was relatively cheap, and robust, and most of all, it had easy-to-use software called Choregraphe. In 2015 Aldebaran Robotics was sold to the Softbank group, which had also purchased Boston Dynamics. The Pepper robot was first introduced in 2014 and made its debut as a marketing gimmick, selling mobile phones in Softbank stores across Japan. Anyway, Pepper was produced by Foxconn in Taiwan, while Nao was traditionally built in France. Interestingly, Foxconn is one of the major investors in Softbank Robotics.

CHRISTOPH: Did Softbank move the production of the Nao robots to Taiwan as well?

DWAIN: We don't know for certain. Much of this is shrouded in mystery.

CHRISTOPH: What happened next?

DWAIN: Well, Softbank's focus on robotics shifted. They sold, what was then arguably, the most famous robotics company in the world. A company they had bought only a few years earlier.

CHRISTOPH: That would have been Boston Dynamics.

DWAIN: Correct. Softbank sold Boston Dynamics in 2020 to Hyundai. Boston Dynamics has produced many impressive humanoid and zoomorphic robots, including Atlas and Spot. We discussed that deal in a previous episode.

CHRISTOPH: Did Softbank sell their Nao and Pepper business to Hyundai?

DWAIN: No, they did not. They sold it to the United Robotics Group. And if you haven't heard of them before, you're not alone. I had to look them up myself.

CHRISTOPH: Did Softbank sell its whole robotic operation?

DWAIN: No, they sold Softbank Robotics Europe, which used to be Aldebaran.

CHRISTOPH: And what is this company called now?

DWAIN: Oddly, it is called Aldebaran.

CHRISTOPH: What? So we have a zombie company now. It is back from the dead.

DWAIN: Are you surprised?

CHRISTOPH: Not really. Change was in the air for a while. Reports that Softbank would slash jobs and stop producing its Pepper robot emerged in June 2021. There was not enough demand for their chest high humanoid robot. Software updates stopped and replacement batteries were sold out everywhere. Their website was obviously no longer updated and the support, in general, suffered greatly.

Many Nao and Pepper owners started to search for alternative battery sources to avoid their precious robots to become useless piles of plastic and metal.

DWAIN: A secondary market emerged trading in "unofficial" repairs and spare parts.

CHRISTOPH: Right. And on July 1st 2022 emails were sent out informing us that Softbank had sold some of its robotics operations to the United Robotics Group.

DWAIN: This immediately reminded me of our episode on why all social robots fail in the market. (That's one of my favorite episodes, by the way).

CHRISTOPH: I hope it is not that hopeless yet. When I received the email about the sale I immediately contacted the listed PR people. Only Johannes Kober responded informing me that they were unable to answer any of my questions and that I should try again towards the end of the year. This did not fill me with a lot of confidence about the future of Nao and Pepper. It seems like they did not have any plans ready for their own future. I kept on emailing and phoning Johannes and on September 22nd, I finally received a written response to my questions. It only took them three months to answer some of the most basic questions about their business.

### 3 The letter

DWAIN: What did they write back?

CHRISTOPH: Shall we go through the questions and answers to my questions one by one?

DWAIN: Well considering the popularity of these robots in our field, it seems like we have a duty to.

#### 3.1 Q1

CHRISTOPH: Question 1: Who will be building the Nao and Pepper robots and where are they being built?

DWAIN: That will be very easy to answer.

CHRISTOPH: They replied: With the acquisition by United Robotics Group (URG), we are building a European leader in service robotics companies. Of course, we will also continue to improve our offerings for existing products such as Pepper & NAO. Aldebaran is headquartered in Paris where we design, industrialize, and drive the production of our robotic solutions.

DWAIN: Ah, they didn't answer your question.

CHRISTOPH: What do you expect from their PR department?

DWAIN: Something approximating an answer.

CHRISTOPH: They told us that Aldebaran’s headquarters will remain in Paris.

DWAIN: Where is URG located?

CHRISTOPH: They are in Bochum, Germany.

DWAIN: At least they are building a European leader, whatever that means.

CHRISTOPH: Tell me one company that does not claim to be a leader.

DWAIN: Fair enough. How many points does URG get on our “PR B.S. Scorecard” for this answer?

CHRISTOPH: I would give is a solid 6. What is your score?

DWAIN: I give it a 4, they did mention Paris is where they drive production. Shall we move on?

CHRISTOPH: Sure.

## 3.2 Q2

CHRISTOPH: Question 2: There have been reports that the production of the Pepper robots has stopped. Are more Pepper robots being produced right now? Are more Nao robots being produced right now?

