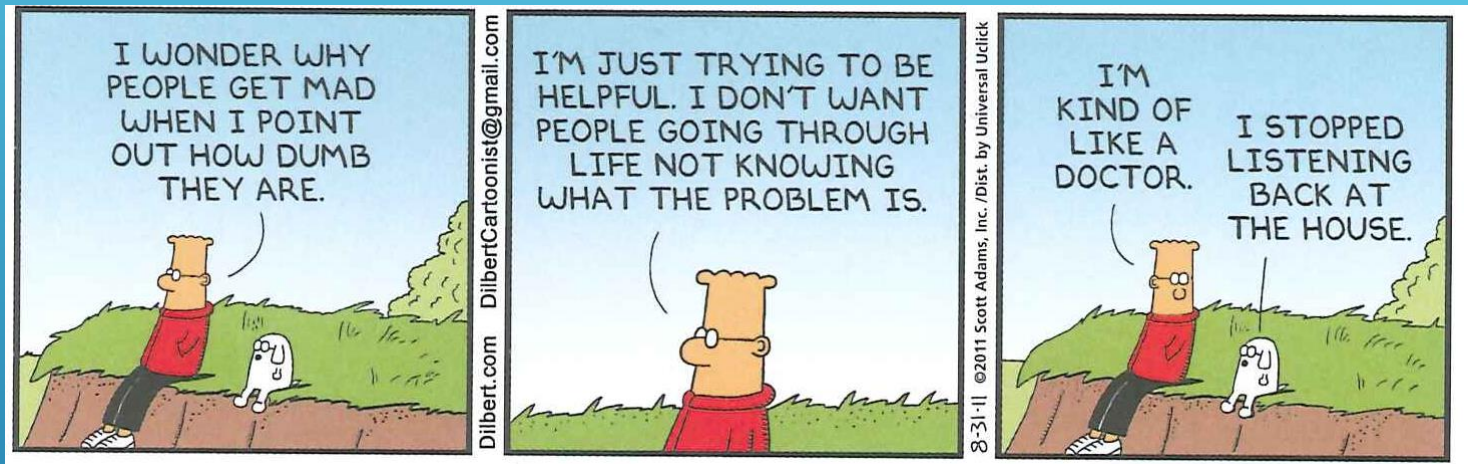


# THE LIMITS OF SAFETY

How the outside world influences decision making

Sebastian Daeunert, Safety Manager EDDF TWR





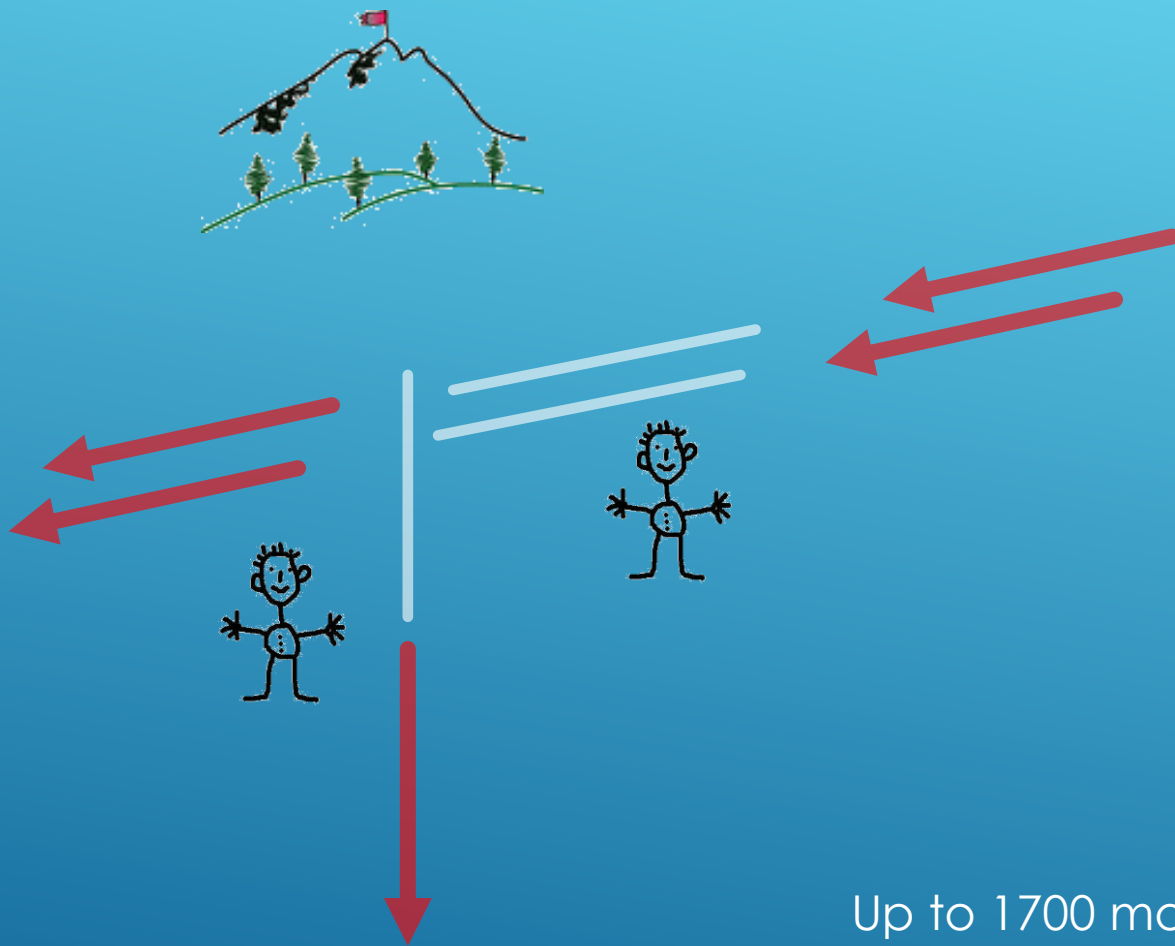
A LITTLE BIT ABOUT ME



**A CHANGE OF SYSTEM**

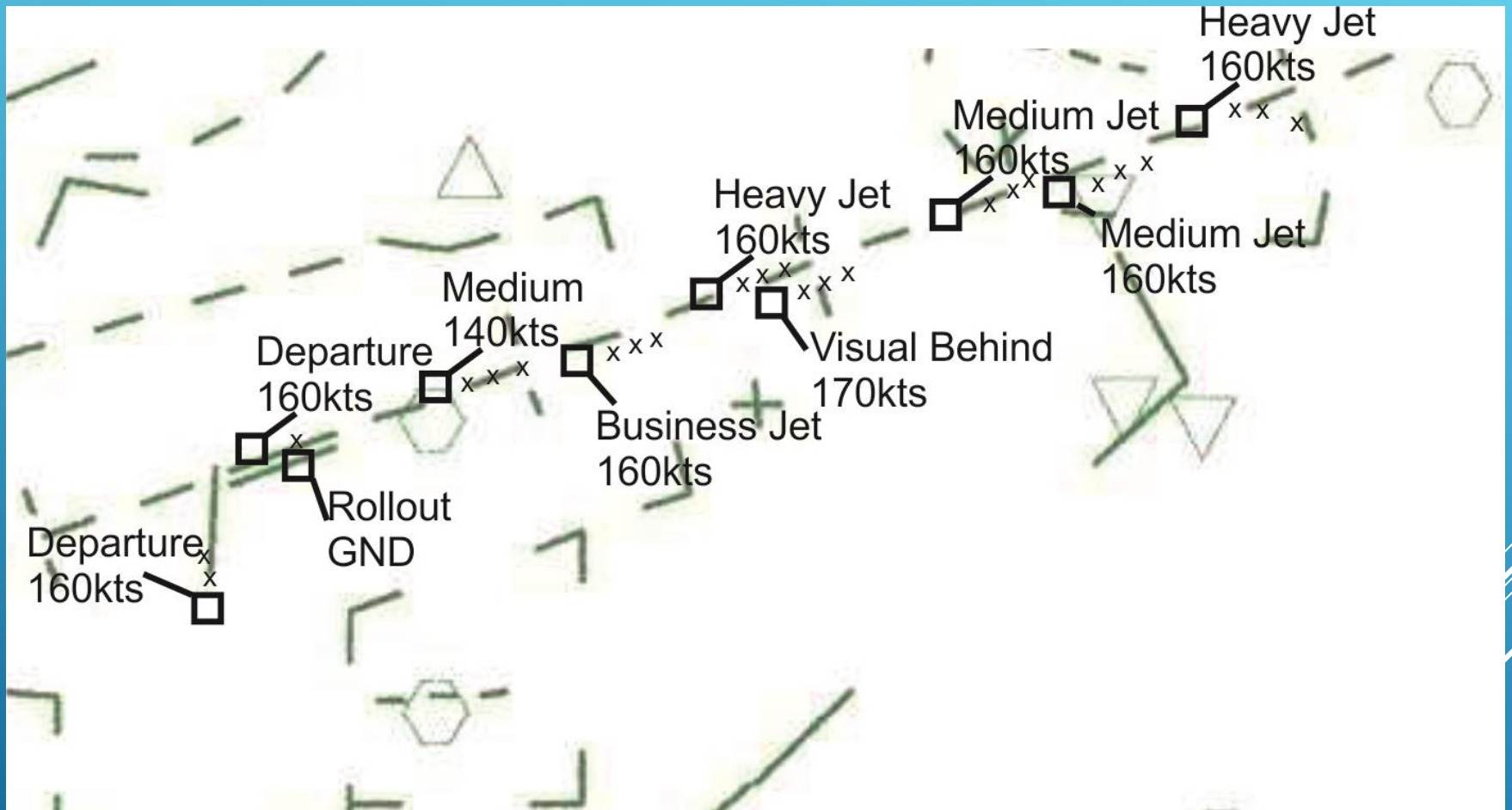
**OLD SYSTEM**





Up to 1700 movements/day







# INTERACTIVE COMPLEXITY

A MIX BETWEEN OVERLOAD AND COMPLEXITY

- ▶ React immediately or else....
- ▶ Carry Out Instructions immediately
- ▶ Listen because you only get information once
- ▶ Constant use of „Expedite“, „Bring Up Your Engines“, „Be ready to roll as soon as the Runway is clear.“

