The NS and Prorail were frequently targets of his criticism. But the newly retired railways expert, Professor Ingo Hansen, was also often enraged by other Delft showpieces, such as the Superbus. “As a scientist, you have to say what you think.”

Tomas van Dijk

The railway is falling apart

The NS and Prorail ads are too focused on short-term profit, that is what Professor Ingo Hansen has warned for many years now. Shortly after his farewell speech (on 9 March), two trains collided with each other near Amsterdam Central Station, resulting in one fataliy. According to Prof. Hansen, however, the accident could have been prevented if the European Rail Traffic Management System (ERTMS) was in place. Earlier this year the professor was commissioned by the Dutch government to write a report about the system, entitled ‘Innovatie op het spoor en mogelijkheden van ERTMS in Nederland’ (Innovation on the railway and possibilities for ERTMS in the Netherlands).

It sounds cynical, but one could hardly imagine a better case for your argument. (Sigh) “This discussion about the ERTMS has been going on for ten years now. Many European countries are now investing heavily in this system. But NS and Prorail want to wait until all the specifications for the most recent version of the software are known. This is an excuse. From a business economics perspective, in the short-term they have an interest in not introducing it if the government doesn’t make any additional funds available.”

When I inquired, soon after this accident, whether or not this system would now be implemented, you answered that you feared “one death was not enough”. And now you say: “In 2009, you stated back then. ‘Soon it will be a thing of the past for your intercity to get caught behind a slow train, “Of course, a driver will know from the moment they see the train ahead can incur two to three minutes of delay, just like that. And this happens systematically, while it’s completely unnecessary. If the intercity train knows precisely when the vehicle ahead has got out of the way, it can adjust its speed earlier, it no longer comes to a halt nor does it have to wait for the green signal from the train controller. Moreover, if train controllers use a system that supports decision-making, they can make well-considered choices when conflicts arise at complex junctions.”

Wouldn’t such a train controller need to have much more information about every train?”

“Of course, the system needs to take the trains’ working characteristics into account. Okay, so you don’t know the exact weight of the train in advance; after all, you don’t know how many passengers are on board. And you don’t know exactly how much head wind there is. But you can build up historical databases and make probability calculations.”

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“I think that scientists have a duty to let the truth be known’
And concerning punctuality, the Netherlands railways are the most intensively used in Europe. Aren’t they set up so badly here in the Netherlands? For yet your own research has shown that things aren’t going as we’d like. For the government approved. At present 93% of trains are delayed by less than five minutes, making them ‘on time.’

"The collaboration isn’t going as we’d like. And the NS thinks that our approach is over-precise. “The then chairman of the Board of Governors, Hans van Luijk, and the bosses of Shell, TNO and Fokker, wrote this letter to the minister indicating their support for the Superbus. Not one of them has an idea that was not technically feasible. I find it surprising that most of my fellow professors did not really dare to speak up."

Hansen leafs through the stack and takes out a letter. "And then this letter,” he continues indignantly. “The then chairman of the Board of Governors, Hans van Luijk, and the bosses of Shell, TNO and Fokker, wrote this letter to the minister indicating their support for the Superbus. Not one of them has an understanding of these sorts of issues.”

You were personally concerned that things were being put forward at TU Delft that didn’t add up, in your opinion. “I am annoyed by the fact that members of the Board of Governors do not consult the expertise they have in their own ranks before deciding on something that is in the public interest. If someone contradicts my scientifically grounded opinion, then I will speak up. I think that scientists have a duty to let the truth be known.”

In 2002, you wanted a debate at TU Delft on the JSF. The reason for this was the fact that the then dean of the Faculty of Aerospace Engineering, De Jong, put the case for participation in the JSF project in an open letter to the Dutch Parliament. “It is incomprehensible that the Board of Governors allowed a dean to lobby for the purchase of a fighter plane.”

You’ve made a lot of enemies. “Yes, that’s true. I think that professors should make use of their knowledge and freedom. When I started out at TU Delft, the director of the Trail research school said to me after a committee meeting, ‘You really say what you think’ I was a bit shocked by that. I think that scientists should always say what they think.”

Could that also be the reason why the collaboration with the NS and Prorail has not gone well? “I am not trying to win them over. If they don’t like my ideas, then that’s up to them. For the rest, the contact with project managers at Prorail and the NS is quite good, but at higher levels, there are people who don’t have the right expertise.”

Interview

Who is Ingo Hansen

Professor Ingo Hansen (1946) gave his farewell speech on 9 March, looking back on a research career spanning 18 years at the Department of Transport & Planning. For 15 years, he has been conducting research into rail safety and on making the organisation of rail traffic as efficient as possible. Prof. Hansen collaborated on the parliamentary report by the Temporary Committee on railway maintenance and innovation (the Kuiken Committee), which was published in February. According to the Committee, at least 1.4 million euros that had been intended for rail maintenance in recent years has been spent on other areas.

Prof. Hansen is also president of the International Association of Railway Operations Research and editor-in-chief of the Journal of Rail Transport Planning & Management.

Gold-medal wheeble bins

Will it be gold and glory or abject failure? Without great technical breakthrough, today’s Olympic athlete has no chance. And by that I don’t mean the coach on the sidelines, but all the engineers and designers working behind the scenes to help the modern sportsman perform just a fraction of a percentage better.

The same old examples, trotted out time and again, are usually the ones which interest me the least. Yes, a shark suit that lets you swim a little higher in the water will make you go faster. That’s just a simple question of hydrodynamics. What I find far more fascinating are the discoveries that work on the athlete’s psyche.

Column