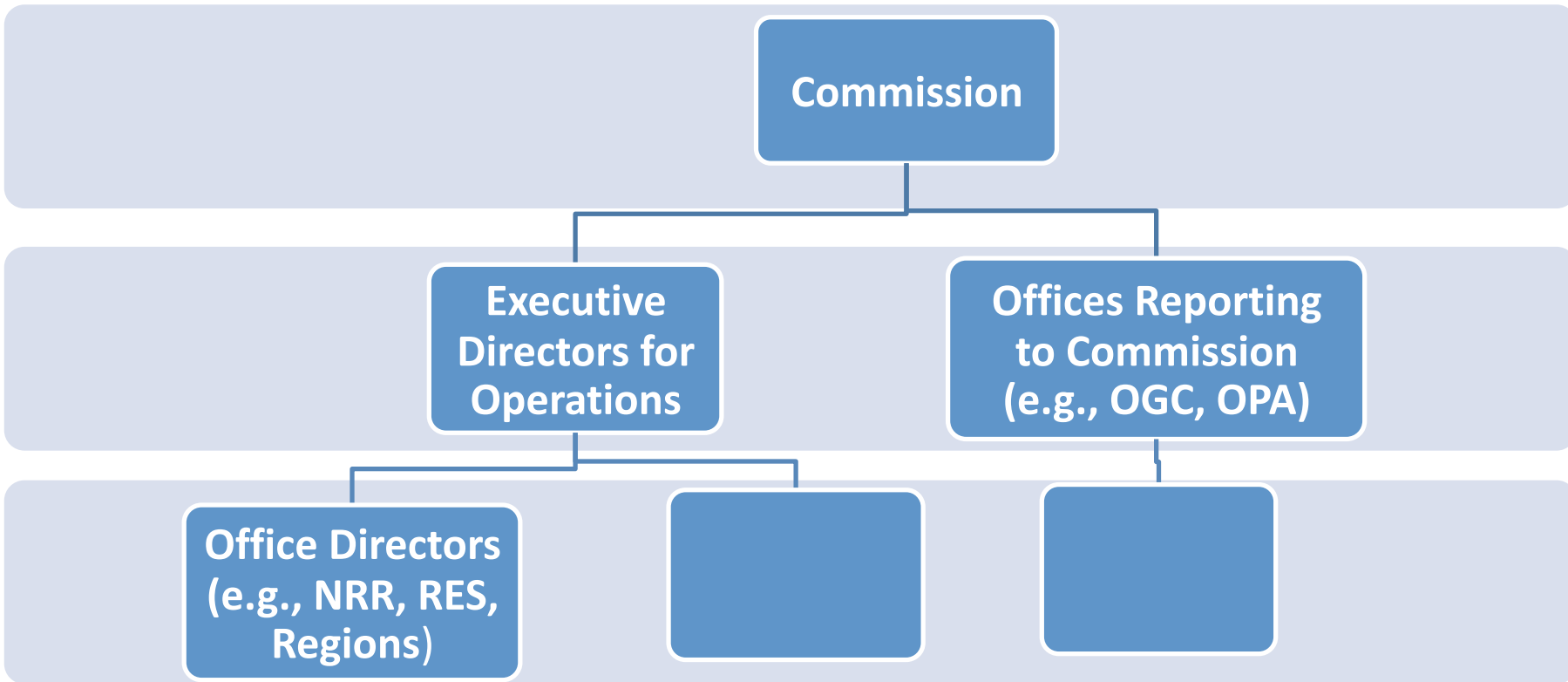
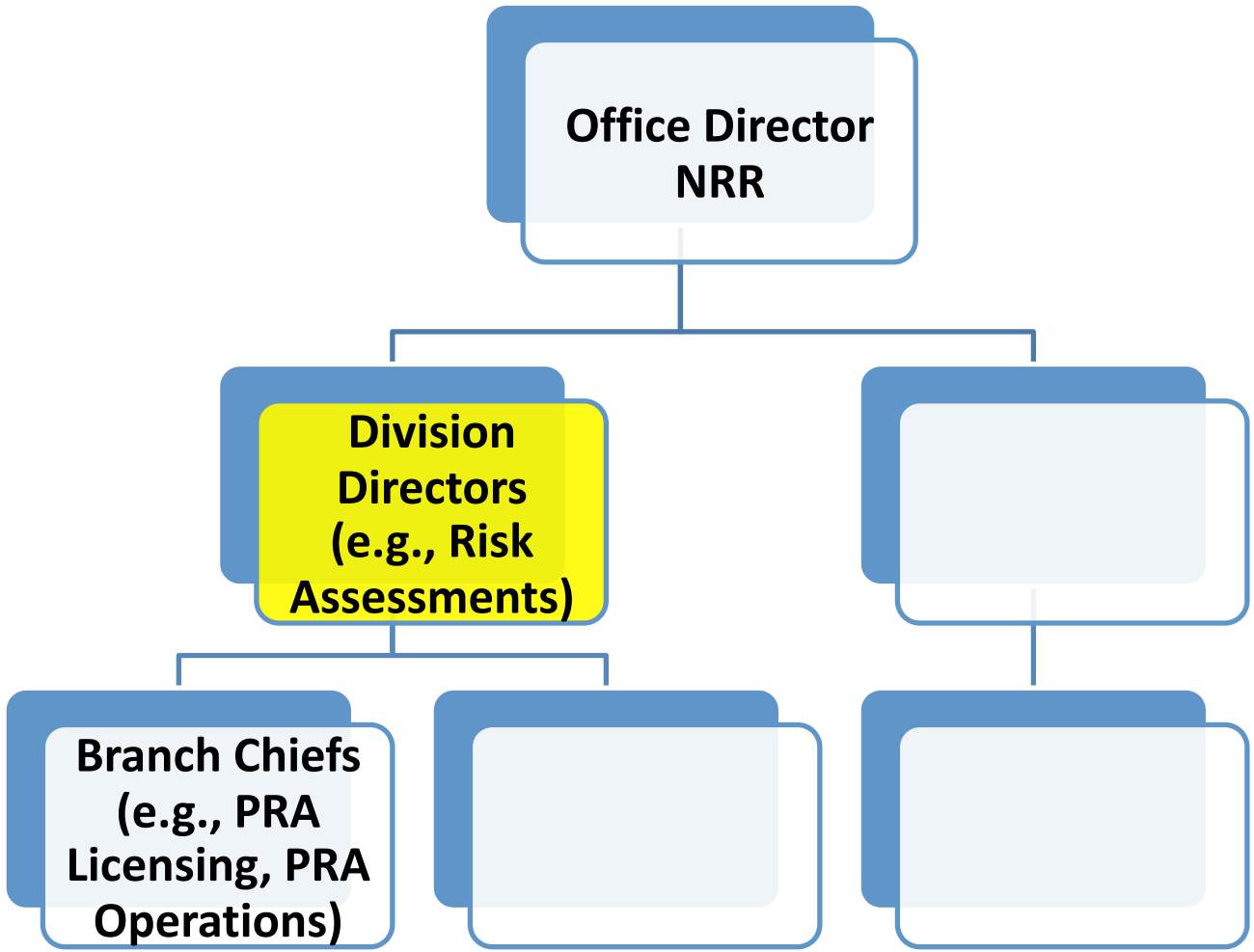
Risk Communication with Mid-Level Decision Makers Challenges and Lessons Learned September 18, 2018