## WHAT PILOTS KNEW





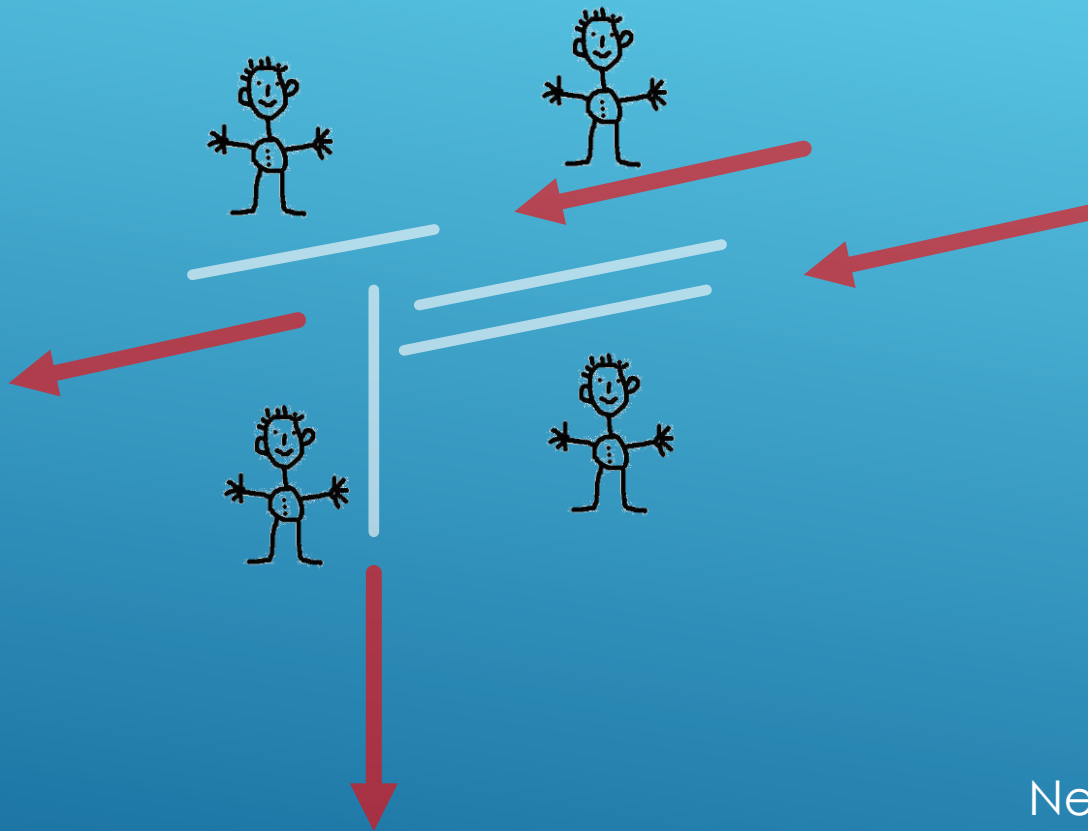
WHAT CONTROLLERS KNEW



# A NEW RUNWAY IS BORN

CONFLICTING GOALS





New System



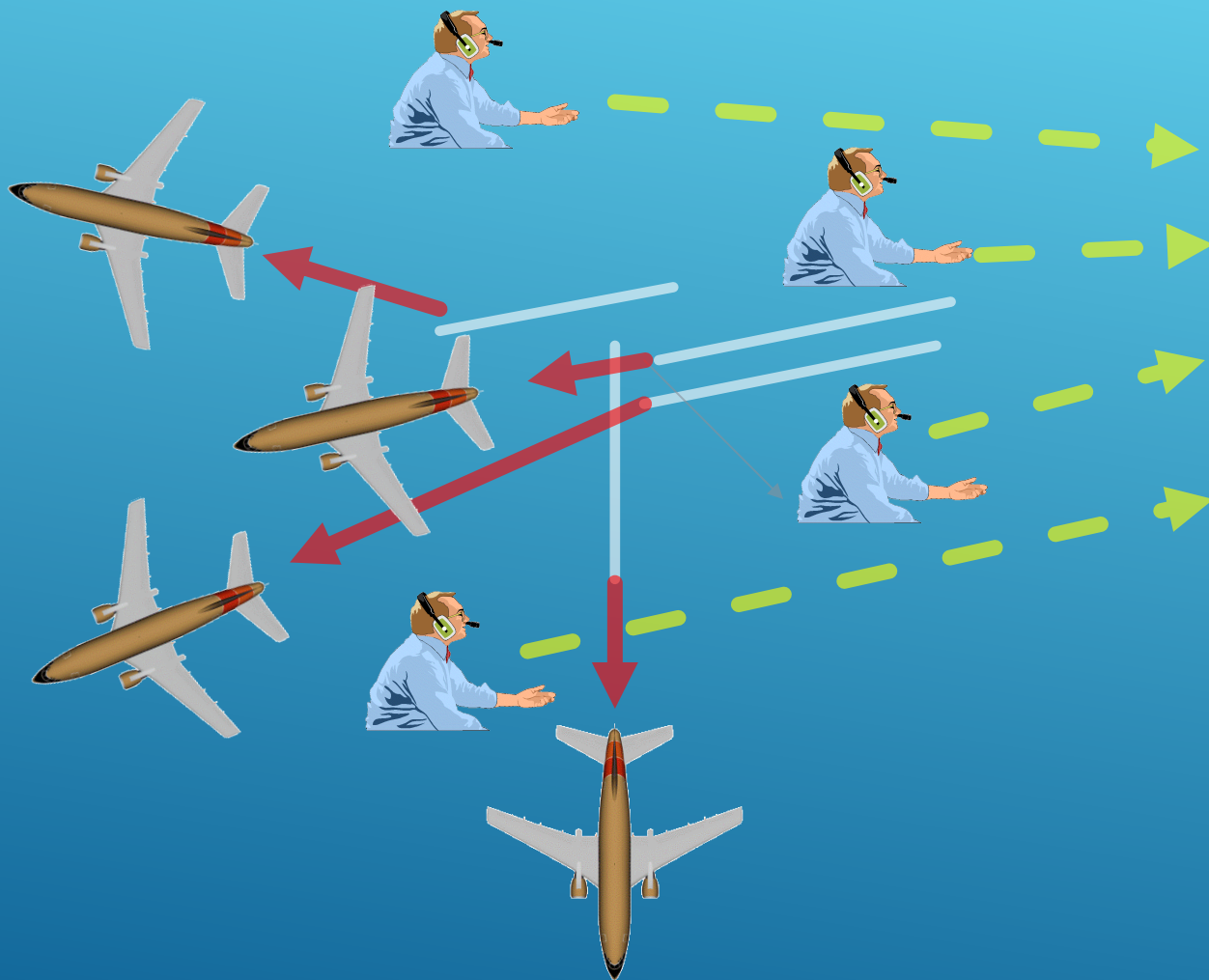
