New Ways of Proactive Safety Management

——Quantifying Safety to Build Life Channel

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JUNEYAO AIR
吉祥航空

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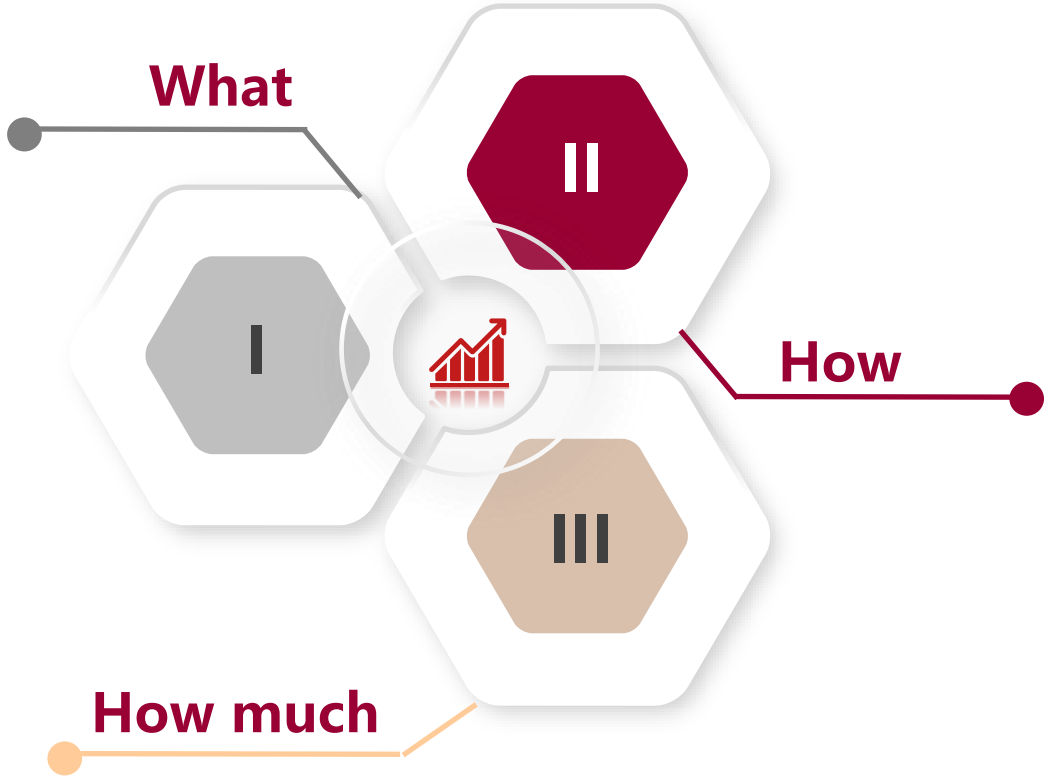
二、What is proactive safety management

三、How to realize proactive safety management

Understanding of proactive safety management



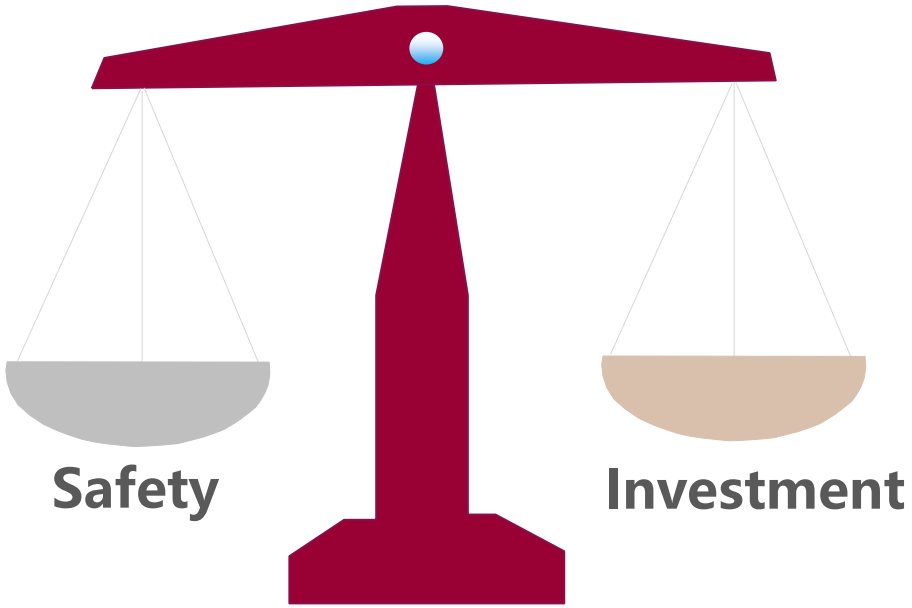
Unstable approach

? simply require flight crew to set flaps

? decelerate in advance

? descend early

Understanding of proactive safety management



- Proactive safety management doesn't equal to flight envelope. Taking safety management steps forward or backward depends on how much analysis and measures we take.