DWAIN: Those are two questions there. What was the reply?

CHRISTOPH: For cost efficiency purpose we hold Pepper production, and built enough finish goods inventory to cover the coming years demand – as part of NAO, production is continuously running and is even on the way to be increased to answer the demand.

DWAIN: So they have produced enough Peppers for years to come? Do we know how many they’ve built?

CHRISTOPH: The intention was to build enough for each of the 3700 Softbank mobile stores in Japan. Plus the expected demand from others. Foxconn does probably not accept orders below a certain threshold.

DWAIN: So there’s likely a warehouse somewhere in Japan or Taiwan, harbouring thousands of Pepper robots?

CHRISTOPH: We can only speculate. But that would be a pretty spooky place to visit.

DWAIN: Wherever they are, I hope they don’t degrade. It might well, be several years before they see the light of day.

CHRISTOPH: At least they seem committed to building new Nao robots if the demand should arise.

DWAIN: What is your B.S. score?

CHRISTOPH: I think they provided reasonably good answers. Maybe a two. although I would really like to know how many Pepper robots are waiting for new owners and how many Nao robots they sell per month.

DWAIN: It would be unlikely that they’ll ever disclose this information.

CHRISTOPH: Commercial sensitive information?

DWAIN: That would be the standard reason.

CHRISTOPH: What is your score?

DWAIN: I'd also give it a two. What were the next questions?

### 3.3 Q3

CHRISTOPH: Question 3: Who will be selling the robots? Who will be offering service and support?

DWAIN: That is again two questions. You really have to stop doing that! What was the answer?

CHRISTOPH: After the acquisition of Aldebaran, URG oversees all the business activities, including managing all the Pepper and NAO partners outside the APAC region. Since Oct 1st 2021, the regional Master Distributors are appointed in Europe, Middle-East, Asia and North America for Pepper and NAO robots. With their partner networks, they continue to sell our humanoid robots to corporations and academic institutions and support the Pepper and NAO customers.

DWAIN: Since October the 1st 2021? That is before Softbank sold Softbank Robotics Europe to URG.

CHRISTOPH: And it covers both Nao AND Pepper robots.

DWAIN: They are talking about Regional Master Distributors. Who are they?

CHRISTOPH: I would have to guess. Softbank did not sell any robots directly in New Zealand. They have re-sellers in many countries. Notice that they only sell the robots to corporations and academic institutions. They do not sell to the consumer market.

DWAIN: That's not surprising. These robots can't do anything useful out of the box.

CHRISTOPH: I also doubt that any of the re-sellers actually repair the robots. Usually, they had to be sent back to Paris or Shanghai. The actual support the re-seller could offer is therefore rather limited.

DWAIN: There is also a very important detail in this response. URG will operate outside of APAC (that is the Asia Pacific Region), which includes China, Japan, and Singapore.

CHRISTOPH: Looks like Softbank Robotics wants to still protect its home ground.

DWAIN: We are in New Zealand and therefore part of APAC. URG would not be able to sell us any Nao or Pepper robots. I wonder if Softbank Robotics will continue to sell them to us?

CHRISTOPH: I have no idea, looks like we have to find out. Is the USA part of APAC?

DWAIN: That depends on the definition of APAC. At this point, we do not know. The division of the market does seem a bit unclear. What is your PR B.S. score?

CHRISTOPH: Again, not too bad. Maybe a four due to the ambiguity?

DWAIN: Works for me. What about the next question?

### 3.4 Q4

CHRISTOPH: Question 4: Will Aldebaran/URG only sell/service in Europe? What will happen to the other markets around the world?

DWAIN: A good answer to this question, would be very helpful for us.

CHRISTOPH: Well, don't get your hopes up. Their answer is: Pepper and NAO will continue to be sold worldwide. By supervising all the business activities of the group, including Pepper and NAO, United Robotics Group will take over the sales activities, distributors and integrators of Aldebaran outside the APAC region.

DWAIN: Okay, worldwide sales. But not through URG in the APAC region. I guess we have to hope that Softbank Robotics will continue to operate in the APAC region.

CHRISTOPH: Yes, the New Zealanders are still in the dark. And since New Zealand is the world thought leader in HRI, I would give this a score of 4.

DWAIN: I would give it a 3. Next question.

### 3.5 Q5

CHRISTOPH: Question 5: What role will Softbank have for Nao and Pepper?

