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Safety Culture: A Requirement for New Business Models –Lessons Learned from Other High Risk Industries

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Synopsis

Technical development and changes on global markets affects all high risk industries creating opportunities as well as risks related to the achievement of safety and business goals. Changes in legal and regulatory frameworks as well as in market demands create a need for major changes. Several high risk industries are facing a situation where they have to develop new business models. Within the transportation domain, e.g. aviation and railways there is a growing concern related to how the new business models may affect safety issues.

New business models in aviation and railways include extensive use of outsourcing and subcontractors in order to reduce costs resulting in for example negative changes in working conditions, e.g. work hours, employment conditions and high turnover rates.

The energy sector is also facing pressures to create new business models for transition to renewable energy production to comply with new legal and regulatory requirements and to make best use of new reactor designs. In addition, large scale phase out and decommissioning of nuclear facilities have to be managed by the nuclear industry.

Some negative effects of the new business models have already been observed within the transportation domain. There are several examples of negative effects of extensive outsourcing and use of subcontractors. In the railway domain the infrastructure manager is required by the European and national regulations to assure that all subcontractors are working according to the requirements in the infrastructure managers SMS (Safety Management System). More than ten levels of subcontracts can be working in a major infrastructure project making the system highly complex and thus difficult to control.

In the aviation domain tightly coupled, interacting computer networks supplying services to airports as well as to air traffic control, can be managed and maintained by several different companies creating numerous interfaces which has to be managed by the SMS. There are examples where a business model with several low-cost subcontractors can turn out to be much more expensive due to the need for handling numerous interfaces. Other negative effects are social dumping by external contractors and loss of competence if procurement requirements are not taking quality and safety issues into account.

The paper will present some lessons learned within the transportation domain which can be useful for the nuclear industry in facing the major challenges ahead. Based on MTO Safety's extensive experience in the nuclear domain and work on safety management and safety culture in the aviation, railway and maritime domain some important lessons to be learned for the nuclear industry are presented.

Assuring safety is a fundamental requirement for obtaining a license to operate a business in nuclear power, aviation and railways. Thus safety culture is an essential requirement for a successful business. Therefore safety culture must be part of any new business model in high risk industries. In the future safety culture and leadership commitment and skills in creating safety culture will be even more important. The paper will

discuss how companies and public utilities are to achieve this and how the regulators are to assess this where learning across industries is a key success factor.

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