一、The realistic meaning of proactive safety management

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Safety

- Safety is a status in which risks associated with personnel injury or property loss are reduced and controlled to an acceptable level by continuous risk management, instead of the absolute safety with no accidents or the corrective actions afterwards.

Proactive safety management

- The correct concept of proactive safety management should also reflect the right safety management visions, which are getting rid of the wrong idea of "safety equals to no accidents" and gradually changing from the working way of management afterwards to the thinking of nipping in the bud.

一、The realistic meaning of proactive safety management

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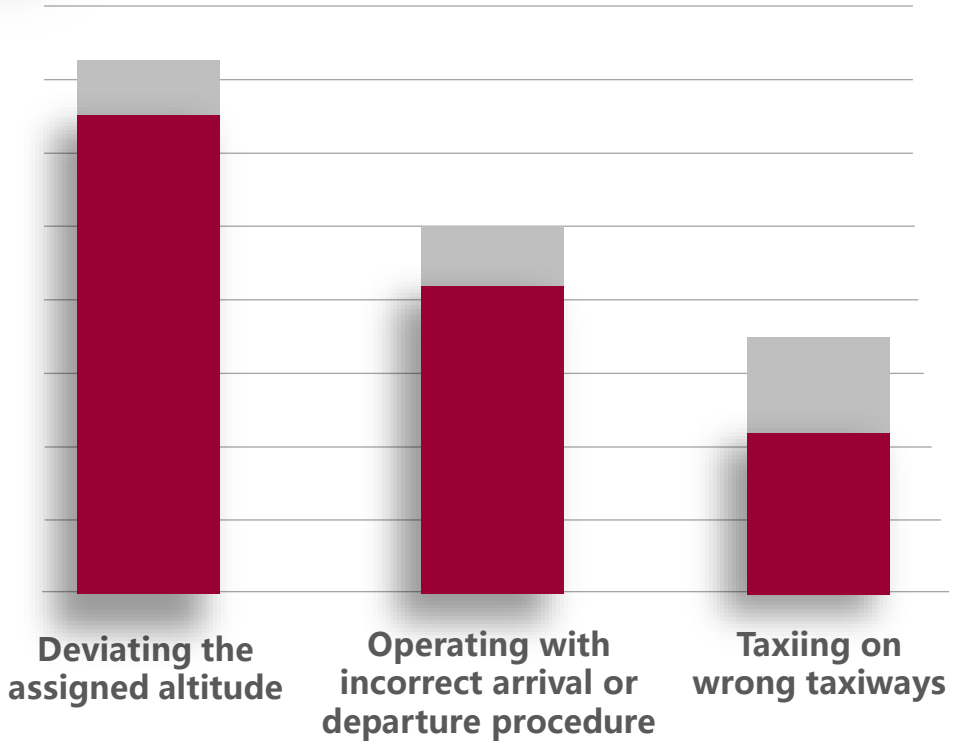
1 Help to set up correct safety concept



- Unfamiliar with airport maps
- Not researching the detailed instructions
- No prompt reminder

➢ Flight crew lack of the awareness of risk prevention and the concept of ensuring safety and proactive safety management.