DWAIN: Alright, last chance for clarity for New Zealand.

CHRISTOPH: Their answer: SoftBank Robotics Group continues to support our robotic journey together as a shareholder of United Robotics Group and will stay the Master Distributor of Pepper and NAO in the APAC region.

DWAIN: Bingo! There you go. We'll continue to be serviced by Softbank Robotics.

CHRISTOPH: Yes, that would be fine if the support website for Softbank Robotics for the APAC region would be available in any other language but Chinese.

DWAIN: You have to be kidding?

CHRISTOPH: I kid you not. Clearly they have a very strong focus on China.

DWAIN: How do you get support then?

CHRISTOPH: I had to use the European Support website to contact their support and they forwarded me to the the Chinese support team.

DWAIN: Well, their answer was pretty straightforward, but I give them some extra B.S. points for using the phrase "robotic journey". So maybe a six?

CHRISTOPH: Works for me. Shall we move on?

DWAIN: Yes!

### 3.6 Q6

CHRISTOPH: Question 6: There has been an acute shortage of batteries for Nao and Pepper. When will they become available again?

DWAIN: Yes, I saw you crack open one of our batteries in order to repair them yourself.

CHRISTOPH: Desperate times call for desperate methods. Yes, we butchered open a battery pack. There was no easy way of opening the pack. The battery cells, however, are pretty standard.

DWAIN: What was their answer?

CHRISTOPH: Pepper has not been impacted. Nao Batteries had initially faced a shortage of batterie cells, but this has been solved, and as mentioned above, the daily NAO production volume is on the way to being increased.

DWAIN: Have you been able to source new battery packs for Nao yet?

CHRISTOPH: No, I checked several web stores and none of them have them available. One web shop declares that they will become available in March 2023.

DWAIN: So, what is their B.S. score?

CHRISTOPH: Pretty high, since the information they provided is just not true. I give it a 9.

DWAIN: I give them a 7.

CHRISTOPH: Shall we move on?

DWAIN: Yes captain my captain.

### 3.7 Q7

CHRISTOPH: Question 7: The Choreograph software has not been updated in a while. It cannot be installed on modern Apple computers (neither Intel nor M1/2). When will new versions become available?

DWAIN: Oh, that's a good one. Didn't we have to resort to running it on Windows for recent experiments?

CHRISTOPH: Yes, there was no way to install it on a Mac or even a virtual windows machine on a Mac.

DWAIN: What was their response?

CHRISTOPH: We are continuing the production of current NAO robots and providing the support and services to our customers and partners. There is an upgraded version of NAO planned in our product roadmap in the future.

DWAIN: So we have a reference to a road map, but that is it?

CHRISTOPH: Yes, just an internal road map. No clear commitment to any dates.

DWAIN: And no mention of Pepper. Seems like Pepper might be doomed if they don't intend to update the software for it!

CHRISTOPH: You are right. Not much of an answer at all. What is your score?

DWAIN: Pretty high. I give it an 8.  
CHRISTOPH: Well deserved.  
DWAIN: Is the answer to the next question any better?

### 3.8 Q8

CHRISTOPH: Question 8: There has been no new hardware for a while. What is the future of the Nao and Pepper robots? When will new versions become available?  
DWAIN: That is an important question. What was the response?  
CHRISTOPH: There is an upgraded version of NAO planned in our product roadmap, however we cannot disclose more information on this. And for Pepper there is not any plan defined yet.  
DWAIN: That sounds like a death sentence for Pepper.  
CHRISTOPH: Why? They wrote that they just don't have a plan yet.  
DWAIN: Road maps and future plans are easy to announce. If a company openly admits that it has no plans for a product then it almost always means that there is no future for it.  
CHRISTOPH: Unless something major changes. Which it always could.  
DWAIN: They'd probably only keep Pepper running to sell the remaining stock.  
CHRISTOPH: Who would want to buy a discontinued robot?  
DWAIN: People who don't know any better. Their website still makes it appear that Pepper is available and will likely remain so for the foreseeable future.  
CHRISTOPH: Maybe Softbank Robotics in the APAC region has some plans for Pepper.  
DWAIN: Then why did they not communicate with URG? They should be working together.  
CHRISTOPH: Who wrote the book of "should"?  
DWAIN: What is your B.S. score?  
CHRISTOPH: They are being reasonably honest, even though this might hurt their Pepper sales. But they could be even more straightforward and tell everybody that Pepper is dead. So maybe a three.  
DWAIN: I agree, I would also give it a three. What is the next question?

