System Safety and Management Intervention

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1. Aim

To develop a guidebook to

- investigate the social safety attributes of complex systems in operational use
- explore the implications of management on safety issues

2. Methodology

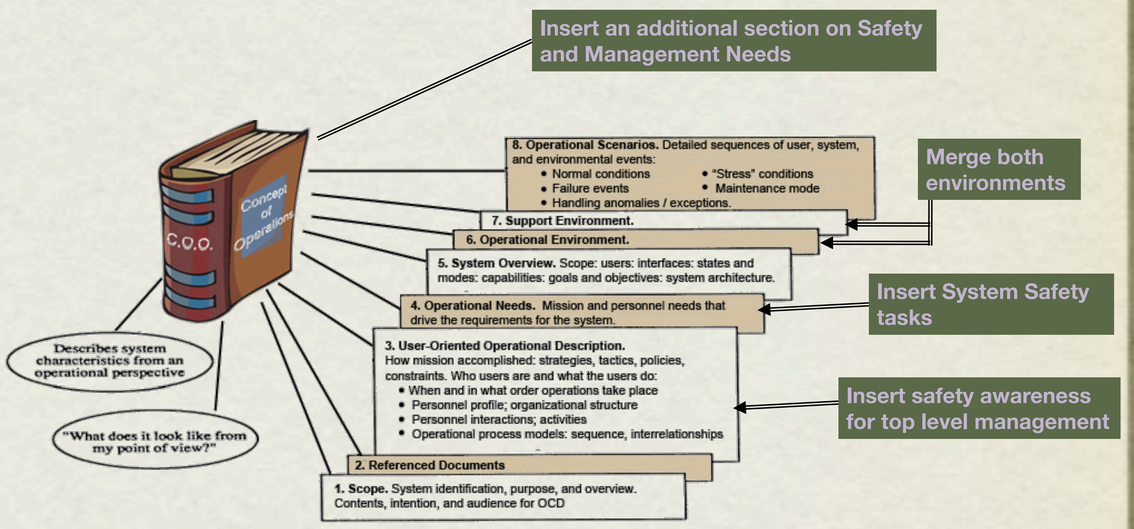
- Review and describe the different types of systems and their distinct behaviours
- Introduction to System Safety terminologies
- Review some of the traditional and current approaches to System Safety
- Analyse and identify the different type of human elements existent in the management
- Review prominent safety failures to relate the key issues about the existence of the human elements, such as Deepwater Horizon Oil rig explosion, Space Shuttle Challenger Disaster
- Improve the Concept of Operations document in the Systems Engineering Process that will help to achieve the goals of System Safety

3. Findings

Human elements that contribute to System Safety

- Perceptions
- Stress and Judgment
- Attitudes of leadership
- Cognitive Biases
- Communications

Improvements to the Concept of Operations Document



4. Conclusion

The guidebook will

- outline the types of social factors which may influence the effectiveness of the operating procedure
- provide an evaluation process to better develop the Concept of Operations document to help top level management to overcome the social factors which may impinge on their effectiveness of decision-making during failures

References

Virginia Department of Transportation(VDOT) 2007, 'VDOT Northern Region Operations (NRO) Concept of Operations', Virginia Department of Transportation, US

British Petroleum(BP) 2010, 'Deepwater Horizon Accident Investigation Report', BP