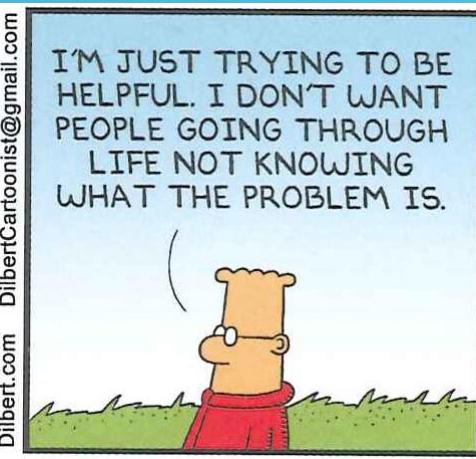
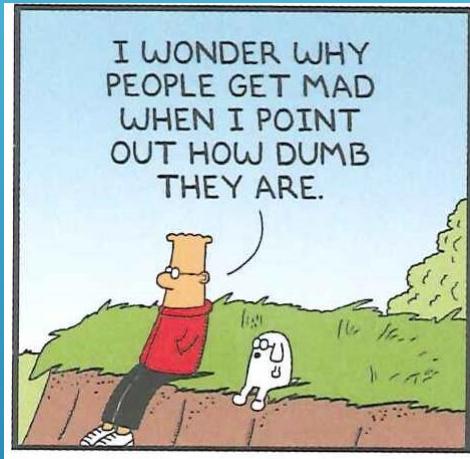


