

When software could recognise the test, could certification still be trusted?

Volkswagen AG | United States and Germany | Conduct from 2006 | Guilty plea 2017

US VEHICLES	US FEDERAL RESOLUTION	FELONY COUNTS	INDIVIDUALS INDICTED
Approximately 590,000	\$4.3bn	Three	Six
S01	S01	S01 S02	S01

DOCUMENTED EVENT

On 11 January 2017, the DOJ announced that Volkswagen AG had agreed to plead guilty and pay \$4.3 billion in criminal and civil penalties. Volkswagen entered the guilty plea in federal court in Detroit on 10 March 2017 to three felony counts: conspiracy to defraud the United States, engage in wire fraud and violate the Clean Air Act; obstruction of justice; and importation of merchandise by false statements. DOJ charging documents said Volkswagen engineers began the project in 2006 and designed software that recognised whether a vehicle was undergoing official emissions testing or normal road use. The software selected a compliant mode for the test and a different mode in normal operation. Approximately 590,000 US diesel vehicles were implicated. The resolution comprised a \$2.8 billion criminal penalty and \$1.5 billion in civil penalties. Six Volkswagen executives and employees were indicted, and the plea agreement provided for three years of probation and an independent compliance monitor. [S01 | S02]

NFRISK SCENARIO ADAPTATION - NOT AN EXTERNAL FINDING

A product must pass a formal certification test before release. The engineering team designing the product also controls how it recognises and responds to the test conditions. Validation uses predictable inputs, and no independent team compares certified behaviour with ordinary operation. The product can therefore pass the test while operating differently in the real world.

STRESS-TEST QUESTIONS

- 01
- Can the product or process detect that it is being tested and behave differently from normal operation?
- 02
- Is certification testing independent of the team that designed the product, and does it include unpredictable or in-use conditions?
- 03
- Who monitors for divergence between certified results and real-world performance after release?
- 04
- Would evidence of deliberate control circumvention trigger a different escalation, investigation and accountability route from an accidental defect?

CONNECTED RISK

Conduct & Governance Risk (primary)
Data & Control Integrity (contributing)
Physical, Safety & Environmental Risk (consequence)

FRAMEWORK RELEVANCE

COSO ERM lens: Governance & Culture
NFRisk maps the deliberate design of software to defeat a compliance test to COSO's Governance & Culture component. This is a retrospective analytical mapping, not a DOJ or COSO finding about Volkswagen. [S03]

NFRISK PRACTITIONER INTERPRETATION

A control test that the target can detect is not reliable evidence of normal operation. Assurance should include independence from the product team, unpredictable or in-use testing, comparison of test and real-world outputs, monitoring for mode-dependent behaviour and an escalation route for deliberate circumvention. Intentional manipulation is a governance and control-integrity failure, not merely a testing defect.

PRIMARY-SOURCE REGISTER

S01 US Department of Justice (2017)
Volkswagen AG Agrees to Plead Guilty and Pay \$4.3 Billion...
S02 US Department of Justice (2017)
Volkswagen guilty plea
S03 COSO (2017)
Enterprise Risk Management - Integrating with Strategy an...

EVIDENCE BOUNDARY Official findings are separated from the institutional scenario, framework interpretation and NFRisk practitioner view.