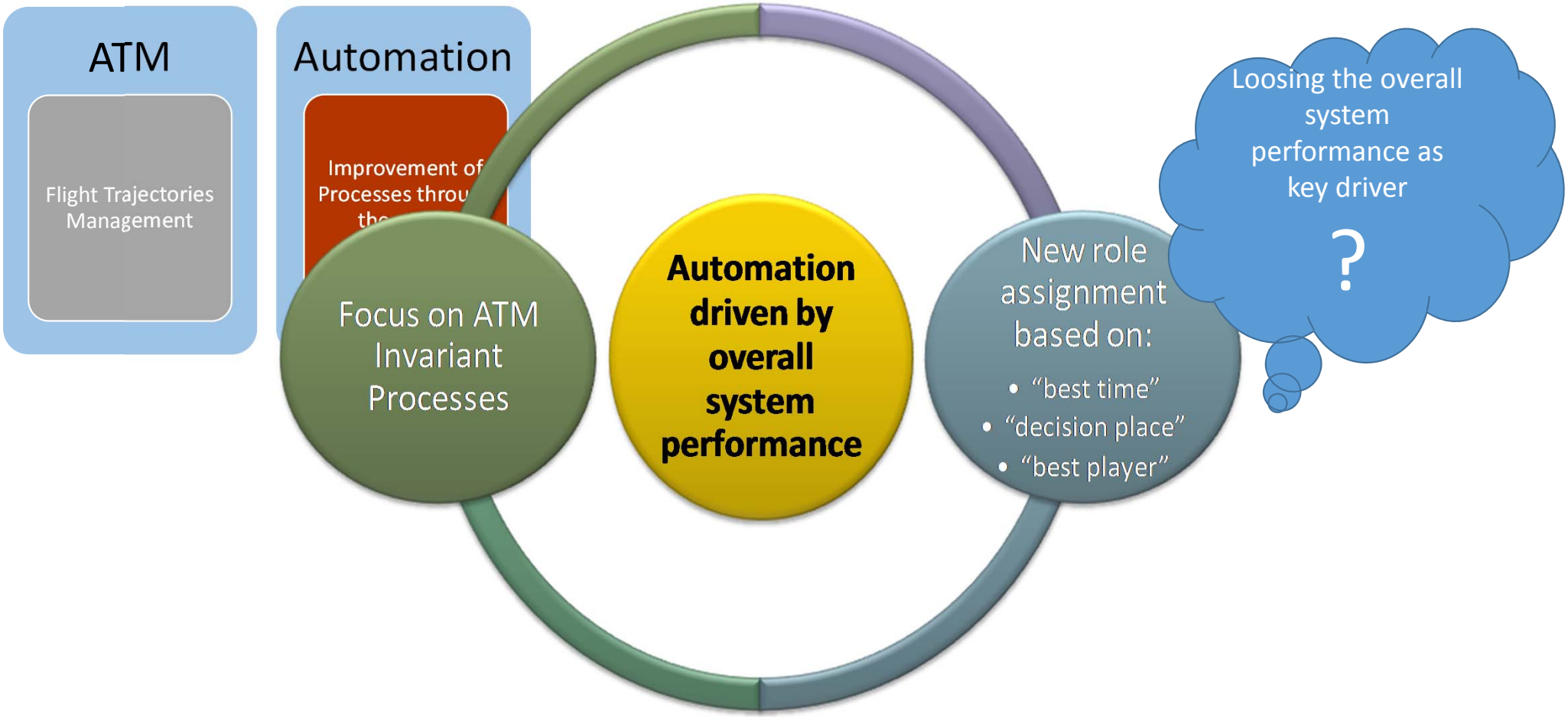
SESAR WPE
LONG TERM AND INNOVATIVE RESEARCH

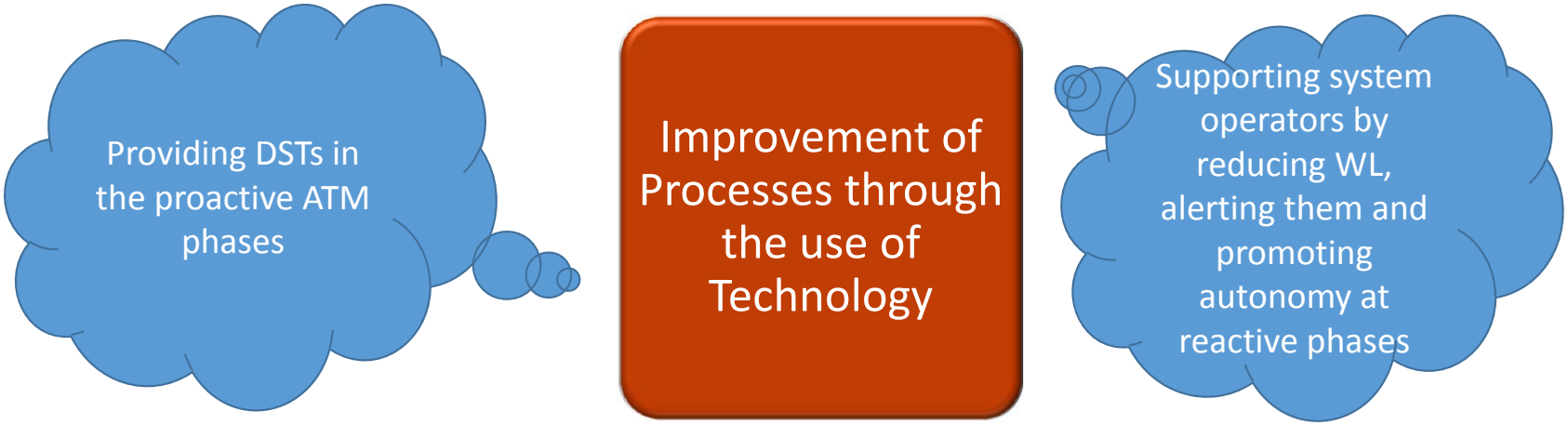
The Fifth SID:
Report and Observations from Hala!

Francisco J. Saez Nieto


ATM
Flight Trajectories Management
Automation
Improvement of Processes throu
Focus on ATM Invariant Processes