when everything  
goes wrong...



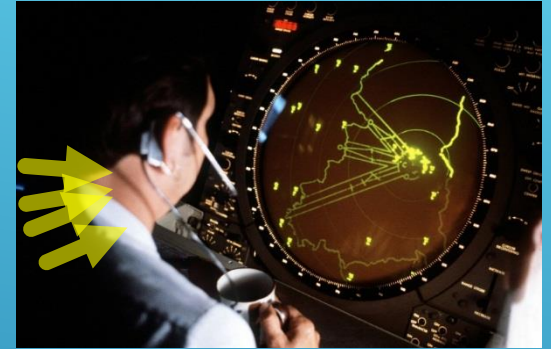
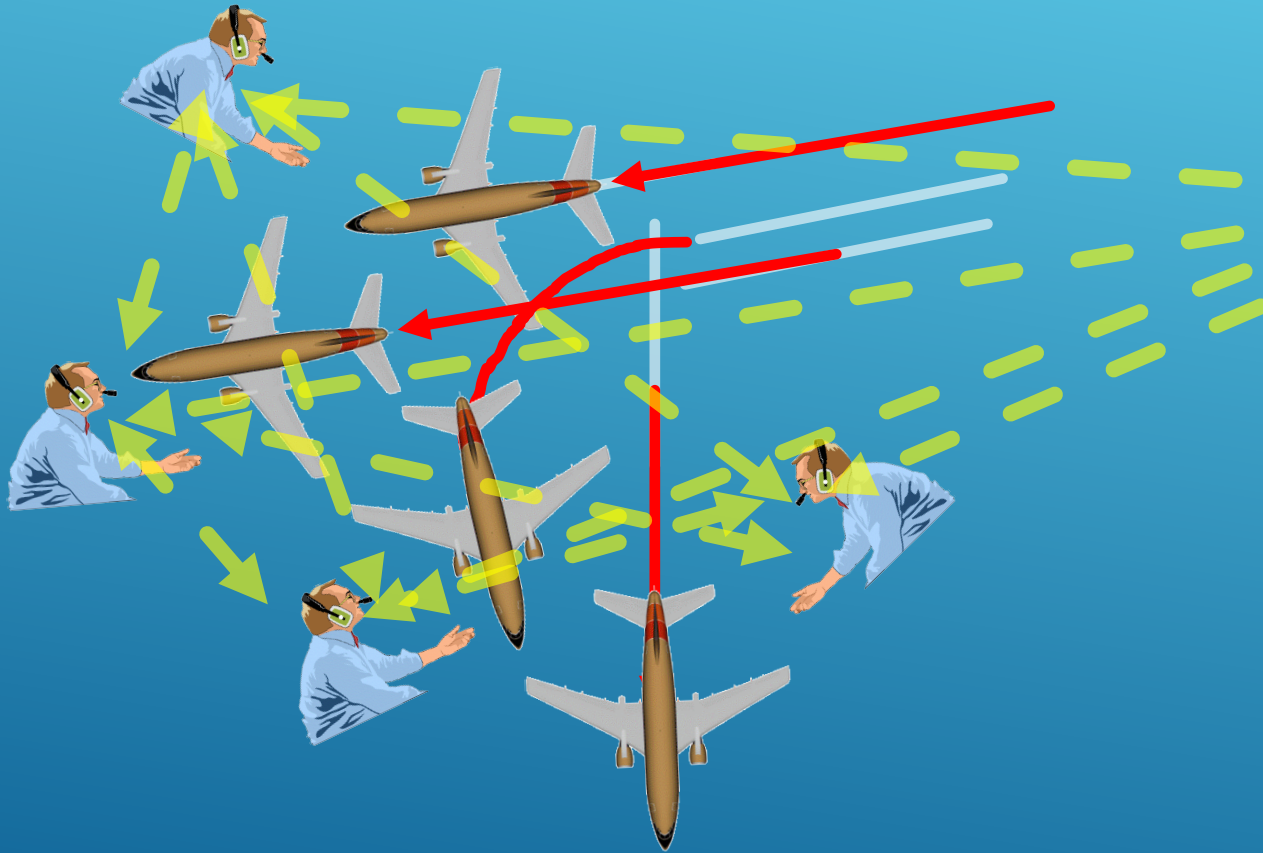
...remember  
that it  
could still  
be worse!!!





