

## **Review of the Modern Rank of Zero Defect Quality**

**Sergej Gričar**

University of Novo mesto, Faculty of Economics and Informatics, Slovenia  
*sergej.gricar@uni-nm.si*

**Drago Papler**

Electro Gorenjska, Slovenia  
*drago.papler@gmail.com*

**Štefan Bojnec**

University of Primorska, Faculty of Management, Slovenia  
*stefan.bojnec@fm-kp.si*

In the article we are reviewing simple thesis of Crosby (1979) that each product and each service should be harmless. The starting theoretical point is to investigate types of quality prevention of errors and compliance (Crosby, 1979), analysis and understanding of big data information in relation to Deming's plan–do–check–act or plan–do–study–adjust circle. Therefore, the article examines quality behaviour as a case study of recent articles of Business Insider on the contemporary topic of wounding managerial movements and reflection on the sensitivity and volatility of airline guiding out of the office. In the empirical part, we use data on the number of airplane crashes during the last few years with the number of dead at different locations.

The null hypothesis is that there is still a space of at least several percent to improve businesses against defects nevertheless; Crosby declared word “prevention” back in 1979. Cole (2017) emphasized that the key goal is to give analytic systems a perspective view of the future, in order to be able to predict and warn of errors even before they occur. Quantitative processing of large amounts of data in order to have a usable value is a key challenge. Digital transformation is important here. The alternative hypothesis covers the idea of Alexopoulos and Packianather (2017) that zero defects already reached. Moreover, “advanced manufacturing initiatives, such as recently launched Industry 4.0 initiative, focus achieving zero product defects throughout the manufacturing process” (Ferreira et al., 2018, p. 374). They found that Industry 4.0 would need large and complex production networks and collaborative engineering.

The quality outcome is that there is always as much as possible safe product or service. The costs of no quality or with other words defects are not more than statistically three-sigma limits e.g. 2.5% of the total income. But on the other hand the newest prepositions are that quality is as less defects as six-sigma limits and therefore no accidents should even ever happen. Therefore, the managers should keep in mind the quality statues and effects on the consumer life and company success. Most issues of quality come from the managerial staff, not from workers. Crosby (1979) analysed in depth this task and therefore the repetition of the tension and complexities of our contemporary quality in the economy is a must. For managers, it is important that never do not let it go on the market any service or any product that is not perfect. This means that it causes any damage to things or to human beings. The fast and rapid changes, the responsiveness and the constant reorganization of companies and modes of work and knowledge in the field of technology, methodology, management principles and quality elements are necessary. Among them can be the connectivity of digital systems and digital transformation, innovation, the promotion of quality and excellence, new marketing channels and methods to be competitive. A better and qualified database supported by simulation tools will lead to the development of a preventive quality assurance system (PQAS), which not only helps to control quality in mass production, but in addition optimizes the completely developing and preproduction processes (Hofman et al., 2017). Additionally, von Randow et al. (2017) present a trend and forecast model that enables a preventive identification of upcoming abnormalities to quickly respond with correlated measures to

prevent customer dissatisfaction. The results of ordinary least square test would present our confirmation and status of the word prevention in contemporary business.

*Keywords:* quality management, case study, aircraft industry, ordinary least square

*References:*

- Alexopoulos, T. and Packianather, M. (2017). A monitoring and data analysis system to achieve zero-defects manufacturing in highly regulated industries. In: Campana, G., Howlett, R., Setchi, R., Cimatti, B. (eds.) Sustainable Design and Manufacturing 2017. SDM 2017. Smart Innovation, Systems and Technologies, Vol. 68. Springer, Cham.
- Cole, T. (2017). Digital Transformation - 3 really big trends, 4 action fields and 3 lessons learned. In: 61st EOQ Quality Congress in Bled, Slovenia on October 11-12, 2017. Success in the Digital Era - Quality as a Key Driver.
- Crosby, B. P. (1979). Quality is free. The art of making quality certain. New York: McGraw-Hill.
- Hofmann, R., Groeger, S. and Fiebig, S. (2017). Intelligent measuring data for production control. *International Journal of Advanced Quality* 45(2), 19-26. DOI: 10.25137/IJAQ.n2.v45.y2017.
- von Randow, N., Ramm, A. and Dust, R. (2017). Preventive Quality management for mobility services using data analytic methods. In: 61st EOQ Quality Congress in Bled, Slovenia on October 11-12, 2017. Success in the Digital Era - Quality as a Key Driver.