Sunil Weerakkody, Ph. D.
Sr. Technical Advisor in Probabilistic Safety Assessment
Division of Risk Assessment
Office of Nuclear Reactor Regulation
US Nuclear Regulatory Commission

Senior Management



Mid-Level Decision Maker



Challenges

- **Select appropriate topics**
- Choose appropriate content
- Choose level of detail
- Select communication mechanism\s
- Select the “messenger\s”
- Choose “timing”
- ?

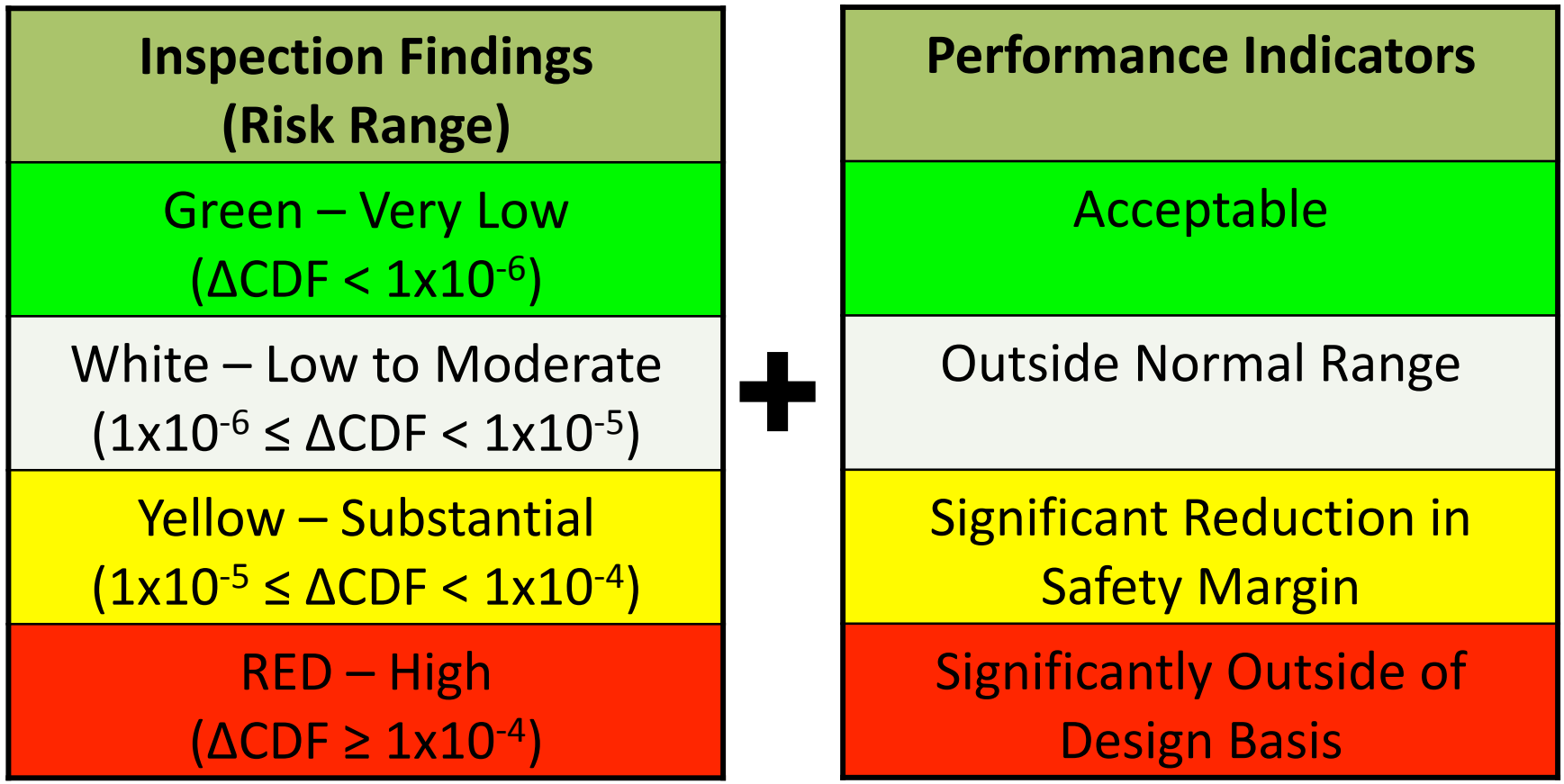
Selecting Topics (Examples)

