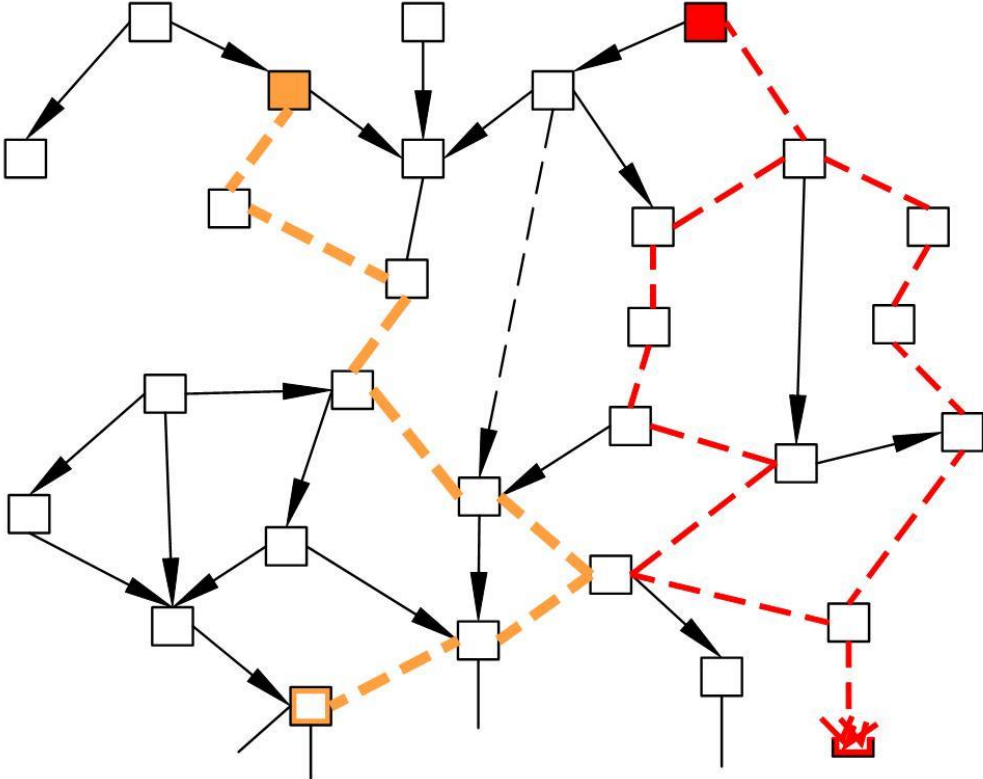




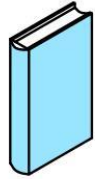
Franz Knoll, Ing. Dr. Sc. Dr. h.c.