### 3.9 Q9

CHRISTOPH: Question 9: The website for the Nao/Pepper robots was redesigned a little while ago and is missing much of the previous content. When will the content be updated?  
DWAIN: I know what you are talking about. All those extensive tutorials are gone. What was their reply?



CHRISTOPH: Technical support content and requests about NAO and Pepper such as FAQ and How TOs, troubleshooting, are gradually transferred to United Robotics Group website on the dedicated support webpage. Other documentation like software downloads, getting started guides, Release notes are still available on the developer center webpage

DWAIN: They only talk about the transfer of the content, and the original web page.

CHRISTOPH: Correct. They do not respond at all about all the content that was discontinued when Softbank took over. Either they do not know what the question was or they simply have no good answer. The support website for the APAC region is still in Chinese only. Why don't they at least have an English version? This is so basic.

DWAIN: If they are committed to the support of their robotic platform then you would think this would be a key priority for them. If they are unaware of the problem then I wonder whether they fully understand the problems with the Nao and Pepper platforms.

CHRISTOPH: This documentation is only important once you own one of their robots. It does not help them much selling new robots.

DWAIN: In any case, they did not answer the question and hence my PR B.S. score will have to be 7.

CHRISTOPH: Sounds fair. Do you want to hear the next question?

DWAIN: Shoot.

### 3.10 Q10

CHRISTOPH: Question 10: What plans does Aldebaran/URG have for humanoid robots?

DWAIN: That is a pretty open question. Why did you ask it?

CHRISTOPH: I wanted to hear what application domains or research areas they might target. These humanoid robots are practically useless and I was hoping to find out if they acknowledge it.

DWAIN: Did they?

CHRISTOPH: TheIR response was a bit longer. Here we go:

CHRISTOPH: The main goal of URG is to develop a new generation of robots, combining the best of both worlds, human interaction social robots, and skillful industrial robots: we call them CobiX - Robots for Humans. With the URG subsidiaries in Germany, France, and Austria, we can serve our customers better in Europe.

DWAIN: CobiX? Do you mean cobots?

CHRISTOPH: No. CobiX.

DWAIN: That is a new word. Great marketing.

CHRISTOPH: Want to know more about cobotX?

DWAIN: Please continue.

CHRISTOPH: We try to merge the knowledge from the industrial approach together with the public life approach which is kind of new category for robotics. We as United Robotics Group bring this assistance and support, by developing service robots, which will be a help for the society. They are team players and become part of a worker's network or workflow.

DWAIN: Stop! Give me a break! Are we talking about service robots now?

CHRISTOPH: Looks like it.

DWAIN: But Nao and Pepper cannot do much in the real world. They can only communicate with humans, to some degree.

CHRISTOPH: That is true. But URG has many more robotic companies and Nao and Pepper are probably only part of it.

DWAIN: Let's hear the rest of their reply then.

CHRISTOPH: These humanoid CobiX are part of our roadmap and will comeback with more mobility capabilities & autonomy and physical interactions capabilities in addition to current social interaction ones. The robots of United Robotics Group will be assisting and supporting humans in their daily WorkLife. We believe: Service robots will soon be seen in everyday work. We think the society and the opinion of the society will change in this matter. Robotics will be one of the key technologies of the next decades.

DWAIN: This sounds like the first paragraph of every HRI research paper ever written: Robots will be useful in the future and everybody will have them. Do they have any CobiX robots?

CHRISTOPH: No, just Pepper, Nao and the others.

DWAIN: What then is it CobiX other than a marketing plan?

CHRISTOPH: I asked them about their plans.

DWAIN: And you got a very unspecific and boring plan back.

CHRISTOPH: Are you calling Elon Musk's Optimus robot boring? Because that is exactly what he promises as well.

DWAIN: Now, now - Optimus was developed in just one year, and it can already do more than both Pepper and Nao achieved after 17 years of development.

CHRISTOPH: Okay, Elon gets 1000 points for speed.

DWAIN: We digress.

CHRISTOPH: You are right. Optimus deserves its own episode.

DWAIN: URG has eight robotics companies, including Rethink Robotics.

CHRISTOPH: We probably need to get back to this group of companies. Shall we finish the list of questions first?

DWAIN: Not before you give us your PR B.S. score.

CHRISTOPH: This would have to be a pretty high score. They invented a new word for service robots. I will give them a 9.

DWAIN: Yeah, 9 sounds about right. Next question, please.

