



Contribution ID: 45

Type: **not specified**

## Reliability Growth in the Context of Industry 4.0

*Tuesday, 12 September 2023 17:20 (20 minutes)*

One of the last major steps in the development of complex technical systems is reliability growth (RG) testing. According to [1], RG is defined as [...] improvement of the reliability of an item with time, through successful correction of design or product weaknesses. This means that besides testing, a qualified monitoring and inspection as well as an effective corrective action mechanism is required. The simultaneously running and interacting processes of testing, inspection and correction share some of their data sources and require input from different fields of the development. Thus, digitalisation of the RG process has high potential in terms of effectivity in time, costs, data quality and longitudinal comparability of results.

This talk summarizes the findings of implementations of the RG process in digital industrial environments. Established RG models are compared not only according to statistical properties but also with regard to connectivity in machine-to-machine applications.

[1] Birolini, A. (2004): Reliability Engineering. 4th ed., Springer, Berlin.

### Keywords

Reliability Growth, Industry 4.0

### Classification

Both methodology and application

**Primary author:** HASELGRUBER, Nikolaus (CIS Consulting in Industrial Statistics GmbH)

**Presenter:** HASELGRUBER, Nikolaus (CIS Consulting in Industrial Statistics GmbH)

**Session Classification:** CONTRIBUTED Reliability 2

**Track Classification:** Reliability