

## Neptec UK Ltd; Unified 3D Perception Unit

### Project Summary

Visual navigation systems for space (both orbit and exploration) are developed with processing units almost entirely tailored for each particular sensor suite and for each particular mission which is both expensive and time consuming.

By creating a **Unified 3D Perception Unit** as a plug & play core element (or Common Building Block) for systems involving visual navigation, it is expected a substantial cost reduction can be made across the lifecycle from mission concept to mission completion, and which is applicable for several end applications.

The focus of the study is to assess the feasibility of fusing important and non-uniform data flows from diverse sets of active and/or passive optical sensors by a recurrent data processing platform, will include a determination of common aspects and prepare a high level specification of this new, innovative and potentially disruptive Common Building Block for space-based visual navigation systems.