THE LIMITS OF SAFETY

How the outside world influences decision making

Sebastian Daeunert, Safety Manager EDDF TWR



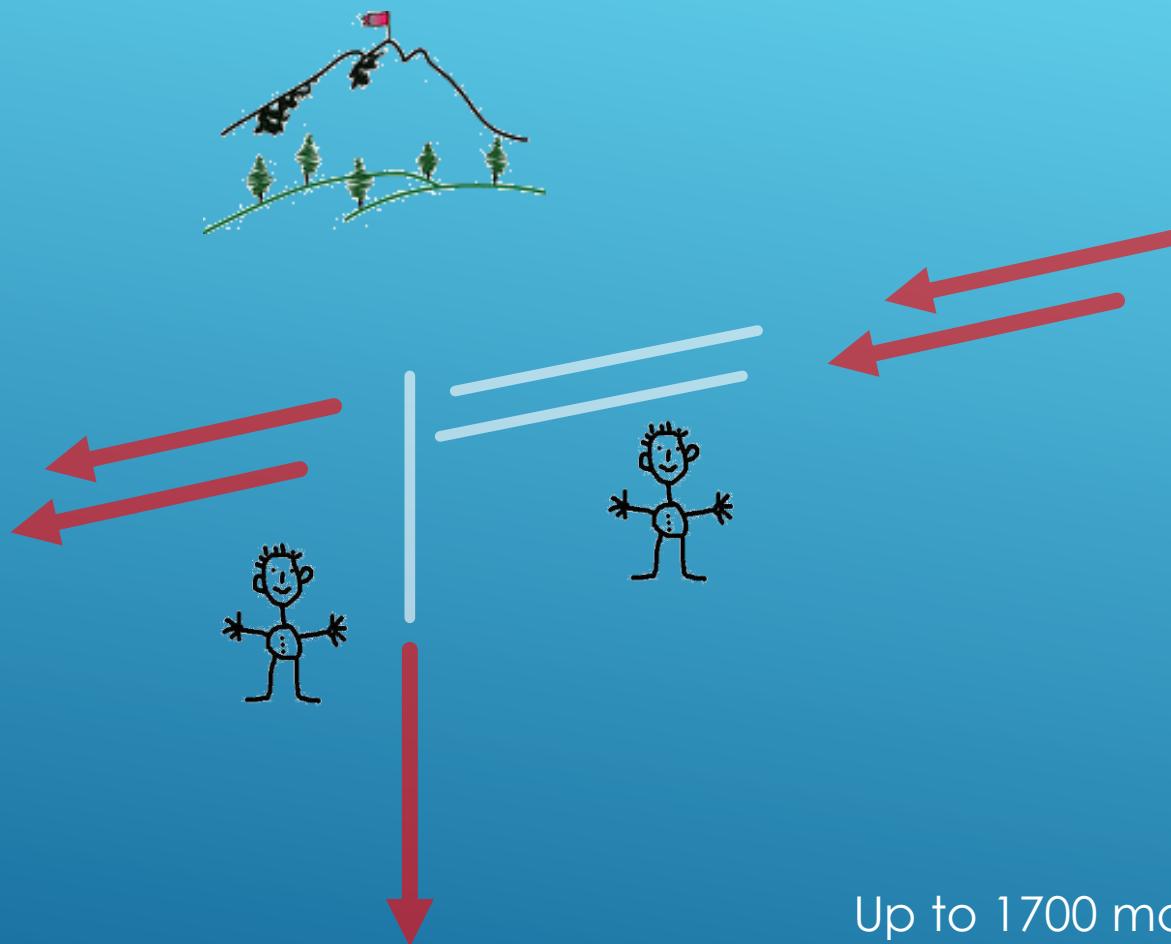