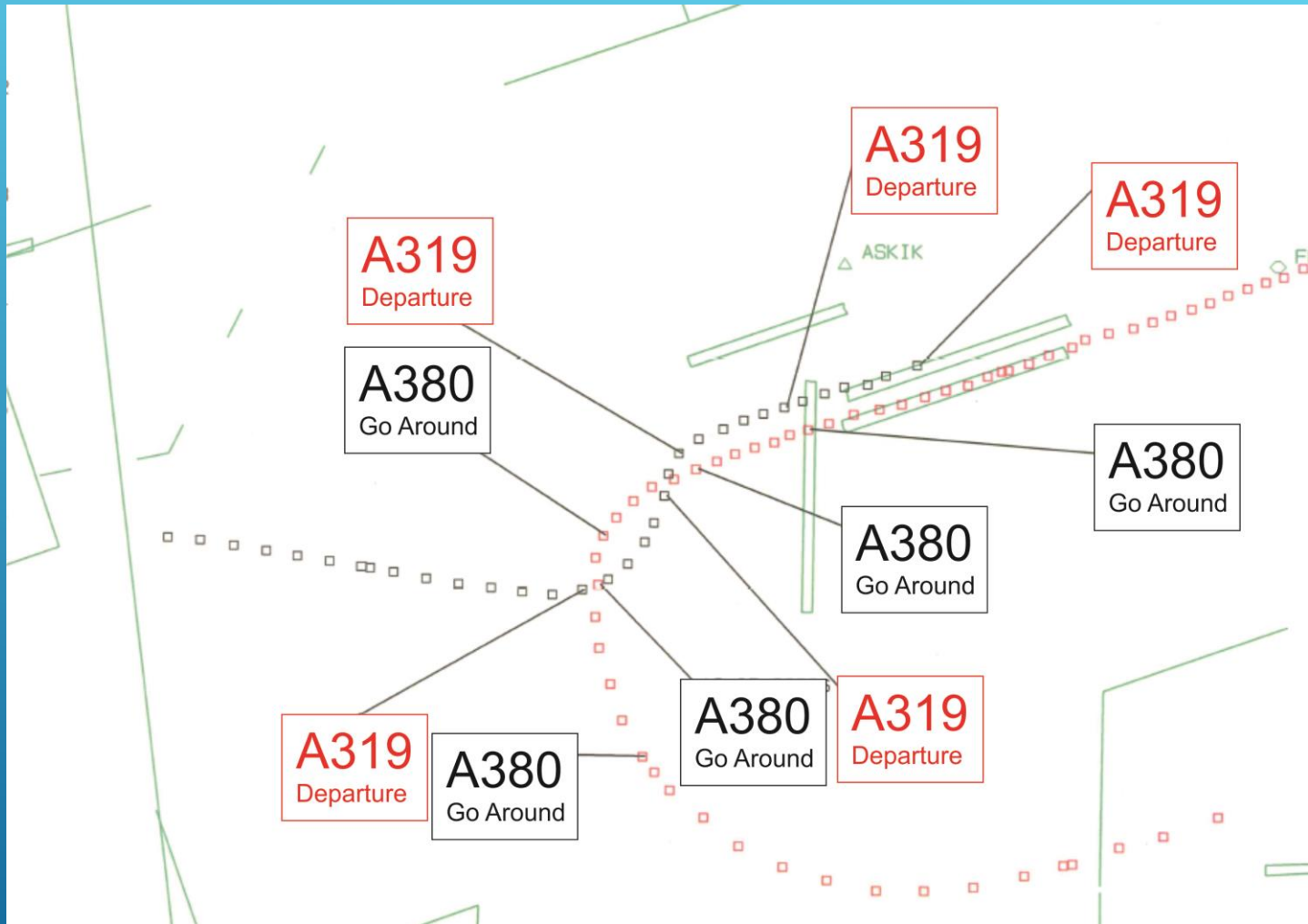


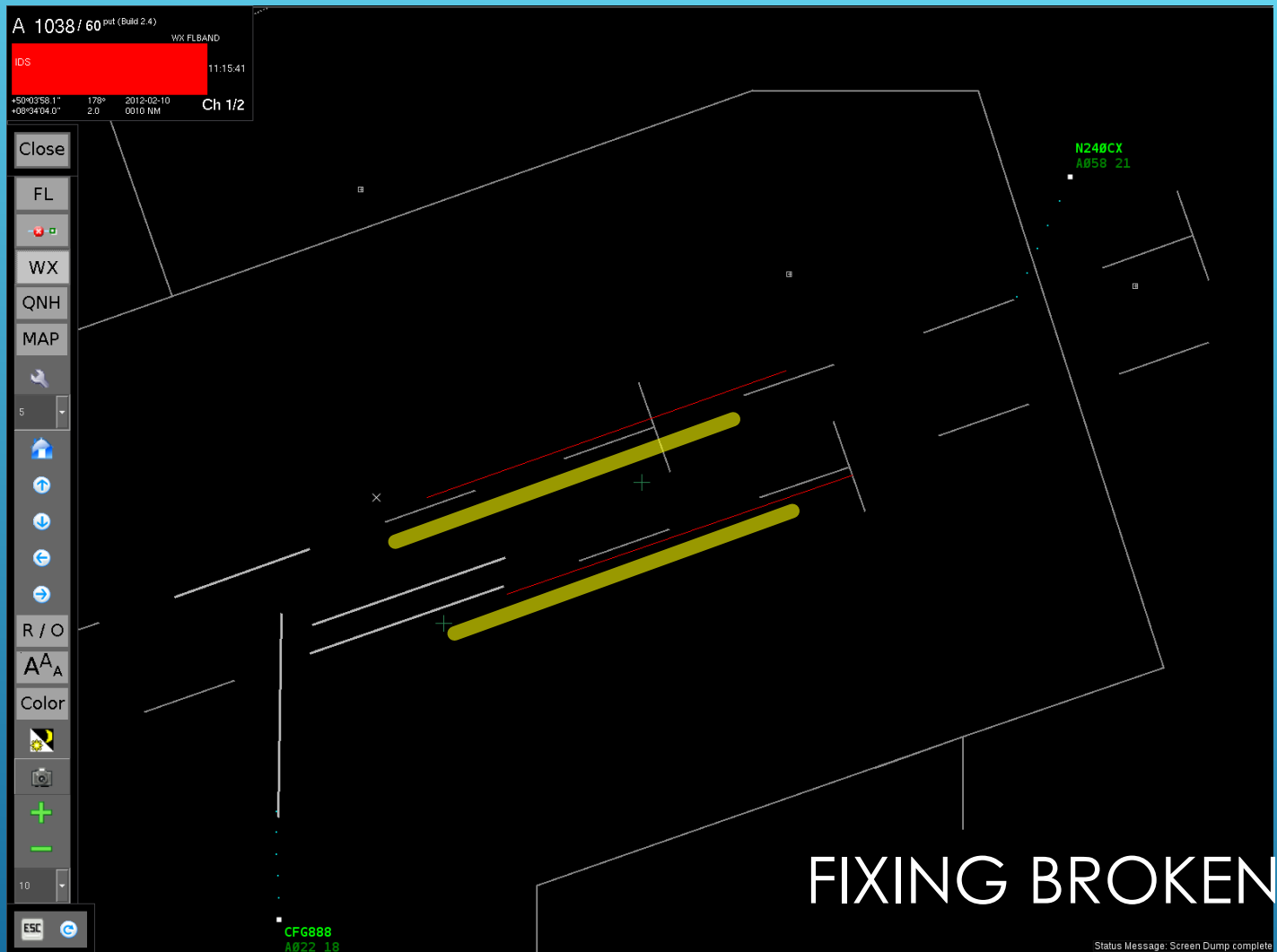
The Easy Way



Noise Abatement SID











FIXING BROKEN PARTS



180 %

System  