### 3.11 Q11

CHRISTOPH: Question 11: How will the roles/tasks be split amongst Aldebaran URG and Softbank?

DWAIN: This takes us back to the question of who, if anybody, is going to continue to work on Pepper.

CHRISTOPH: And the division of the market. Remember, URG will not sell robots in the APAC region, which includes Japan, China, Australia and most important of all, New Zealand.

DWAIN: This should be an interesting one.

CHRISTOPH: With the acquisition of Softbank Robotics Europe (now Aldebaran) by URG, Softbank Robotics Group has a minority stake of 24.9 percent in URG since 2022. In this constellation, the cooperation between URG and Softbank Robotics Group Corp will be intensified in the future in order to mutually benefit from each other's know-how.

DWAIN: This means that Softbank Robotics now also owns a quarter of all the eight URG companies. Not just Aldebaran.

CHRISTOPH: Did URG pay any actual cash to Softbank Robotics?

DWAIN: The media reports only that Softbank is now a shareholder of URG. This implies that they did not receive any money. Keep in mind that Softbank Robotics Europe, which is now Aldebaran, lost around 100 million dollars in the last three years.

CHRISTOPH: So Softbank Robotics cut its losses?

DWAIN: Probably true. But they will also intensify their cooperation in the future.

CHRISTOPH: That does not sound too promising. The only robot left with Softbank Robotics is their cleaning robot Whiz.

DWAIN: The market for cleaning robots is well established. Consumers can purchase affordable floor-cleaning robots from iRobot, Xiami and RoboRock. Whiz is up against strong competition.

CHRISTOPH: Whiz costs 36,540 dollars.

DWAIN: Ouch! I take it back. Whiz is incapable of competing in the consumer market at that price point. Maybe it is another research platform, then?

CHRISTOPH: Maybe.

DWAIN: So we have a division of the market and a promise to collaborate.

CHRISTOPH: That is about it.

DWAIN: Who owns URG?

CHRISTOPH: That is a great question. The structure is a bit, well, unconventional.

DWAIN: Did you ask them about it?

CHRISTOPH: Sure did.

### 3.12 Q12

CHRISTOPH: Question 12: The RAG-Stiftung is not a traditional company. URG also seems to be a group, rather than a company. Could you explain the structure of these companies/groups?

DWAIN: So what is their structure?

CHRISTOPH: They responded: The owner of URG is the Essen-based RAG Stiftung Beteiligungsgesellschaft (RSBG SE), a company owned by the RAG Stiftung. The common roots lie in the coal industry. The primary task of the RAG Stiftung is to finance the perpetual tasks left behind by the former German coal industry. Through the shareholdings, RBSG SE is making an important financial contribution to the financing of these tasks by the RAG Stiftung and also play a part in the successful transformation of the former mining regions.

DWAIN: What are perpetual tasks left behind by the coal industry?

CHRISTOPH: They all related to water management. And they can never stop without dramatic consequences for the millions of people that now live on top of the old German coal mines. The tasks are divided into three major areas. Treating the pit water in the underground sites of former mines, pumping away the surface water, and purifying and monitoring the groundwater in some of the former mining sites, especially around former coking plants.

DWAIN: Are any of the eight robot companies that URG owns producing robots for water management or mining?

CHRISTOPH: No.

DWAIN: Come again?

CHRISTOPH: None of the robotic companies has anything to do with water management or perpetual tasks in general.

DWAIN: Oh. Why does the RAG Stiftung own URG then?

CHRISTOPH: That would be to “play a part in the successful transformation of the former mining regions”.

DWAIN: So it is a financial investment?

CHRISTOPH: In a company that has lost 100 millions in the last three years, cannot sell the Pepper robots it produced and cut 40% of its staff in Europe?

DWAIN: Good point. Well, wait. What is the point?

CHRISTOPH AND DWAIN: MARKETING!

CHRISTOPH: Yes, the future!

DWAIN: Thought leadership!

CHRISTOPH: Now you are getting it!

DWAIN: But what does this mean for HRI researchers? Should anybody still buy Nao or Pepper?

CHRISTOPH: I asked them this question.

### 3.13 Q13

CHRISTOPH: Question 13: Many researchers are concerned about the future of the Nao/Pepper platform. What would be your recommendations for current/future owners of these robots?

DWAIN: Of course they will recommend that we buy their products!

CHRISTOPH: It does not hurt to ask. Their answer was: We are committed to ensuring the continuity of existing services until 2026 for the current Pepper and NAO robots, and we will continue to provide services and support to the owners of our future robots.