Automation driven by overall system performance
New role assignment based on:
• "best time"
• "decision place"
• "best player"
Loosing the overall system performance as key driver
?

Today, when Humans demand support from automation?:

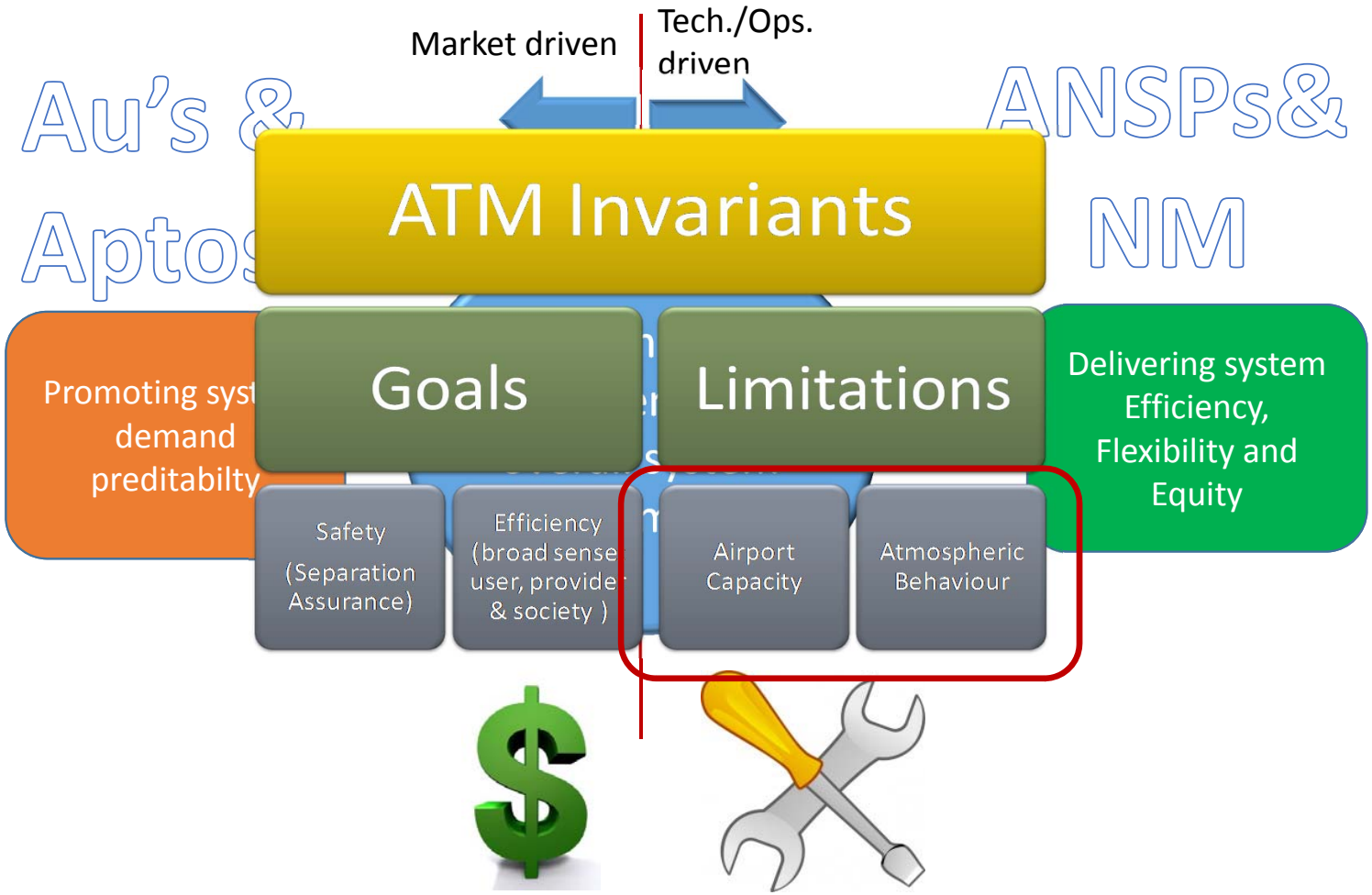
Under non-nominal scenarios (as TCAS)