A LITTLE BIT ABOUT ME



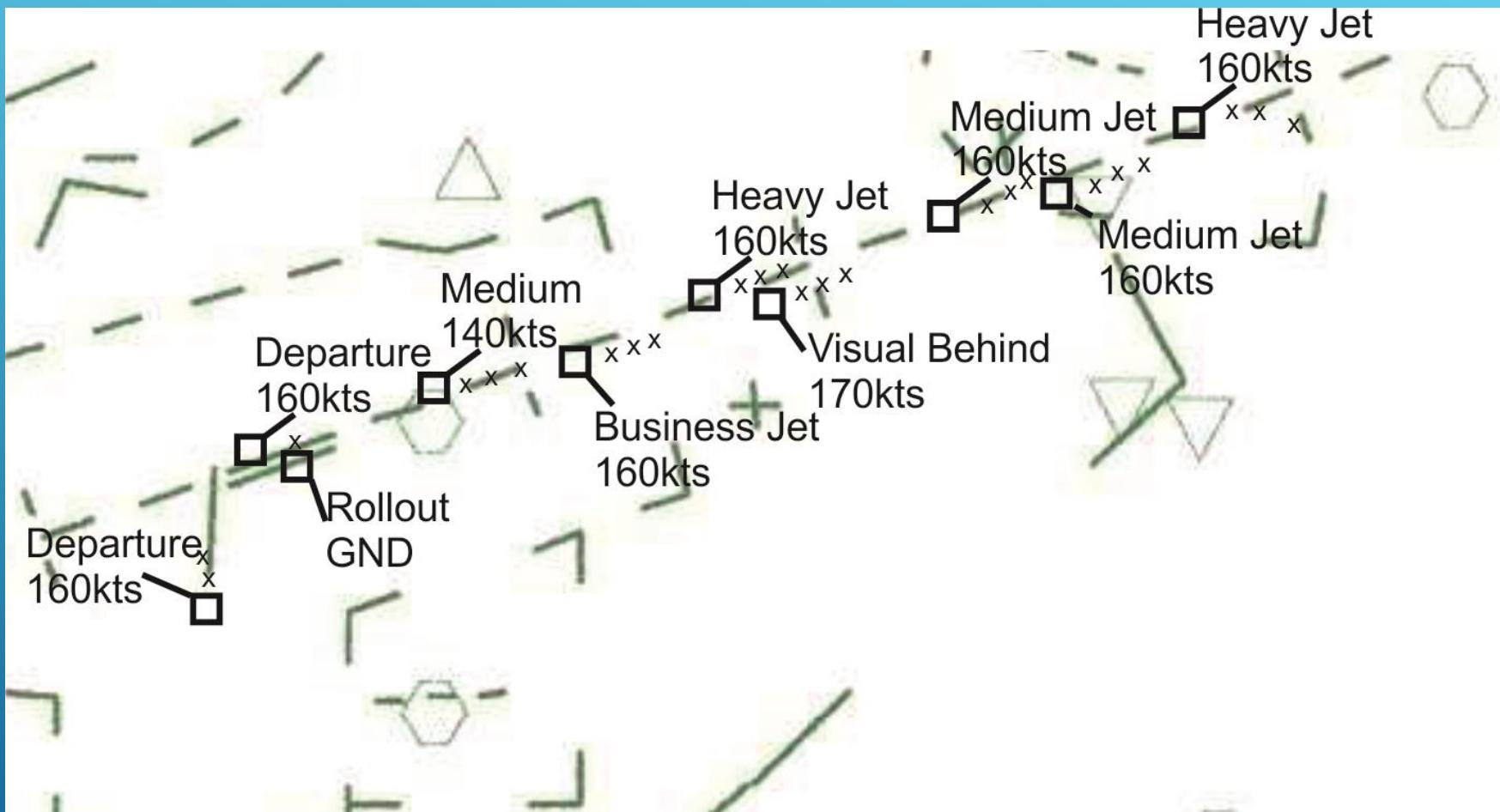
A CHANGE OF SYSTEM

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





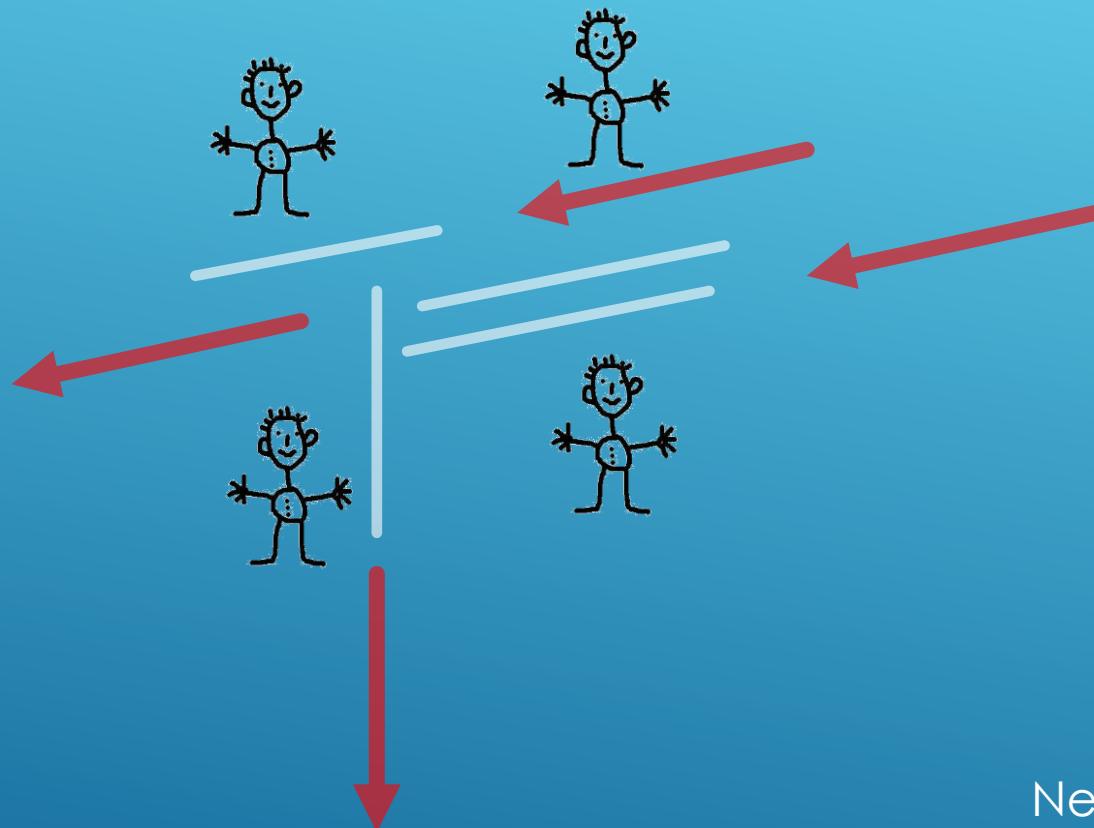
