Uniquely Exascale:
Exascale plus Trickle down (Exascale will drive):

	Exasc. Critical Path	RollB/ Reco	Fail. Avoid.
Application successful execution & correctness (Masking approach)			
-Better fault tolerant protocols (low overhead)	X	X	?
-Fault isolation/confinement + specific local management (software)	X	X	
-Use of NV-RAM for local state storage, cache of file syst.	X	X	
-Replication (TMR, backup core)	?		X
-Proactive actions (migration), automatic or assisted?	Pr.		X
Application execution and result correctness (Non masking approach)			
-Application guided (level) fault management	Pr.	X	
-Language / compiler support for resilience	Pr.	X	
-Resilient Apps. + Libs & algo.	Pr.		X
Reliable System			
-Fault oblivious system software (and produce less faults)	X		X
-Fault aware system software (notification/coordination backbone)	X		X
-Prediction for time optimal checkpointing and migration		X	X
-Fault models, event log standardization, root cause analysis	X		X
-Resilient Storage and file systems	X		X
-Situational awareness	X		X
Experimental env. to stress & compare solutions	X	X	X
Primarily Sub-Exascale (Industry will drive)			
-Fault isolation/confinement + local management (Hardware)	X		X
-Checkpoint of Heterogeneous architecture	X		

Priority: Extend the applicability of RollBack Recovery

Priority: Improve system software reliability

Preventive measure/Optimization: Develop Failure Avoidance Techniques