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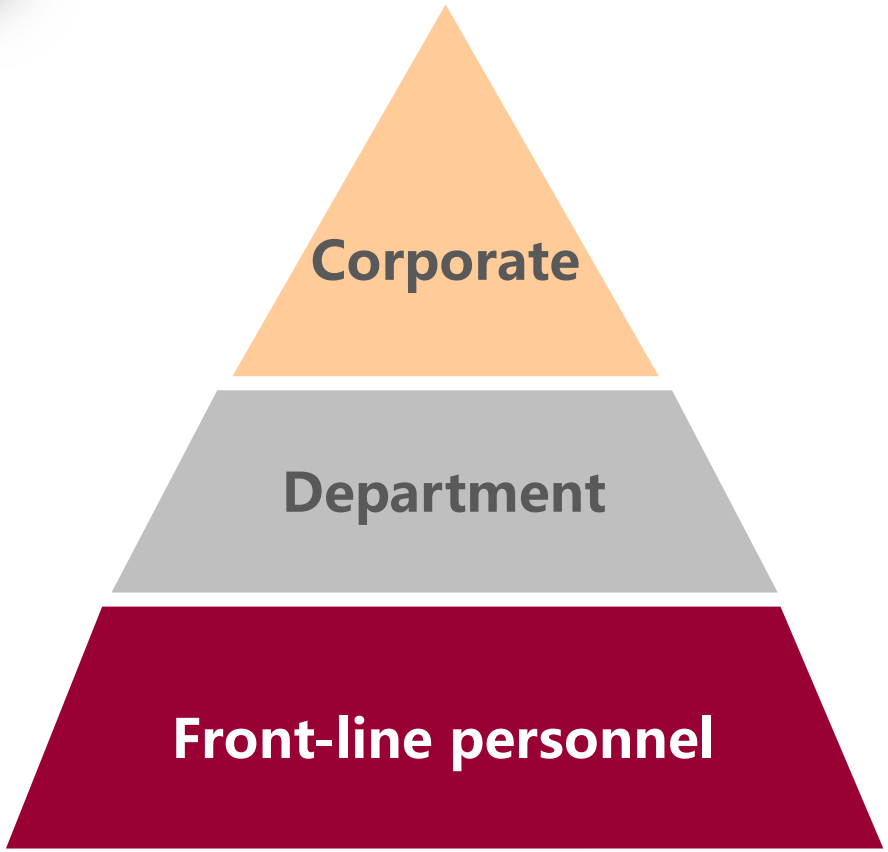
2 Help to shift down the focus of safety work



- Shifting down perspectives
- Shifting down resources
- Shifting down responsibilities

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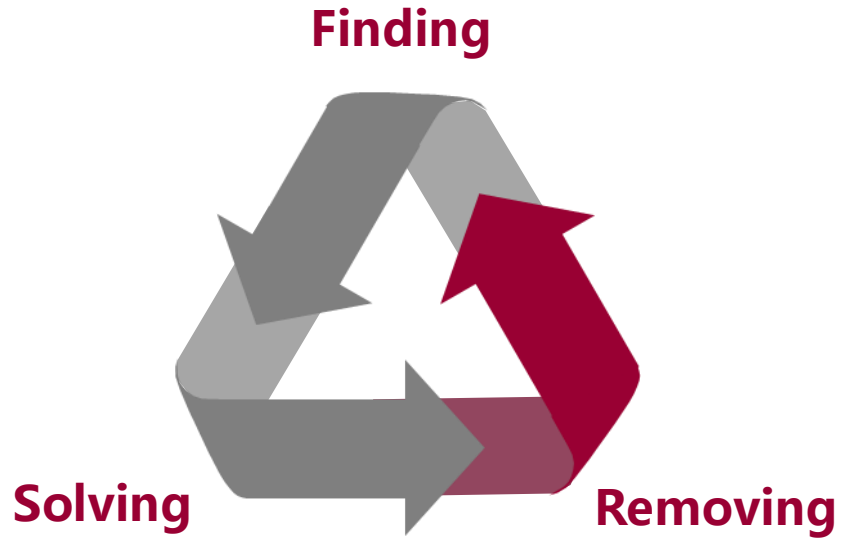
3 Help to realize zero tolerance to potential safety hazards

Zero tolerance to potential safety hazards

- Zero tolerance to potential safety hazards is not equal to zero tolerance to unsafe events, but to the behaviors of ignoring the hazards and not taking any actions.

Proactive safety management

- The focus of safety work should be on the examination and treatment of them before the occurrence of accidents, rather than on the remedial measures afterwards.