Change

90 %

FROM CAPACITY TO  
COMPLEXITY !



FROM CAPACITY TO  
COMPLEXITY !



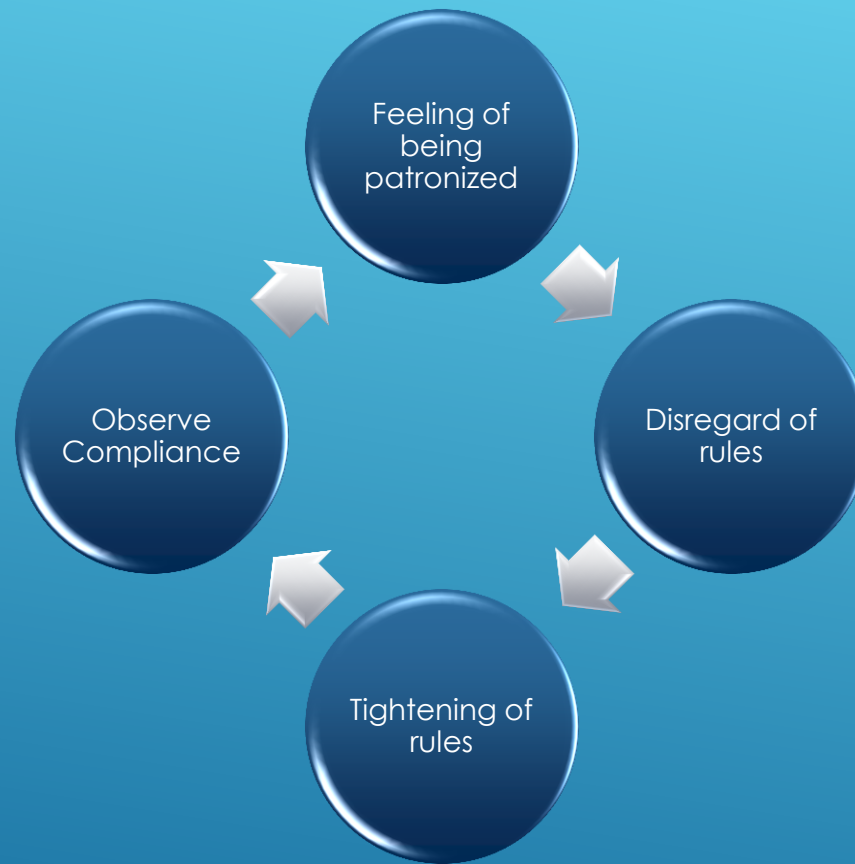
WHY CAN WE NOT CHANGE THESE RULES ?



