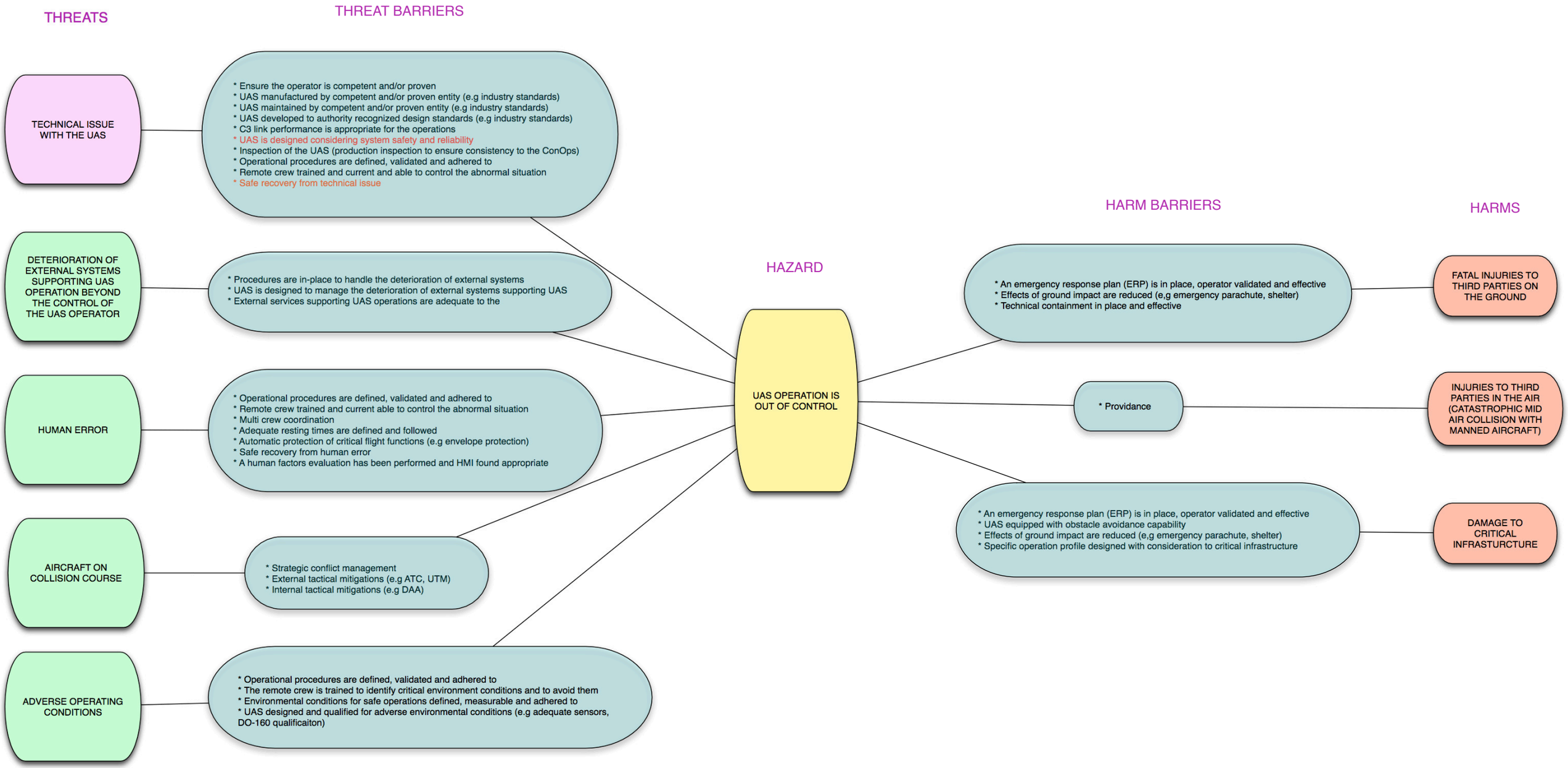
THREATS
THREAT BARRIERS
TECHNICAL ISSUE WITH THE UAS
* Ensure the operator is competent and/or proven
* UAS manufactured by competent and/or proven entity (e.g industry standards)
* UAS maintained by competent and/or proven entity (e.g industry standards)
* UAS developed to authority recognized design standards (e.g industry standards)
* C3 link performance is appropriate for the operations
* UAS is designed considering system safety and reliability
* Inspection of the UAS (production inspection to ensure consistency to the ConOps)
* Operational procedures are defined, validated and adhered to
* Remote crew trained and current and able to control the abnormal situation
* Safe recovery from technical issue
DETERIORATION OF EXTERNAL SYSTEMS SUPPORTING UAS OPERATION BEYOND THE CONTROL OF THE UAS OPERATOR
* Procedures are in-place to handle the deterioration of external systems
* UAS is designed to manage the deterioration of external systems supporting UAS
* External services supporting UAS operations are adequate to the
HUMAN ERROR
* Operational procedures are defined, validated and adhered to
* Remote crew trained and current able to control the abnormal situation
* Multi crew coordination
* Adequate resting times are defined and followed
* Automatic protection of critical flight functions (e.g envelope protection)
* Safe recovery from human error
* A human factors evaluation has been performed and HMI found appropriate
AIRCRAFT ON COLLISION COURSE
* Strategic conflict management
* External tactical mitigations (e.g ATC, UTM)
* Internal tactical mitigations (e.g DAA)
ADVERSE OPERATING CONDITIONS
* Operational procedures are defined, validated and adhered to
* The remote crew is trained to identify critical environment conditions and to avoid them
* Environmental conditions for safe operations defined, measurable and adhered to
* UAS designed and qualified for adverse environmental conditions (e.g adequate sensors, DO-160 qualificaiton)
HAZARD
UAS OPERATION IS OUT OF CONTROL
HARM BARRIERS
HARMS
* An emergency response plan (ERP) is in place, operator validated and effective
* Effects of ground impact are reduced (e,g emergency parachute, shelter)
* Technical containment in place and effective
FATAL INJURIES TO THIRD PARTIES ON THE GROUND
* Providance
INJURIES TO THIRD PARTIES IN THE AIR (CATASTROPHIC MID AIR COLLISION WITH MANNED AIRCRAFT)
* An emergency response plan (ERP) is in place, operator validated and effective
* UAS equipped with obstacle avoidance capability
* Effects of ground impact are reduced (e,g emergency parachute, shelter)
* Specific operation profile designed with consideration to critical infrastructure
DAMAGE TO CRITICAL INFRASTURCTURE