GENESIS, PEPETUATION, CORRECTION OF ERRORS

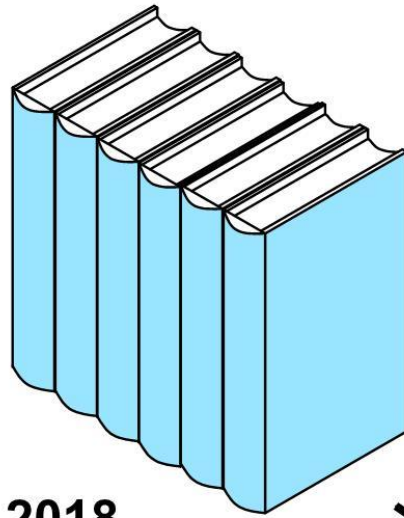


-  Error generated
-  Error caught + corrected
-  Error takes effect

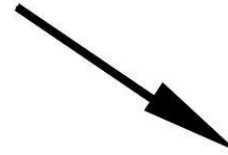
BUILDING CODE DEVELOPMENT

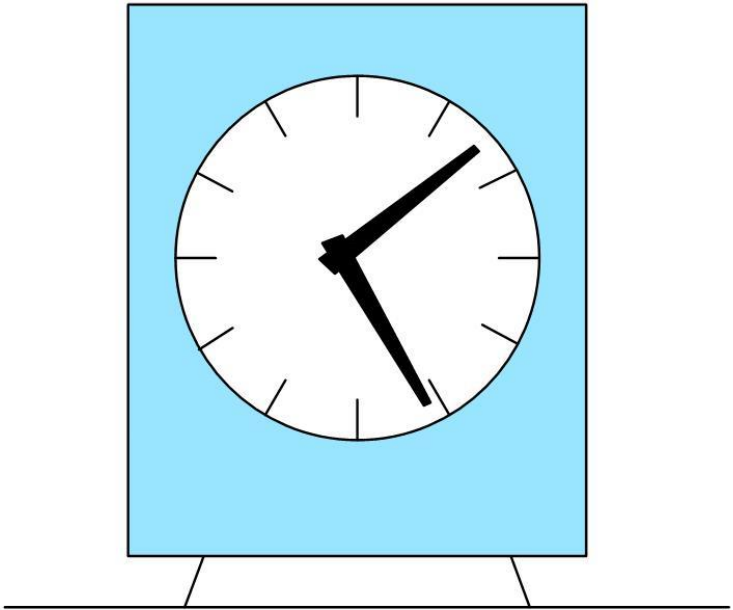


1970



2018



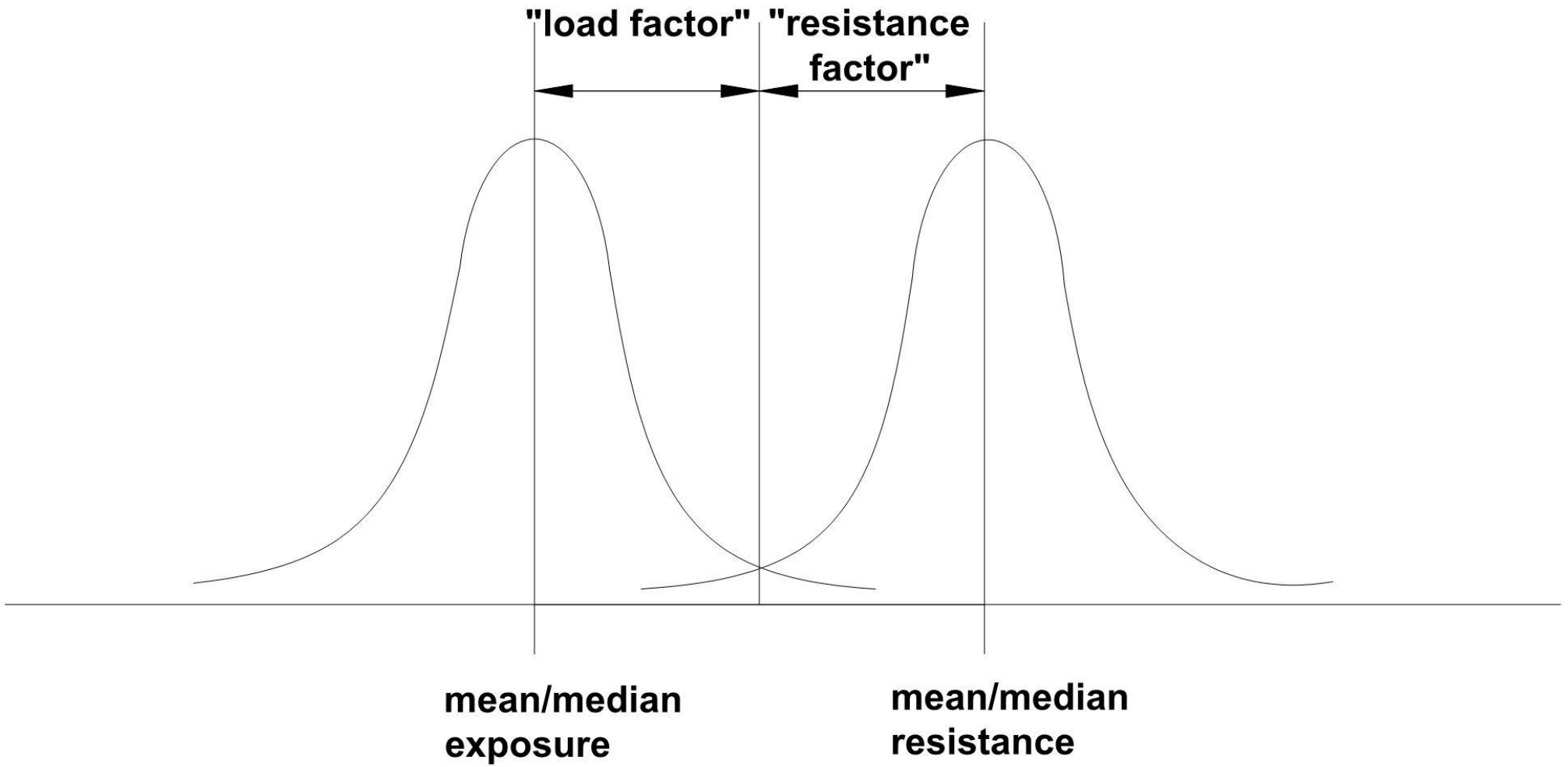


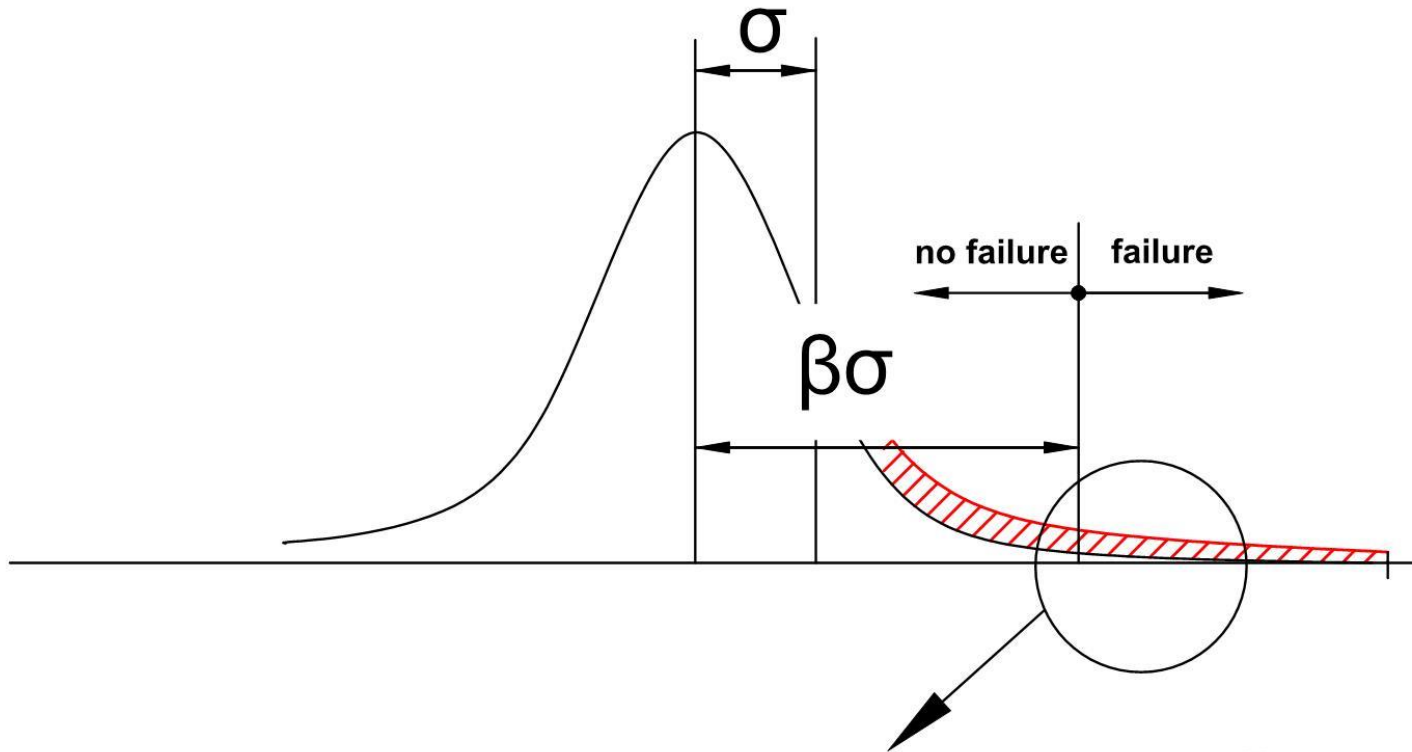
PENNY - WISE DECISIONS

- Δ ¢



+ Δ \$



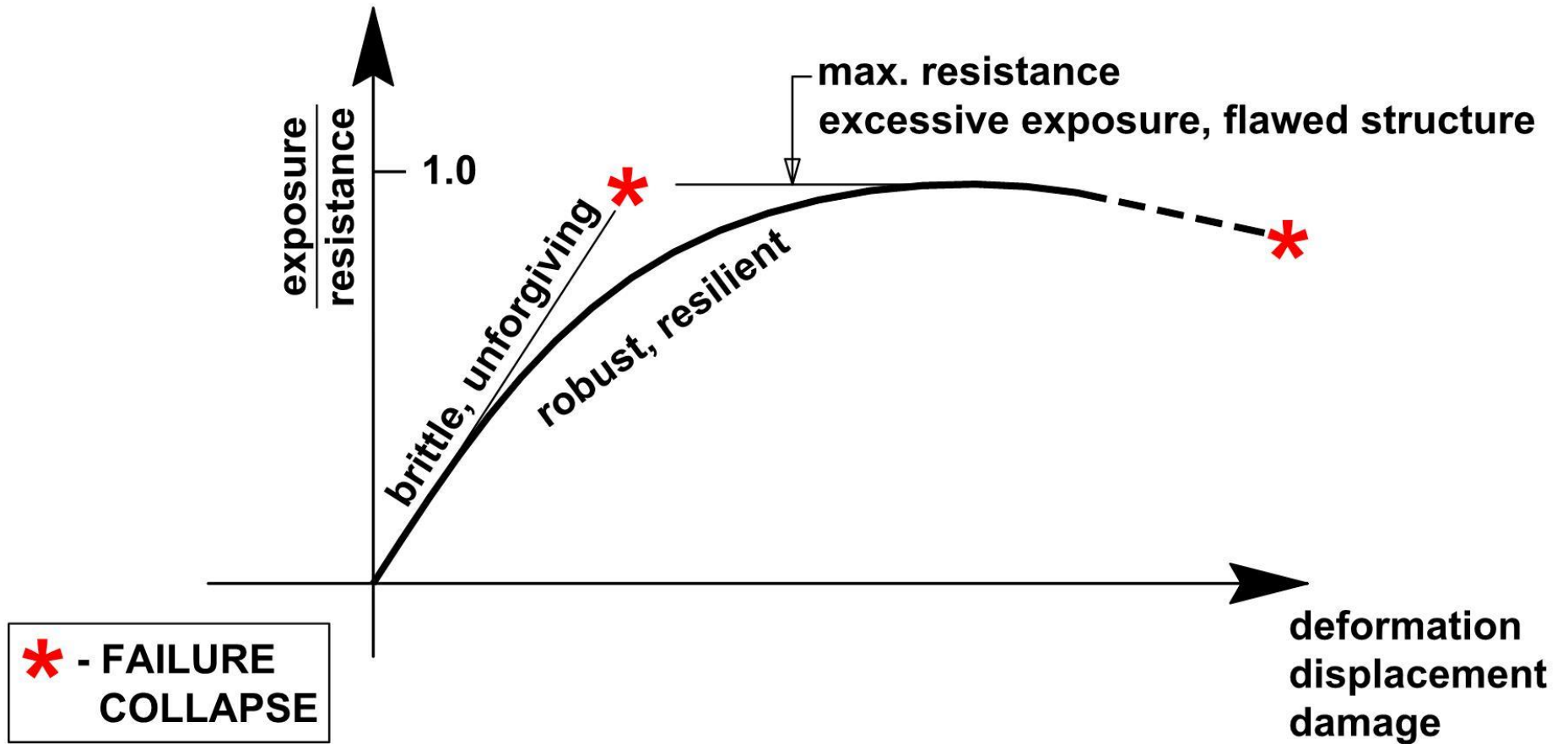


no failure failure