DWAIN: I would be skeptical that a Nao or Pepper robot would survive four years of daily operation.

CHRISTOPH: True. It might be better to wait until they release their next robot.

DWAIN: Unless they pull the plug completely on social robots. After all, they have severely limited utility, both in the home and at work.

CHRISTOPH: Good point. So what do we learn from all of this?

### 3.14 Conclusions

CHRISTOPH: What do you make of all of this?

DWAIN: There are several elephants in the room!

CHRISTOPH: Okay, start with the biggest one!

DWAIN: Pepper is dead.

CHRISTOPH: They lost a lot of money on this robot.

DWAIN: The marketing expectations on how many they could sell were completely exaggerated.

CHRISTOPH: But why kill Pepper? It might not make sense to have two competing products in the market, but Nao can't do much more than Pepper.

DWAIN: Nao is three times cheaper.

CHRISTOPH: Nao still costs 20,000 NZD. You can buy a good car for that.

DWAIN: Yes, and you can buy a Tesla for the cost of a Pepper robot.

CHRISTOPH: Who can afford that?

DWAIN: Not many.

CHRISTOPH: This overly optimistic view on what robots can do and how many would want them continues. Their future plans repeats the exact same message. Robots will be everywhere.

DWAIN: The sales figures are probably the only way that these companies learn the inconvenient truths about social robotics. Which is: beyond novelty, they are largely useless as a consumer product. Only HRI researchers want them.

CHRISTOPH: With the exception of floor cleaning robots.

DWAIN: Which remains with Softbank Robotics.

CHRISTOPH: Still, how many HRI researchers are there? The market is just not that big.

DWAIN: Which brings us to the second elephant. Why does the RAG Stiftung invest in robots?

CHRISTOPH: Hyundai bought Boston Dynamics, but they at least have already a successful industrial robotics division. They can benefit directly from this acquisition.

DWAIN: None of the URG robot companies are going to help them pump water.

CHRISTOPH: Which brings us to another elephant.

DWAIN: Yes. URG seems to buy failed or at least dwindling robotics companies. How can they make a profit from all these proven failures?

CHRISTOPH: What other failures do they have?

DWAIN: Baxter is an example of something that promised big things and received a lot of media attention. It collapsed in 2018.

CHRISTOPH: Maybe they don't have to make a profit. Maybe it is good enough to sell the robotic dream. Pumping water is a rather dull task. But if you sit on a big pile of money, why not improve your image by investing in some fancy technology.

DWAIN: Maybe social robotics is another perpetual task. Always trying, never succeeding.

CHRISTOPH: Do you know what else really worries me?

DWAIN: What?

CHRISTOPH: The questions I sent them are not particularly difficult to answer. Why does it take them several months? These are the most basic questions about their business?

DWAIN: Sometimes the simple questions are the hardest to answer - because they don't fit the PR narrative all that well.

CHRISTOPH: Or maybe this podcast is just not important enough for them.

DWAIN: Well we're certainly not the Washington Post.

CHRISTOPH: No, we are just HRI researchers.

DWAIN: Who just lost their best pal Pepper.  
 CHRISTOPH: Are you going to miss Pepper?  
 DWAIN: I can always visit it at the Christchurch airport.  
 CHRISTOPH: Where it forever and ever tells people how the  
           security check works.  
 DWAIN: Yes, 51,000 dollar boom box.

The link that they had sent in their email from July 1st no longer works, but there is a new page online which tries to answer some of the same questions that I had put to them. Clearly, I was not the only one concerned. After all, many universities and research institutes invested millions of dollars into this platform.

## 4 Conclusions

It took URG months to reply to very basic questions. Why have they not worked through their business plan?

URG is holding many other robotic companies. It seems like a collection of failed companies.

The mother company has nothing to do with robotics. This seems to be a speculation again. There is no foundation as with Huyndai.

Pepper is dead. Why did Pepper die and not Nao?

Pepper started as a marketing tool for Softbank Mobile to sell phones. Given that they are all but gone, this does not seem to have worked very well. Or at least the novelty wore off and Pepper has not practical advantage over human staff.

They probably added the touch screen to pepper since voice recognition is noise stores would not work very well.

To do:

Check annual reports of softbank robotics and URG

interview brainery australia.

asia website is in chinese only

nao robot costs 20k, pepper 51k APAC

how much did URG pay for softbank europe? or did they just pay in their own shares?

Can URG create value by collecting all failed robot companies? Are we again at the great fool theory?

D:    test