DRIFT





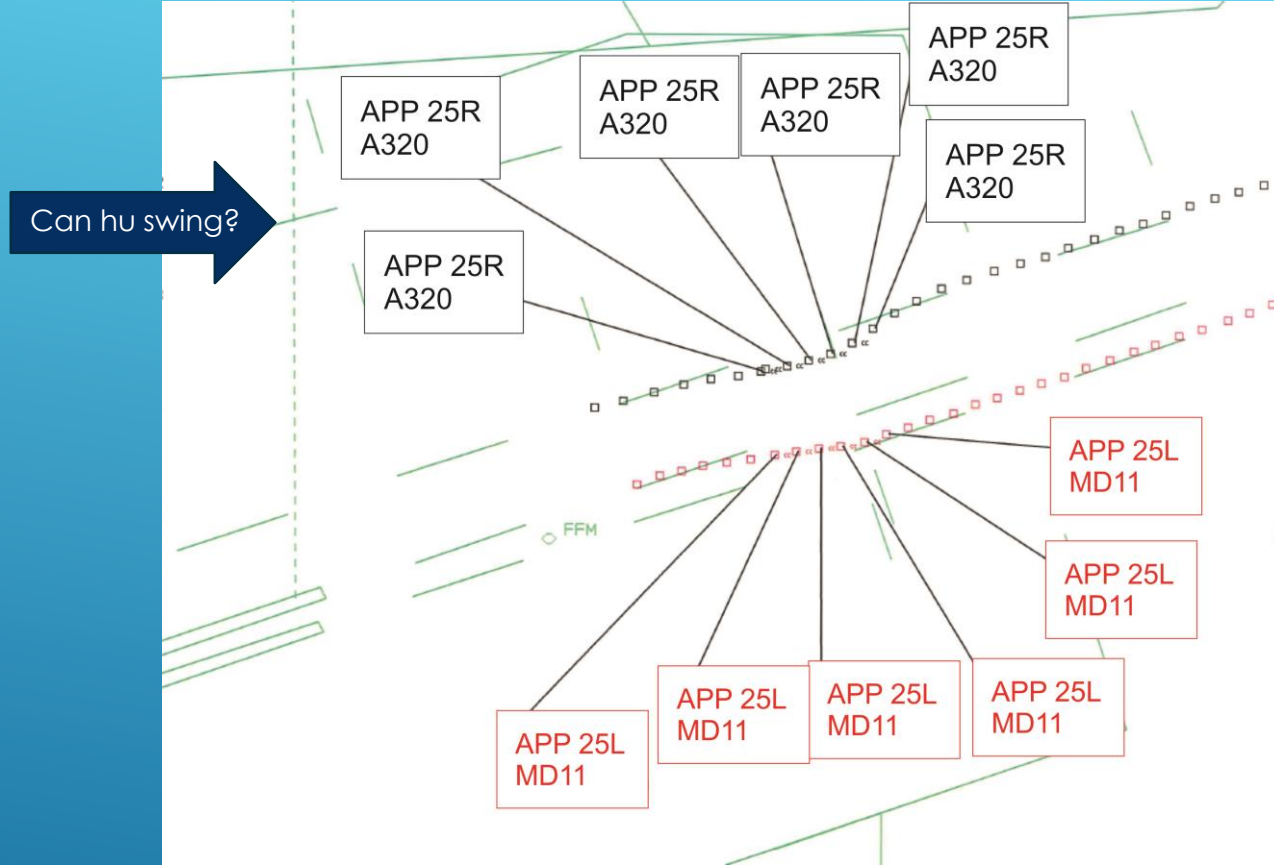


# THE MICRO MANAGING DEATH SPIRAL



If you take away responsibility  
by making more rules, will people  
act responsible?

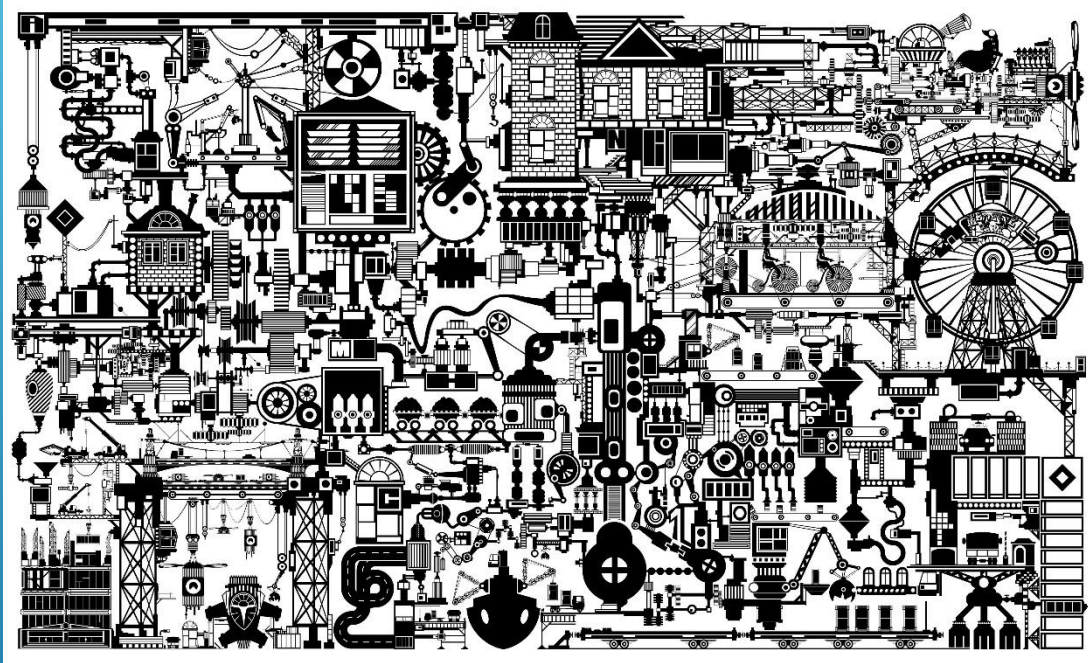




# CASE STUDY

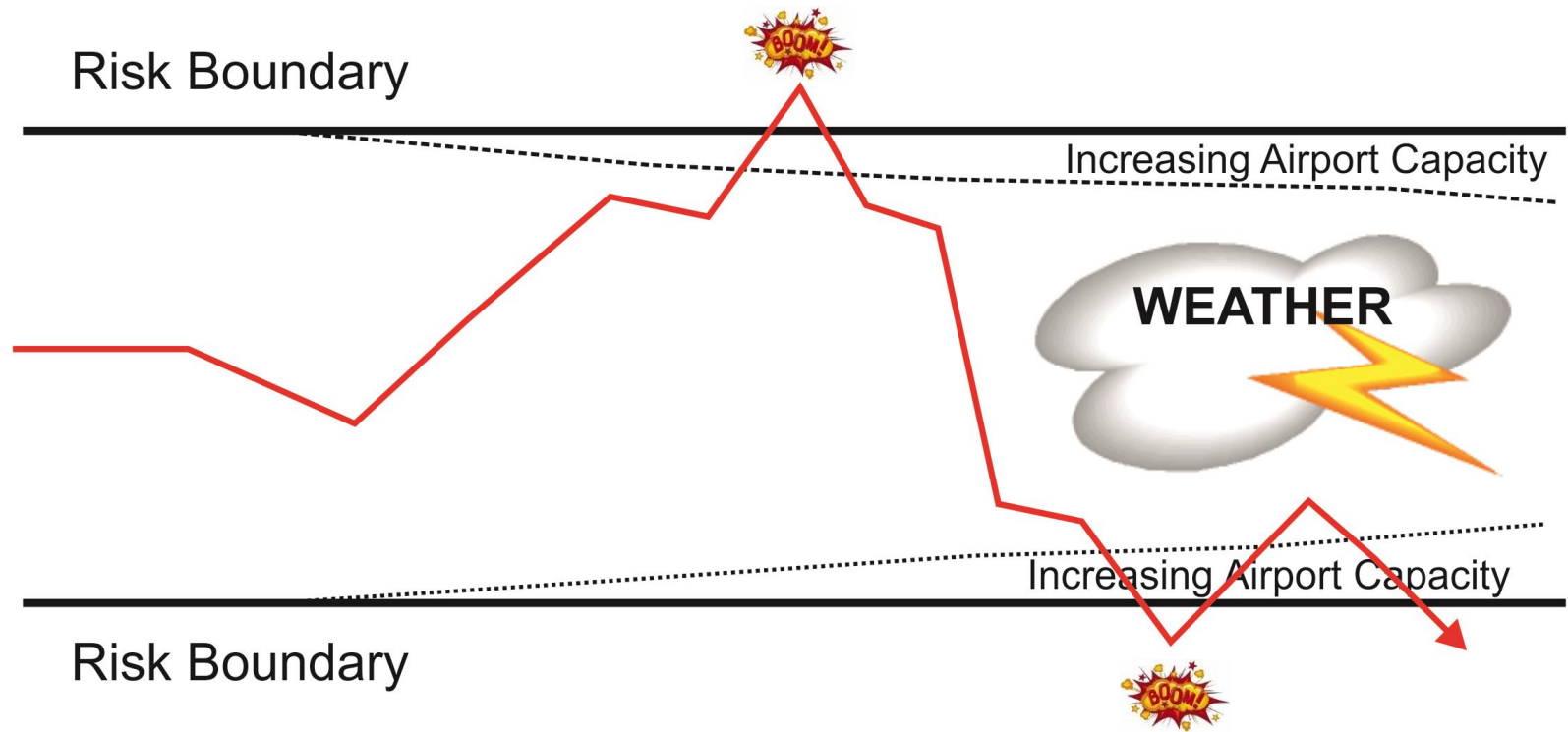
- ▶ ~~React immediately or else....~~ **React at your own chosen speed**
- ▶ ~~Carry Out Instructions immediately~~ **There is plenty of time**
- ▶ ~~Listen because you only get information once~~ **We will repeat it as many times as you need.**
- ▶ ~~Constant use of „Expedite“, „Bring Up Your Engines“, „Be ready to roll as soon as the Runway is clear.“~~ **If you take your time it works too**
- ▶ **Phraseology may not always be ICAO**

