'Written in blood': bereaved engineer calls for reform after MAX deaths

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Javier de Luis has pressured the FAA to change the way they certify airplanes after his sister died in the crash of an Ethiopian Airlines 737 MAX

After his sister died in the crash of an Ethiopian Airlines 737 MAX one year ago, Javier de Luis, an engineer who once designed software for

space stations, became a crusader.

Though his expertise is not in airplanes, 57-year-old de Luis has a simple goal: convince the Federal Aviation Administration (FAA) to change the way it certifies aircraft so the 737 MAX crashes that killed hundreds and led to the plane's worldwide grounding won't happen again.

Aviation regulations "are written in blood," de Luis, 57, told AFP in an interview. "They usually are written because somebody died, something went wrong."

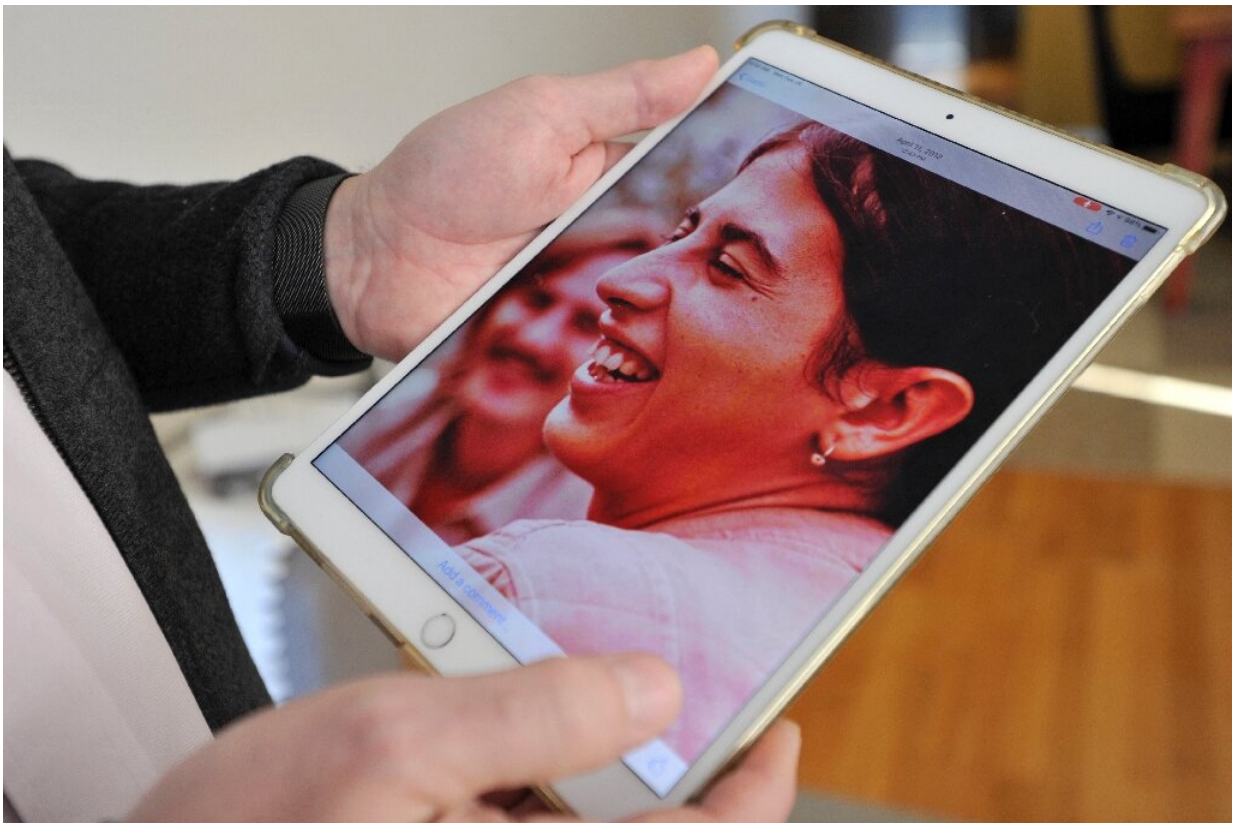
"It's important as we go forward here that we really understand what went wrong, so the rules can be changed or modified or enforced, so that never happens again."

Working from his apartment in Cambridge, Massachusetts, de Luis has written several letters to the FAA as part of his campaign, and was invited to speak to employees at their headquarters in Washington following his sister's death.

Known to friends and family as Gachi, Graziella de Luis y Ponce was a 64-year-old freelance interpreter for the UN Food and Agriculture Organization and the Vatican.

She was among 157 people killed when their flight to Nairobi crashed southeast of the Ethiopian capital Addis Ababa.

Months prior, another 737 MAX crashed in Indonesia, killing 189, and the model was grounded worldwide days after the Ethiopian crash.



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Answer every question

With gray hair and rectangular glasses, de Luis grows animated when discussing why the plane crashed, how the FAA failed and what could be done to stop it.

Ethiopian Airlines flight 302 took off at 8:30 am local time on March 10. Just 90 seconds later, the aircraft's nose began to pitch down, as a sensor sent incorrect information to the MCAS, the automatic anti-stall flight system.

The pilots tried to counter the downward movement, but the MCAS overrode them. Six minutes after take-off, it crashed.

"An airplane shouldn't fall out of the sky if one single sensor fails," de Luis said.

"They should have grounded the airplanes" after the first crash on October 29, 2018, de Luis said. "If they had done that, then my sister and... the 156 other people would be alive."

He compares the failure of the 737 MAX to his experience working on software deployed on the Mir and International Space Station.

Holder of a doctorate in aerospace engineering from the prestigious Massachusetts Institute of Technology, where he also teaches, de Luis was chief executive of Payload Systems, which worked on nearly 30 space flights before being bought by Aurora Flight Sciences, now owned by Boeing.

"I would have to go down to NASA, and I would have to present our design and tell them why it was safe," he said. "I got up in front of the table, and there were experts in the room, and they would start asking me questions, and I had to be able to keep answering until they got tired."

"That's how it should work for... aerospace when it comes to design reviews," he said.

The holder of a doctorate from Massachusetts Institue of Technology, de Luis owned a company that worked on nearly 30 space flights

'It just doesn't go away'

Since the MAX's grounding, de Luis has watched as more and more details have emerged about malfunctions in the plane's development.

Boeing engineers were the ones who inspected the MCAS under a procedure adopted by US regulators in 2005 under pressure from the aeronautics lobby.

The FAA, which only partially understood how the software worked, merely validated their conclusions.

De Luis fears the agency relies "very much on what Boeing tells them" and questions whether safety is really its top priority.

De Luis's parents left Cuba after the revolution, and he recalls how he saw his 94 year-old father cry publicly for the first time when he learned of Graziella's death.

The steady stream of information about the 737 MAX hasn't made it easy to get grieve. Most recently, it was news that debris had been found in the jets' fuel tanks.

"I opened up my iPad every morning, and there's always a story or two about something," he said.

"This way of dying... is just a nightmare because it doesn't go away."