WHAT CONTROLLERS KNEW



A NEW RUNWAY IS BORN

CONFICTING GOALS





New System

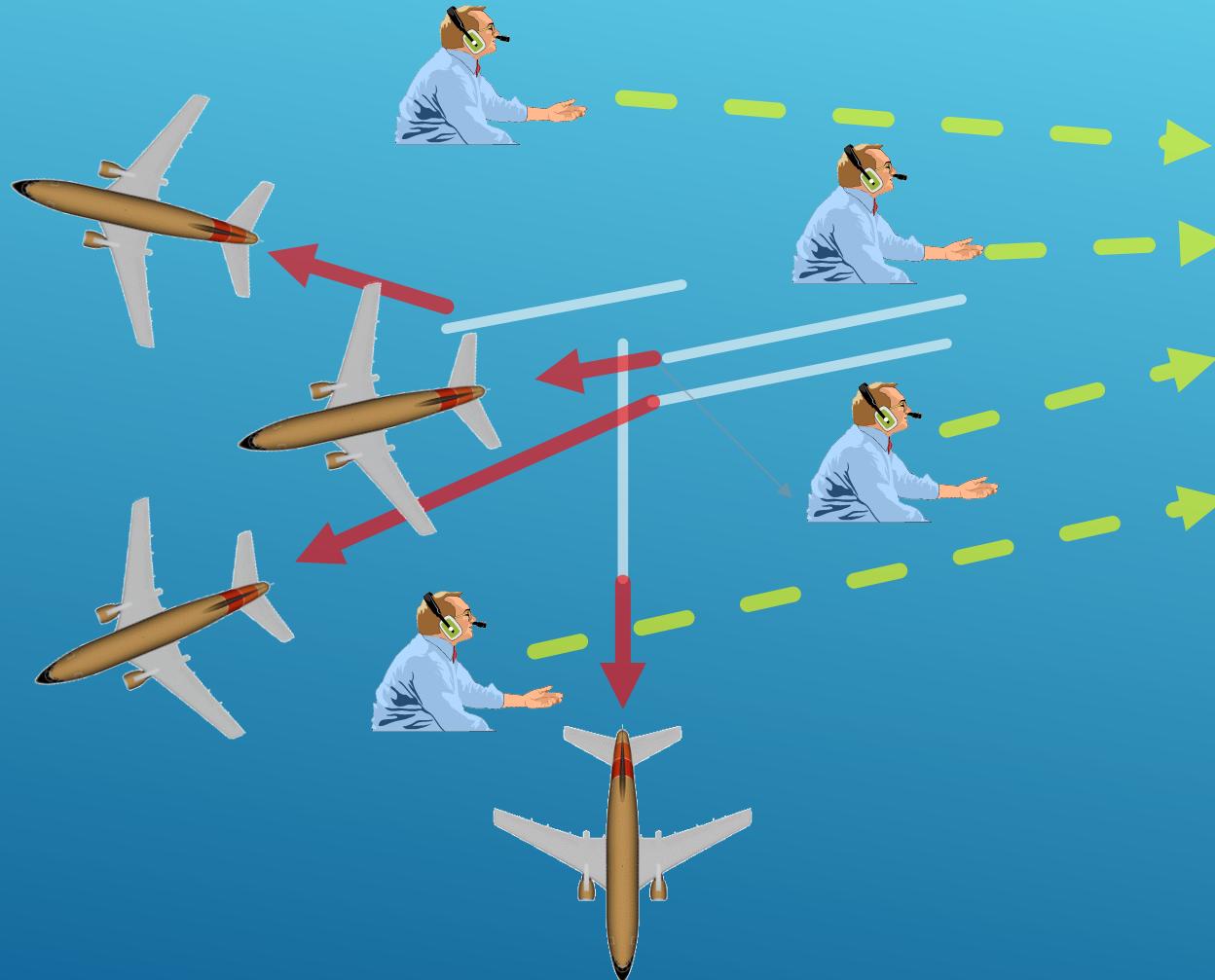


when everything
goes wrong...