# WHAT PILOTS KNOW



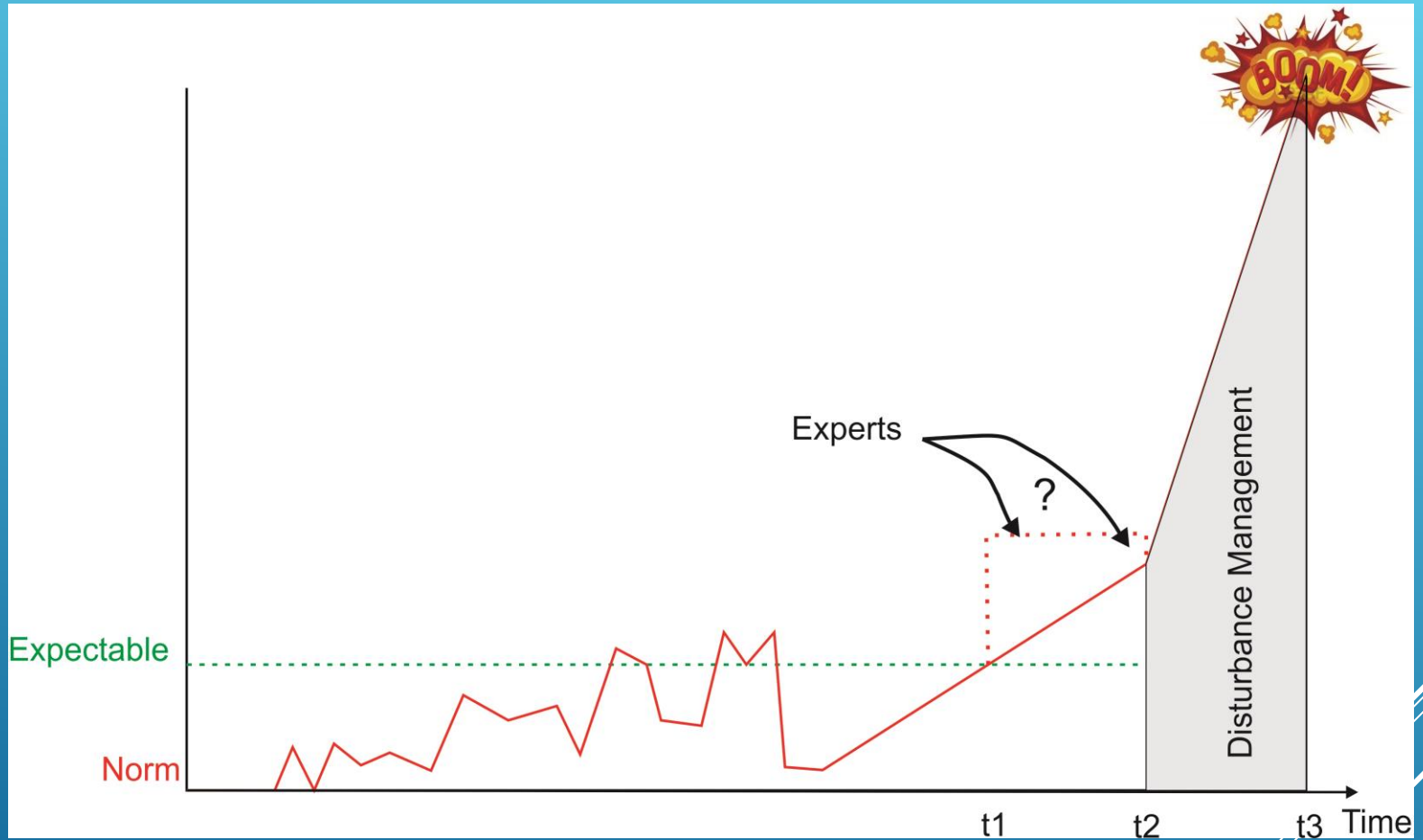
WHAT CONTROLLERS DID NOT YET KNOW





OLD SYSTEM

# NEW SYSTEM



Do you really need your cellphone at work?

Do you practice a Swing Over to circumvent the No Fly Zone?

Do you not make an entry into the electronic Log?

ASK QUESTIONS

Several thin, white, parallel diagonal lines are located in the bottom right corner of the slide, extending from the middle of the right edge towards the bottom left.