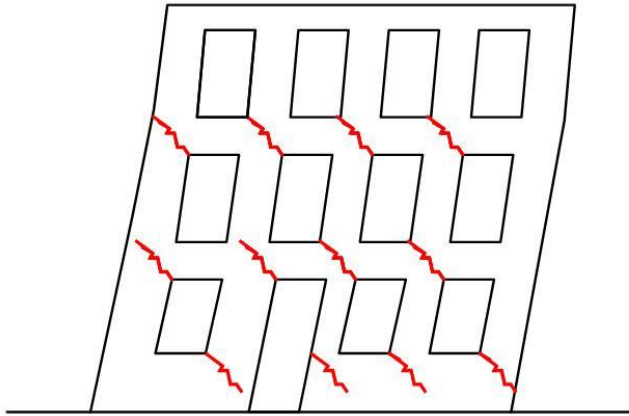
$\beta\sigma$

reality, frequency of failure 10^{-2} to 10^{-3} , including effect of errors

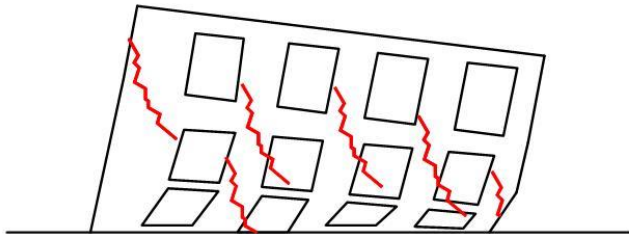
theory, probability of failure 10^{-5} to 