二、Safety channel built by reasonable safety investment

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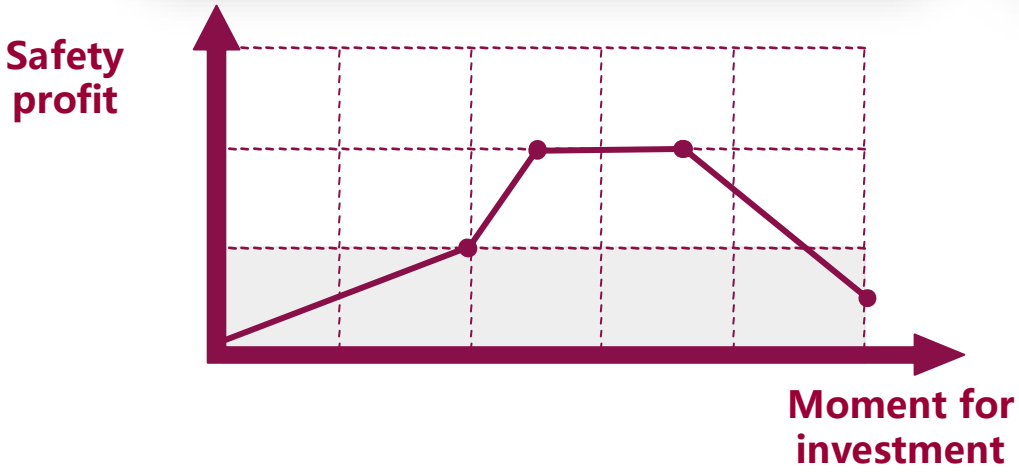
Choose the best moment for safety investment

VS

Building the safety channel is the precondition



- For safety investment, it’s a kind of waste if we invest too early and the profit by the investment can’t be maximized if we miss the best moment. However, investing beyond the safety channel is just useless.

- Safety channel is the channel to make the safety status within certain margin, which is also called life channel.The safety channel is not only the profit balance channel between the investment and safety status, but also the life channel which ensures the risks controllable.

二、Safety channel built by reasonable safety investment

- The establishment of safety channel relies on SMS, the innovation and application and so on. The application of new technique just uses the digital methods to define safety channel and make sure that the life channel with acceptable risks is established by evaluation and pre-caution of risks.

三、The effective ways of proactive safety management

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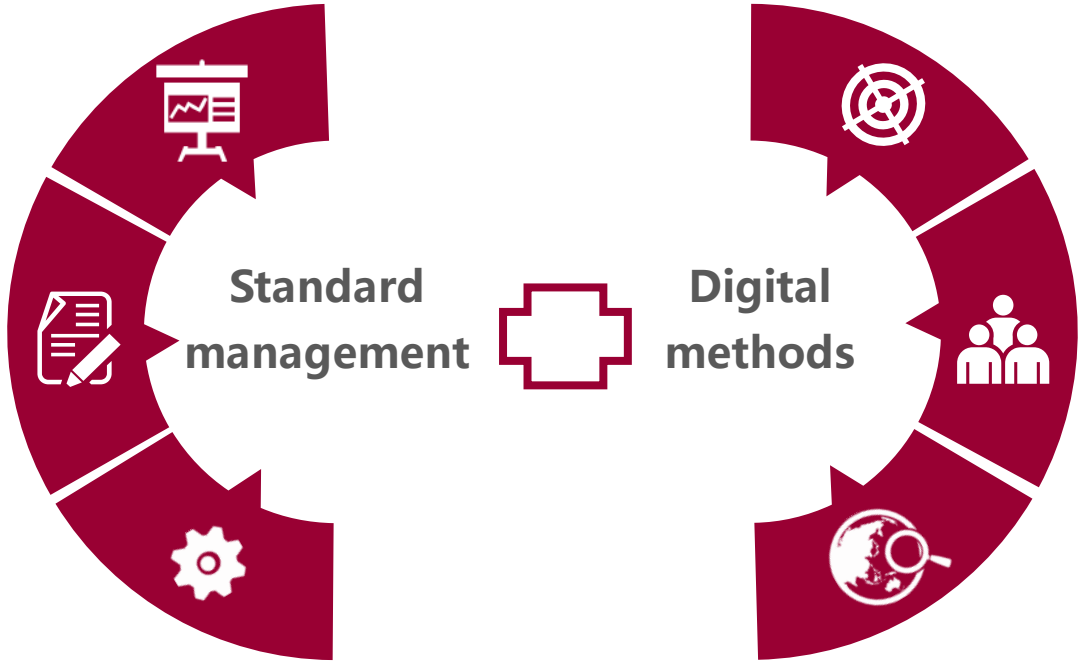
Mean the slogan