Strength	No of Cards
Customer Orientation & Efficiency	15
Teamwork	13
Professionalism (Emergencies, Abnormals)	7
Coordination under complexity	7
Motivation	5
.....	.....
Following Rules	1

FIND STRENGTH NOT WEAKNESS



- ▶ Dependant „Suedumfliegung“
- ▶ Runway Crossings Limited
- ▶ Safety Awareness Month
- ▶ Simulation „Alternatives To Suedumfliegung“

WHAT WE DID

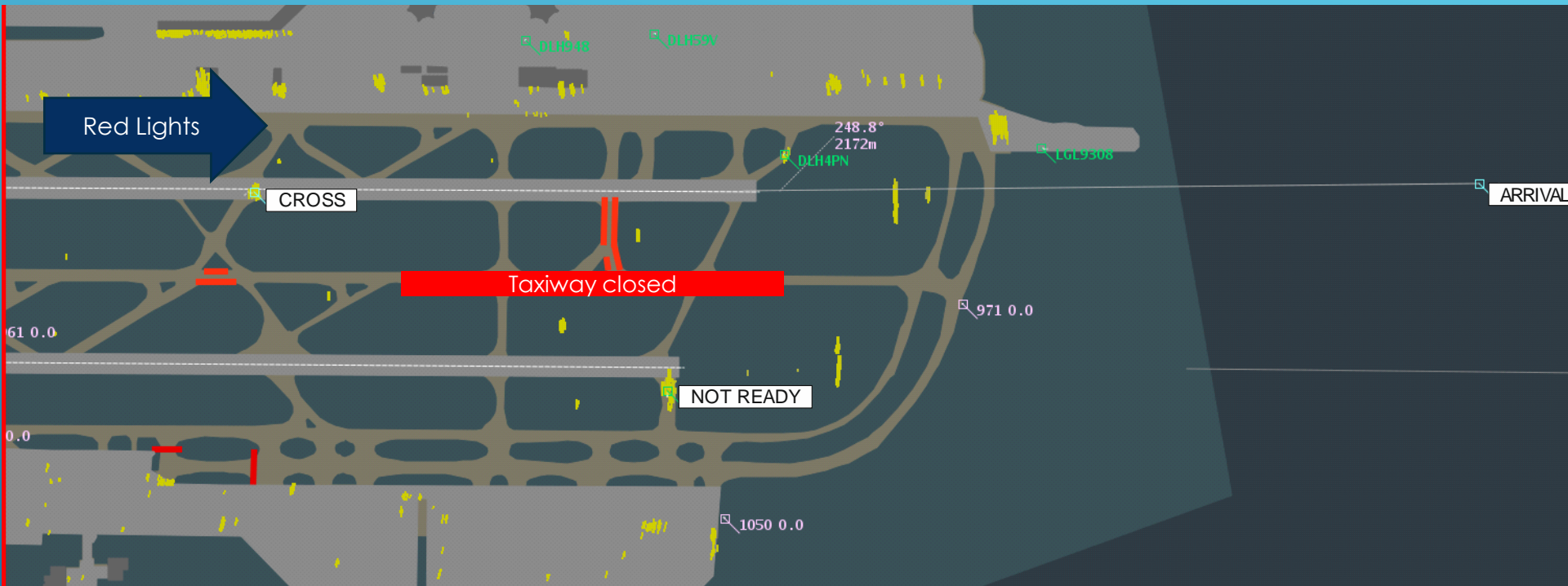


- ▶ Put trust into the people working it
- ▶ Bring back the individual right for responsibility
- ▶ Give a free space to work in
- ▶ Pick up on ATCO suggestions
- ▶ Follow the sharp end wherever you can
- ▶ Ask WHY if confronted with an unwanted behavior
- ▶ Don't micro manage or fix broken parts
- ▶ Make clear statements as to what is possible and what not
- ▶ See the whole picture and not only individual parts people want to change

# WHAT WE ARE DOING



# WHAT WORKS !!



There were red lights in L9

CROSS

Taxiway closed

READ

Go Around

TSW2

LEO530

AFL2304

CA01042

CROSS

ARRIVAL

961 0.0

1021 0.0

1050 0.0

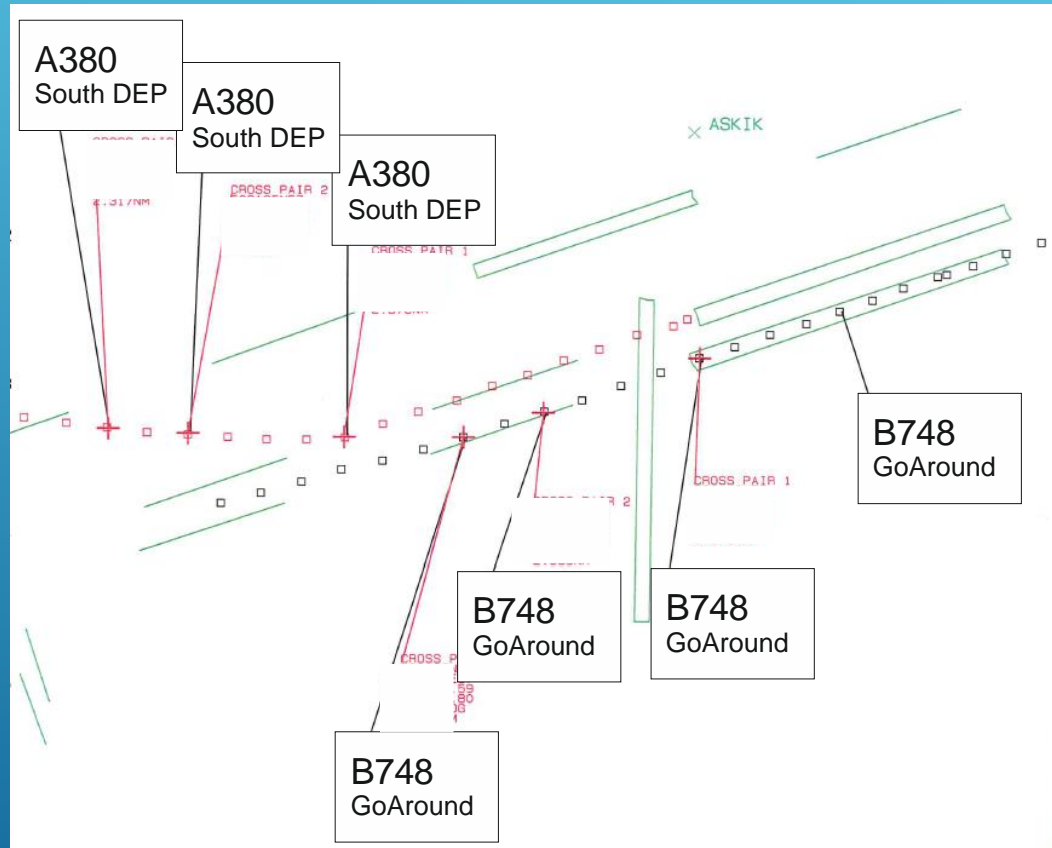
971 0.0

247.1°

412m

## Go Around

# WHAT WORKS !!





# SUMMARY

