

SMS AND SAFETY2

PING LEE

TECHNICAL SUPERVISOR, EVA AIRWAYS



RISK MANAGEMENT

항해와 승마는 삼 할의 위험이 따른다
성공을 위해서는 위험을 감수해야 한다

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SMS

HISTORY

INDUSTRIAL REVOLUTION
TECHNOLOGICAL ADVANCEMENT
WEAKEST LINK
DISASTERS



SMS
REASON

SYSTEM DESIGN LIMIT
HUMAN FACTORS
IDENTIFYING THREAT
PROVIDING GUIDELINES



GUIDELINE

SMS

HOW DOES IT WORK?

DEFINITION OF HAZARD



DEFINITION OF RISK



SMS MATRI X

EVA Risk Assessment Matrix

Severity	Probability of Occurrence				
	Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent -5	5A	5B	5C	5D	5E
Reasonably probable -4	4A	4B	4C	4D	4E
Remote -3	3A	3B	3C	3D	3E
Extremely remote -2	2A	2B	2C	2D	2E
Extremely improbable -1	1A	1B	1C	1D	1E

Risk Tolerability

Risk Level	Risk Index	Suggested criteria
High	5A 、 5B 、 5C 4A 、 4B 、 3A	Immediate action required
Moderate	5D 、 5E 、 4C 、 4D 、 4E 、 3B 、 3C 、 3D 、 2A 、 2B 、 2C 、 1A	Acceptable based on risk mitigation. It may require management decision.
Low	3E 、 2D 、 2E 1B 、 1C 、 1D 、 1E	Acceptable

Components of Modern Aviation Safety Management



LIMITATIONS

LINEAR CAUSALITY

BIMODAL VIEW

DECOMPOSABLE SYSTEM

REACTIVE





SAFETY 2

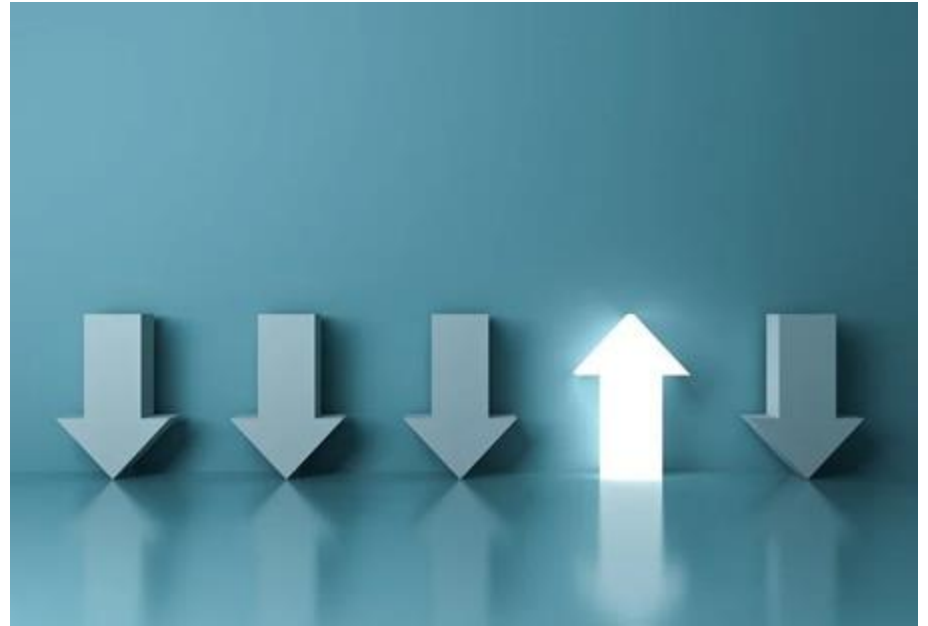
WHAT IS IT?

ORIGIN

WORK AS DONE

RESILIENCE

PARADIGM SHIFT



WHY SAFETY 2?

