The Role of the Regulator in SMS

ITF SMS Roundtable
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OUTLINE

• Objective and assumptions
• Framework - SMS typologies
• Key recommendations and observations
Objective & assumptions

- **Objective**: to inform decision-makers

- **Assumptions**:
  - general goal of regulatory programmes
  - accident causation
  - foundational role of regulatory authority *vis-à-vis* SMS
  - Importance of SMS being hazard- and risk-based
SMS Typologies

1. Compliance-based SMS
2. Compliance-based & limited system safety functionality SMS
3. Process-based
4. Integrated risk-based SMS

Risk-based

Prescribed → Performance-based
# SMS Typologies

<table>
<thead>
<tr>
<th></th>
<th>Compliance-based</th>
<th>Compliance &amp; system safety</th>
<th>Process -based</th>
<th>Integrated performance</th>
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</thead>
<tbody>
<tr>
<td><strong>Accident causation model</strong></td>
<td>n/a</td>
<td>Reliability model</td>
<td>Reliable mgmnt of tech + ops systems</td>
<td>Organisational model &amp; performance</td>
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<td><strong>SMS integrated with regulations</strong></td>
<td>Stand-alone SMS</td>
<td>Limited - varies by jurisdiction</td>
<td>Generally – varies by jurisdiction</td>
<td>Completely: SMS is regulatory ‘umbrella’</td>
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<td><strong>SMS integrated with company mgmnt systems</strong></td>
<td>n/a</td>
<td>At best, restricted to technical aspect</td>
<td>Limited – varies by jurisdiction</td>
<td>Completely: strategic safety goal aligned with enterprise management</td>
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<tr>
<td><strong>Focus of SMS</strong></td>
<td>Regulated requirements</td>
<td>Technical and operations</td>
<td>Tech, operational &amp; SMS processes</td>
<td>Corporate safety performance</td>
</tr>
<tr>
<td><strong>Proactive ID of hazards</strong></td>
<td>n/a</td>
<td>Prescribed HAs of technical systems</td>
<td>HAs; RAs; hazard reports; limited HF</td>
<td>HAs &amp; RAs; ID SSDs using multiple sources</td>
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<tr>
<td><strong>Measurement of SMS</strong></td>
<td>Components documented</td>
<td>SMS Components documented/used</td>
<td>Audit of SMS processes</td>
<td>Evaluation tools that measure company-wide safety management</td>
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<td><strong>Miscellaneous</strong></td>
<td>QA; ‘engineered’ HF; investigate for tech &amp; HF ‘failure’</td>
<td>Voluntary reports; SMS Office; process improvements.</td>
<td>SRM advice to executives; change management; human factors</td>
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Recommendations

• Focus on objectives. Plan, communicate and engage stakeholders.

• Apply system safety concepts to enterprise. Leverage financial & insurance industries.

• Align safety-risk management terms and tools to identify and manage organisational factors.
Selected observations

• Defining and measuring ‘system performance’
• Developing and employing regulatory tools
• Managing SMS-related data
• SMS & small service providers
Conclusion