Paradoxically:

Automation is better than human in processes that can be expressed by rules,

Whereas *Humans are better in pattern recognition*


Market driven
Tech./Ops. driven
Au's &
Aptos
ANSPs&
NM
ATM Invariants
Goals
Limitations
Promoting syst
demand
preditabilty
Delivering system
Efficiency,
Flexibility and
Equity
Safety
(Separation
Assurance)
Efficiency
(broad sense
user, provide
& society)
Airport
Capacity
Atmospheric
Behaviour

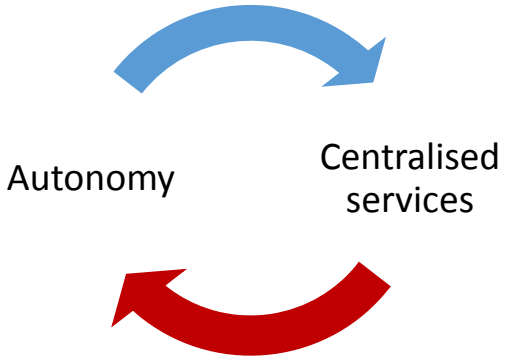
To what extend planning DSTs, based on optimization algorithms, produce reliable, useful outcomes and, on the other hand;

Funtion allocation based on:

Best time

Best place

Best player



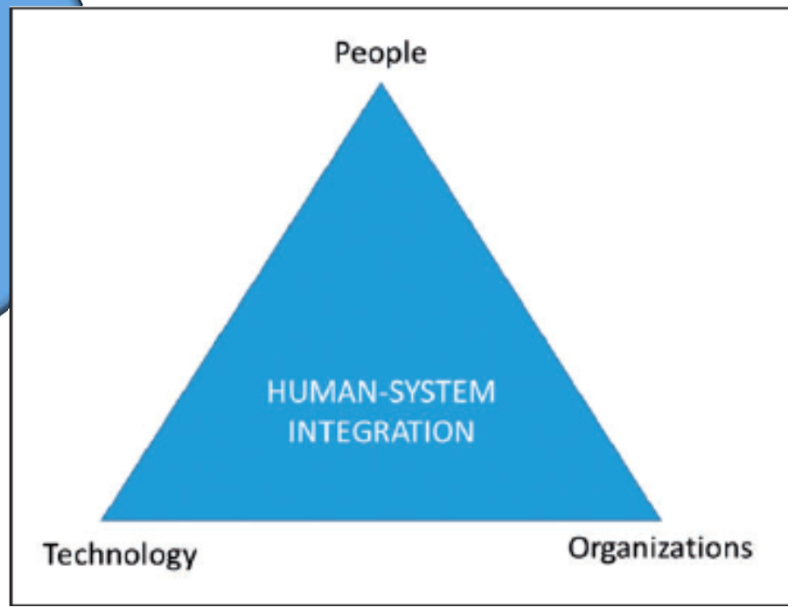
To what extend AUs can autonomously operate in a system with nodal constrains and airspace caothic uncertainties

Funtion allocation based on:

Best time

Best place

Best player



Thank you!