- Prevention
- Responsibility
- Control



Concrete methods

- Practicable
- Profitable
- Controllable

三、The effective ways of proactive safety management

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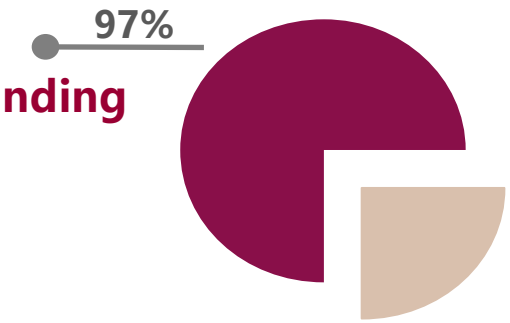
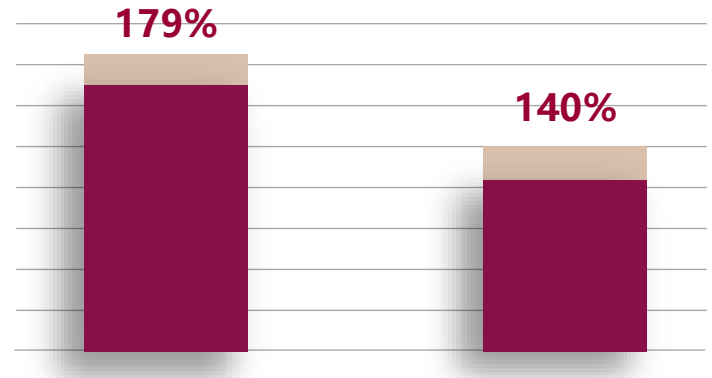
1 Establishing risk monitoring model by precise management



Unstable approach



"statistics show that landing of unstable approach doesn't have too many risks and consequences."

Unstable approach doesn't necessarily result in serious consequences, but must increase risks.

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1 Establishing risk monitoring model by precise management

Risk monitoring model

- Core risks controls
- TEM analyzing model

- Unsafe status monitoring
- Bowtie cause analysis

- Potential risks controls
- SHEL Continuous information monitoring

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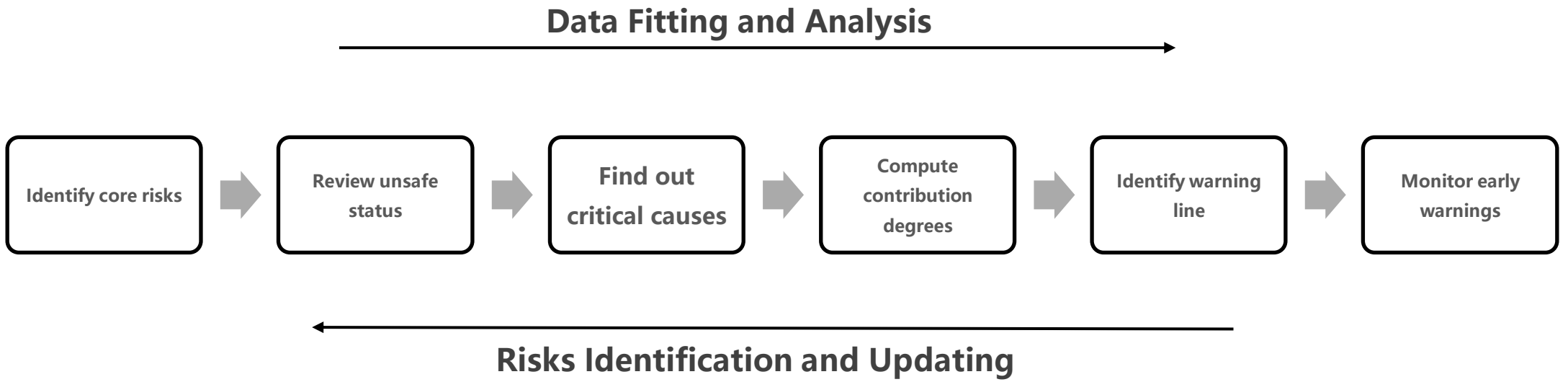
1 Establishing risk monitoring model by precise management

