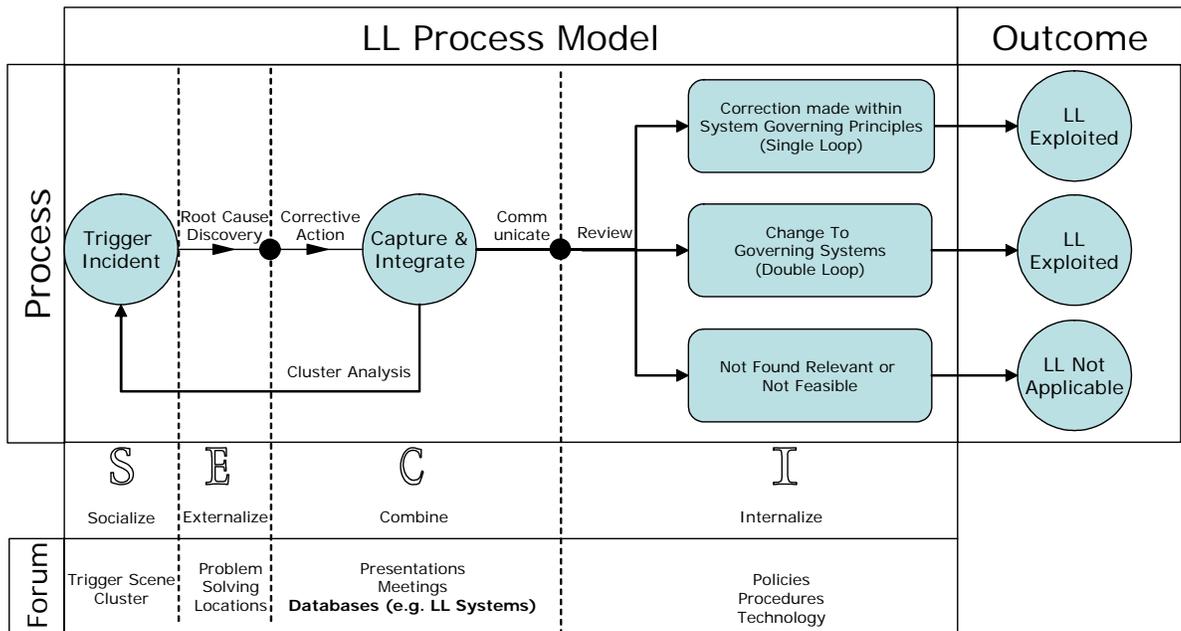


Modern Marvels “Plane Crashes”



It's a GROUP Effort!!

Modern Marvels “Plane Crashes”

Trigger	Root Cause	Corrective Action
TWA 800 	Partially Empty Fuel Tank	<ul style="list-style-type: none"> ■ Legislation that required empty Fuel Tanks to be filled with inert gas
Early Aviators Accidents	Lack of standards and quality assurance	<ul style="list-style-type: none"> ■ Licensing of pilots & Mechanics, Airplane certification
Knute Rockney Crash 	Load Limit exceeded wooden wing design	<ul style="list-style-type: none"> ■ Metal wings and fuselage
CLUSTER: High incidents of Comets ‘Disappearing’	Metal fatigue at corners of square windows 	<ul style="list-style-type: none"> ■ Round windows eliminate stress points
CLUSTER: High fatality rate in survivable crashes (e.g. Denver Runway crash) 	Plane structure increases hazard during crash	<ul style="list-style-type: none"> ■ Structure design to be lighter and energy absorbing. 
	Passenger Confusion	<ul style="list-style-type: none"> ■ Floor Lighting
	Smoke inhalation and engulfing flames	<ul style="list-style-type: none"> ■ Fire resistant seats and interiors

Modern Marvels “Plane Crashes”

Trigger	Root Cause	Corrective Action
<p>Souix City, Iowa Crash</p> <p>CLUSTER: 38% of Crashes Pilot Error (eg; Empire state Building Crash, Flt 401)</p> 	<p>CLUSTER: Control Surface Failure</p> <p>Disorientation, Weather, sleep depravation</p>	<p>Neural Flight Control System</p> <ul style="list-style-type: none"> ■ Pilot Education, and Flight Simulators ■ Ground proximity sensors ■ Synthetic vision system ■ Improved Radar Systems ■ Turbulence detection systems ■ Improved procedures (e.g.; quick nap)
<p>Ground incidents SouthWest 1455 Landing Crash</p> 	<p>Plane lands too fast and too far down runway</p> <p>Increased Runway traffic</p>	<ul style="list-style-type: none"> ■ Engineered material arresting system  <ul style="list-style-type: none"> ■ NASA Incursion Prevention System
<p>Terrorist Attacks</p> 	<p>Pilots overtaken in airplane</p> 	<ul style="list-style-type: none"> ■ TSA increased individual security and baggage screening ■ Bullet-proof flight deck door ■ Pilots trained to carry weapons and in self-defense