

TABLE A-8

Case study: Boeing 737 Max

(Innovation failure summary)

Variable	Description
Innovation	New iteration of popular airliner to boost efficiency, launched 29 January 2016
Radical or incremental	Incremental
Category	Product
Sector	Transportation
Failure timing	Maturity stage, failure in March 2019
Failure root cause	<p>Poor performance</p> <ul style="list-style-type: none"> • A new software system was not adequately described to pilots and was given a significant amount of behind-the-scenes power that overrode pilot commands • Boeing claimed the new aircraft was functionally equivalent to prior models when, in reality, it had significant performance differences • Federal regulators overdevolved regulatory oversight power and authority to Boeing
Failure root cause timing	Product development
Outcomes	<ul style="list-style-type: none"> • Two Boeing 737 Max jets crashed, the first in October 2018 and the second in March 2019, resulting in hundreds of deaths • As a result of these crashes, the jet was grounded in virtually all countries in which they operated • Many airlines that rely on the Max had to cancel a significant number of flights through at least December 2019, resulting in lost revenue • Boeing has continued to produce Max jets but is unable to deliver them to customers; some airlines have cancelled their future orders of the Max jet
Business insight into the innovation process	<ul style="list-style-type: none"> • Need to ensure changes to existing systems are made apparent to system users
Pivot	na
Pivot enabler	na

na = not applicable.

Source(s):

National Center for Science and Engineering Statistics and SRI International, special research (2020) of 2010–20 open-access articles, including *MIT Technology Review*, *New York Times*, *Fast Company*, U.S. General Accountability Office, and *Defense News*.