

SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE  
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A NEW INFORMATION SYSTEM ARCHITECTURE FOR A NEW SPACE EXPLORATION  
PARADIGM: USING STAKEHOLDER ANALYSIS TO REENGINEER THE VALUE CHAIN.

**Abstract**

An information system architecture is proposed in order to take into account the map of stakeholders and relations into a space human exploration venture led by private entrepreneurship and commercial ventures. The model is based on a stakeholder analysis that enables us to capture the main mechanisms that add value to nowadays' visions for space exploration.

Current visions for human space exploration have turned their focus into commercial and private companies, rather than in public funding. Cancellation of the Constellation may deeply affect the development of technologies for human space exploration. Nevertheless, this decision will in fact open new opportunities for private entrepreneurs to participate in space exploration. In order to ensure success of these new ventures, requirements should be rewritten from the beginning, allowing main stakeholders to produce benefits in the value chain. A detailed value chain flow model is proposed, with an adaptive neural network of value propagation discussed. We conclude that advances in the modeling of information systems architecture, are useful not only for identifying key stakeholders in global enterprises such as human exploration, but also a tool for reengineering the whole process and adapting it into new vision paradigms.