The establishment and application of the model



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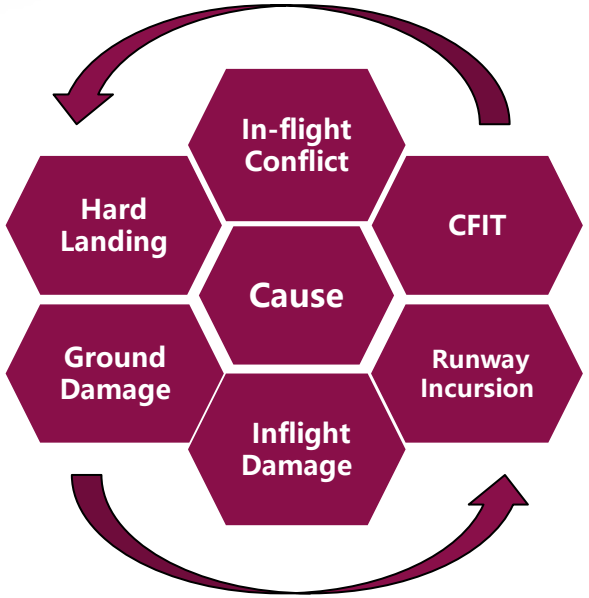
1 Establishing risk monitoring model by precise management



Core Risk

Core Risks
CFIT
LOC-I
In-flight Conflict
Runway Overrun/Excursion
Runway Incursion
Hard Landing
Touchdown out of Runway
Ground Damage
Inflight Damage

Unsafe Status
Significant Tail Wind on Landing
Roll Exc. Below 100 ft AFE
Heading deviation at landing above 60 kts
Long touchdown
.....

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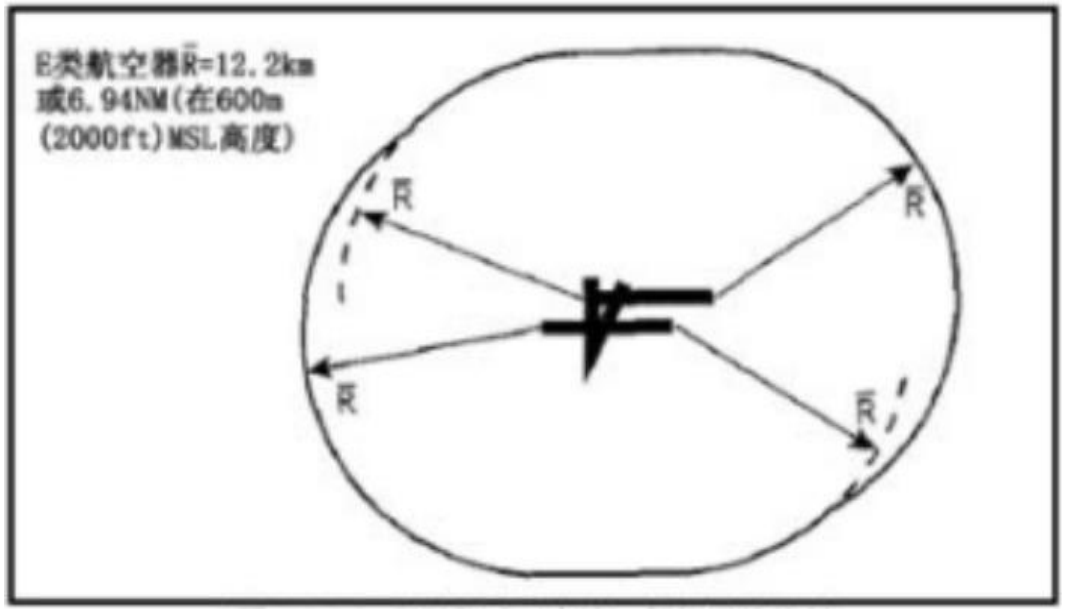
2 Identifying controllable safety channel by utilizing digital methods

The data of different aircrafts

Aircrafts	A/100	B/135	C/180	D/205	E/240
TAS	131	168	215	242	279
Tu… ra…					
Fina…					
The th… whos… i… thr…					

radius of the visual maneuvering (circling) protective area

Aircrafts	Excess barrier redundancy	the minimum limit of the airport elevation OCH	the lowest visibility
A	90 (295)	120 (394)	1.9 (1.0)
B	90 (295)	150 (492)	2.8 (1.5)
C	120 (394)	180 (591)	3.7 (2.0)
D	120 (394)	210 (689)	4.6 (2.5)
E	150 (492)	240 (787)	6.5 (3.5)



三、The effective ways of proactive safety management

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Digital

Precise

View in advance

Consider in advance

Act in advance

Passive management → Proactive management → Predictive management


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谢谢！
THANK YOU!
温暖随行 享所未想