

# **Mål for produksjonstilgjengelighet (ISO 20815 - Annex G)**

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# 1. Content

- Performance measures
  - prediction
  - historical reporting
  - plus target setting throughout alle phases
- Production loss categories
  - **Production facility**
  - (Drilling rig)
  - (Upstream installation and intervention)
  - (Midstream events)
  - (Downstream events)

ISO 20815 Annex G: Similar to Annex D in Norsok Z-016



Note: Upstream, midstream and downstream defined in ISO14224

## 2. Production assurance terms

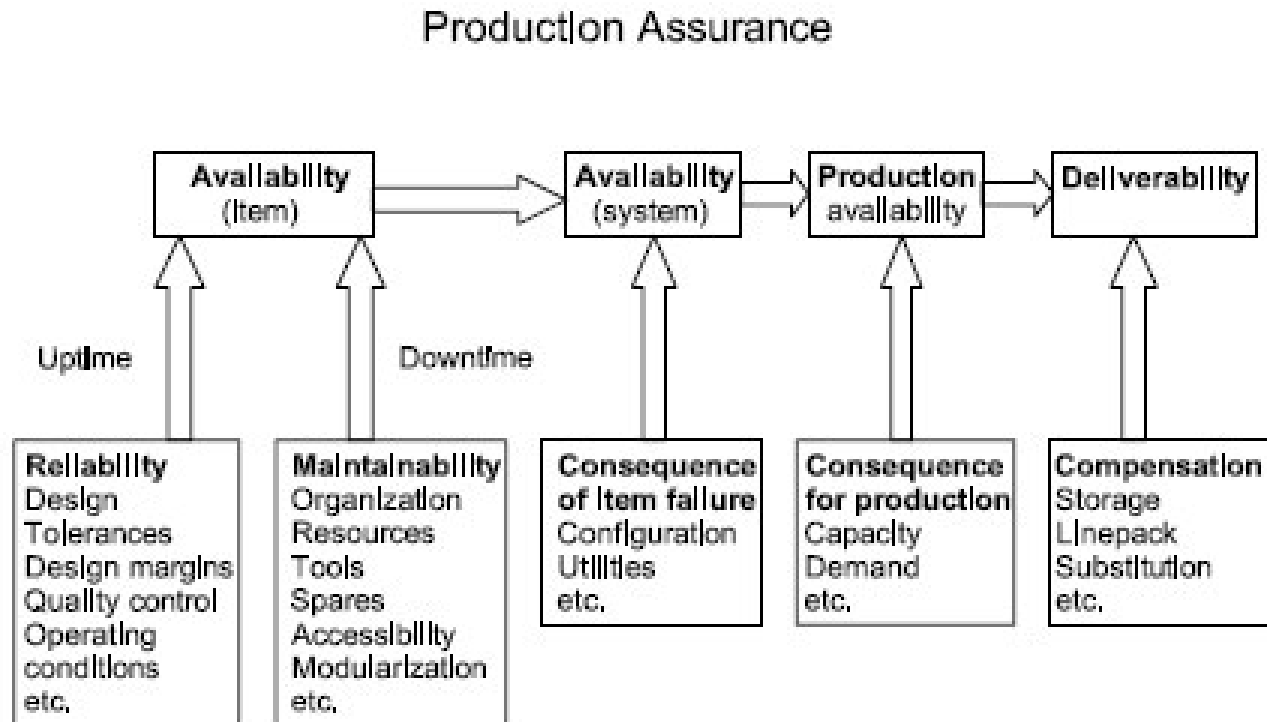


Figure G.1 — Illustration of the relationship between some production-assurance terms



### 3. Performance measures for production availability



- Performance measures
  - prediction
  - historical reporting
- Specify type of events covered in analysis
- Type of measures
  - Volumetric or time
- Level and battery limits of measures
  - **Facility level (3-4)**
    - **Production (un)availability**
    - **Gas deliverability**
    - **Gas injection (un)availability**
    - **Production unavailability due to compressor failure**
  - System level (5)
    - Compression system availability
  - Equipment level (6)
    - Compressor unavailability

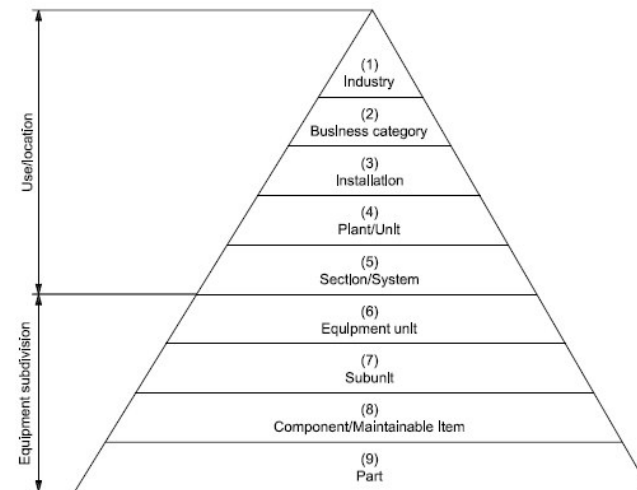


Figure 3 — Taxonomy



## 4. Production availability ( $P_A$ )



$$P_A = \frac{V_P}{V_R}$$

where

$V_P$  is the produced volume;

$V_R$  is a reference production volume.

- Reference level
  - a. Contracted volume
  - b. Design capacity
  - c. Well-production potential
  - d. Planned production volume assuming no downtime (planned or unplanned)
    - *Preferred reference level in predictions*
    - Ensure risking only once wrt production profiles
  - e. Planned production volume



## 5. Production loss categories



- See Table in Annex G
- Production loss contributors in prediction
  - Beneficial to present predicted/simulated losses according to this table, especially for existing plants using such format
- Production loss contributors in historic reporting
  - Oil and gas company usage may still vary, but same format can allow asset/company comparison and benchmarking, and also comparison with earlier predictions