THINGS DONE RIGHT

NON-LINEAR RELATIONSHIP

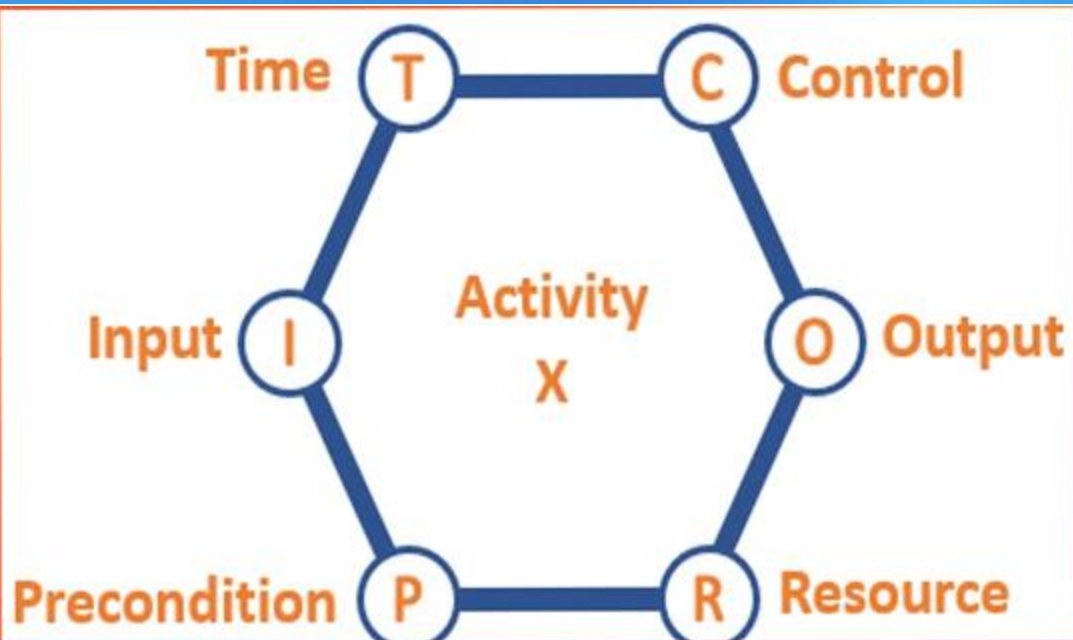
HUMAN CENTERED

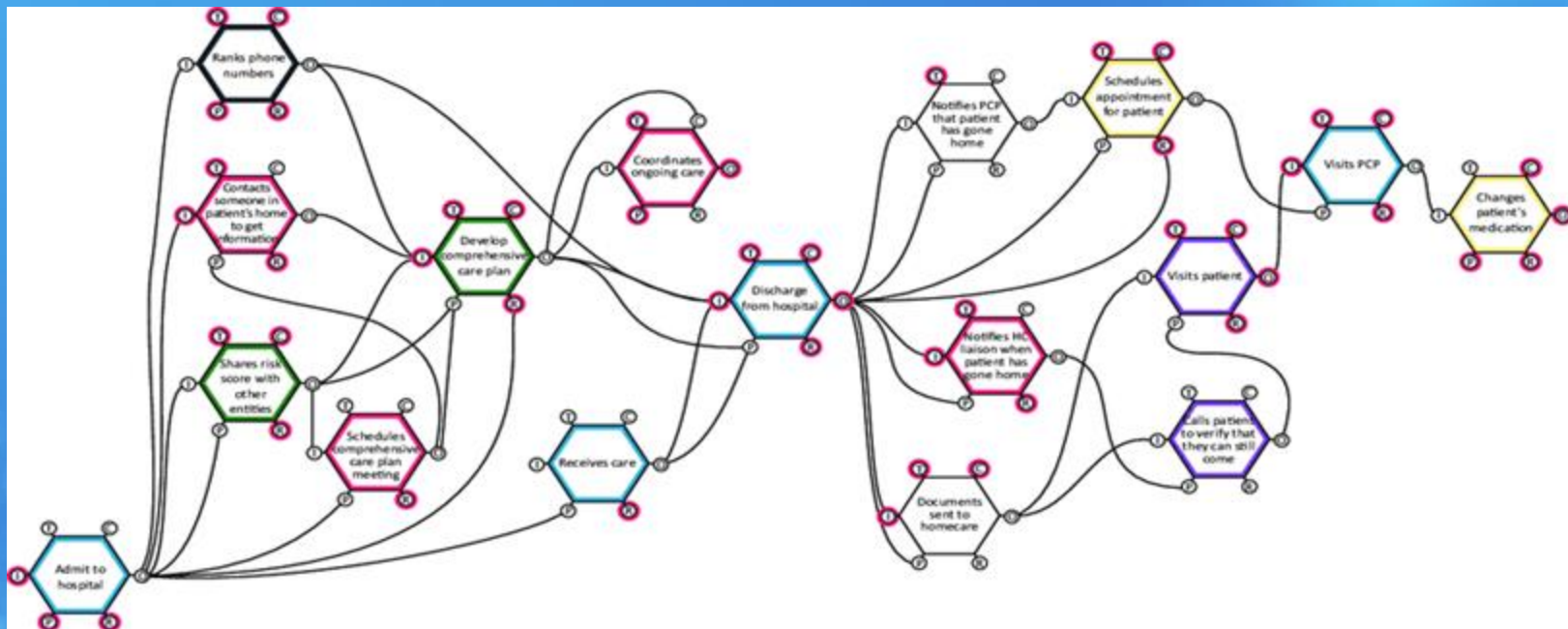
PROACTIVE





FUNCTIONAL
RESONANCE
ANALYSIS
METHOD





WHAT IS IN FOR ME?

DEBRIEFING

JUST CULTURE

CULTURAL CHANGE

POSITIVE REINFORCEMENT



CONCLUSION

Aspects	Safety-I	Safety-II
Understanding of safety	Controlling the number and size of things that go wrong	Ensuring that things go right
Performance associated with safety management	Number of accidents or adverse outcomes	Successful case analysis and duration of smooth operations
View of human behavior	A liability, regarding human factors as the main risks	A resource to manage and ordinate technological systems
View of risk	Preventing the occurrence of risk by various measures	Monitoring and managing of the risk factors
Safety management principle	Reactive, taking action after adverse outcomes	Proactive, try to learn and anticipate the development of events
Knowledge basis	Focus on unexpected events, failures and accidents	Understanding success cases and how things go right

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Thank you!