- Licensing – Cost\Schedule\Efficiency
- Reactor Oversight Process – Risk Significance of Findings
- **Risk-Informed Decision Making (RIDM)**
- Fire PRA Realism
- Use of Newly Developed Methods in PRAs
- Margins between QHOs and Risk Metrics
- Crediting FLEX Strategies in RIDM

Challenging Decisions (RIDM)

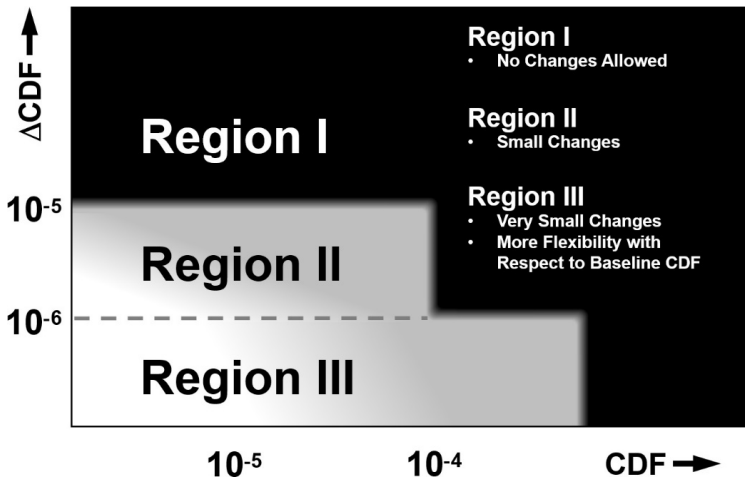
- How should the NRC staff communicate issues to enable RIDM?
  - How did we combine quantitative risk results with other criteria to facilitate risk informed decision making?
    - Specific concern is when quantitative risk results are near or exceed regulatory thresholds

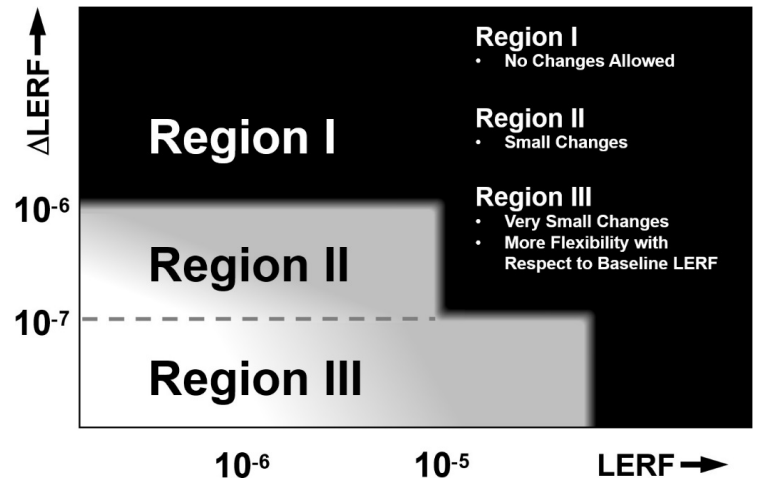
Plant Assessment



RG 1.174 and Application Specific Metrics Should Be Met

Compare PRA results to RG 1.174 or application specific acceptance criteria





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Some Key Pertinent Facts

- Industry and NRC have been aggregating quantitative results since the 1970s.
- Aggregating mean values of risk metrics (CDF, LERF) attributed to initiators with varying uncertainties is mathematical correct.
- NUREG-1855 provides guidance on how to treat uncertainties.
- For purposes of risk-informed decision making numerical values associated with defining the regions in RG 1.174 are to be interpreted as indicative values only.

Lesson Learned

Clearly articulated guidance on how to consider factors such as defense-in-depth, safety margin, and performance monitoring can mitigate the decision making challenges associated with risk-informed decision making in reactor oversight, licensing, and incidence response processes.