10^{-6} (what the code committee has in mind)



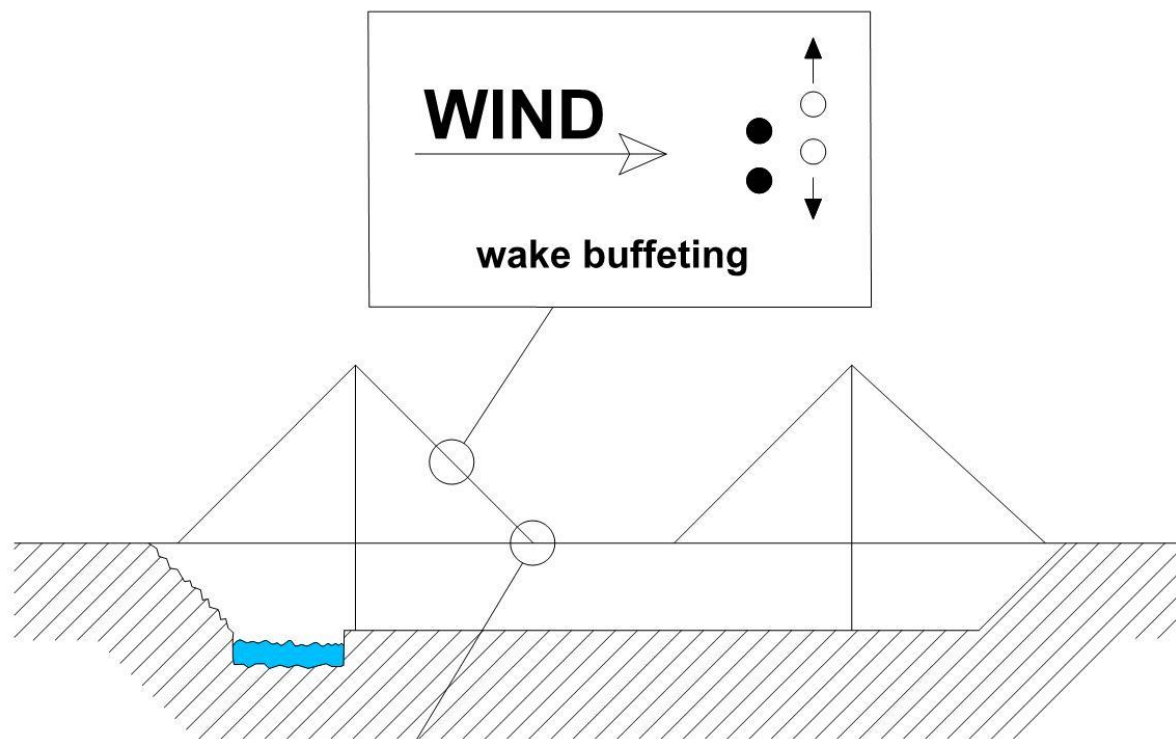
ROBUSTNESS THROUGH DEFORMABILITY



YES



NO



WIND
wake buffeting

**secondary
bending
low cycle
fatigue**

low toughness (charpy)
-20°C
damping ~0