

## **Design Process Failure: The Creation of Engineering Disasters**

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Modern engineering disasters routinely occur due to avoidable errors in the design process. Typical errors involve “comfortable” but unreasonable assumptions about other participants in the design process, “Ceremonial” compliance with inappropriate regulations and unreasonable expectations involving the user or consumer. Over reliance on inappropriate expertise can aggravate the problem, as can designers lack of knowledge of the environment in which products and systems may be used. .

Disasters such as the Kaprun funicular-railway tunnel fire, the sinking of the Titanic, the Airbus A300 vertical-stabilizer failure, the Sicilian ATR 72 ditching, the Lathen Transrapid collision, the World Trade Center collapse, the Mont Blanc tunnel fire and the Concorde accident all represent design process failures. There are other designs which are “disasters waiting to happen”.

The development of a “single market” in Europe can only exacerbate these problems by introducing even more uncertainty in the technical culture surrounding the design and use of products. The training of engineers must reflect the ever more complex environment in which products are designed and used.