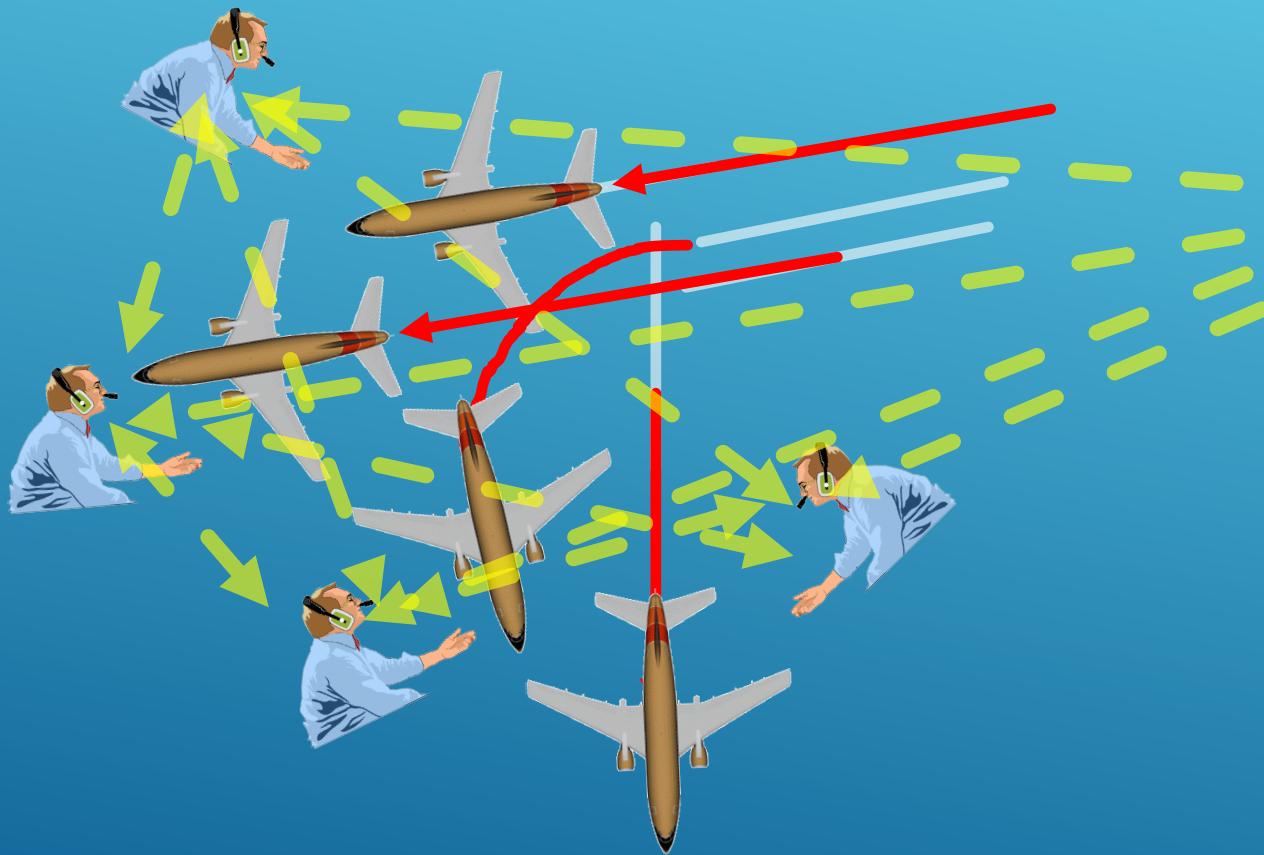


...remember
that it
could still
be worse!!!

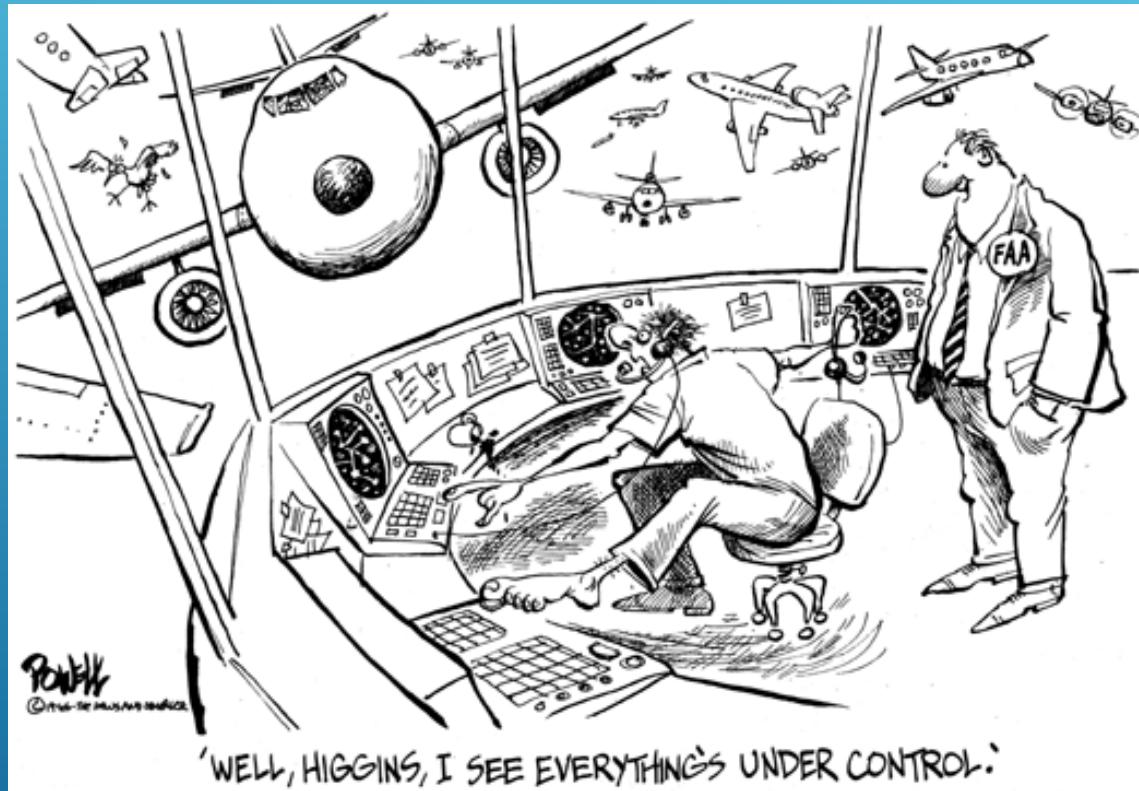


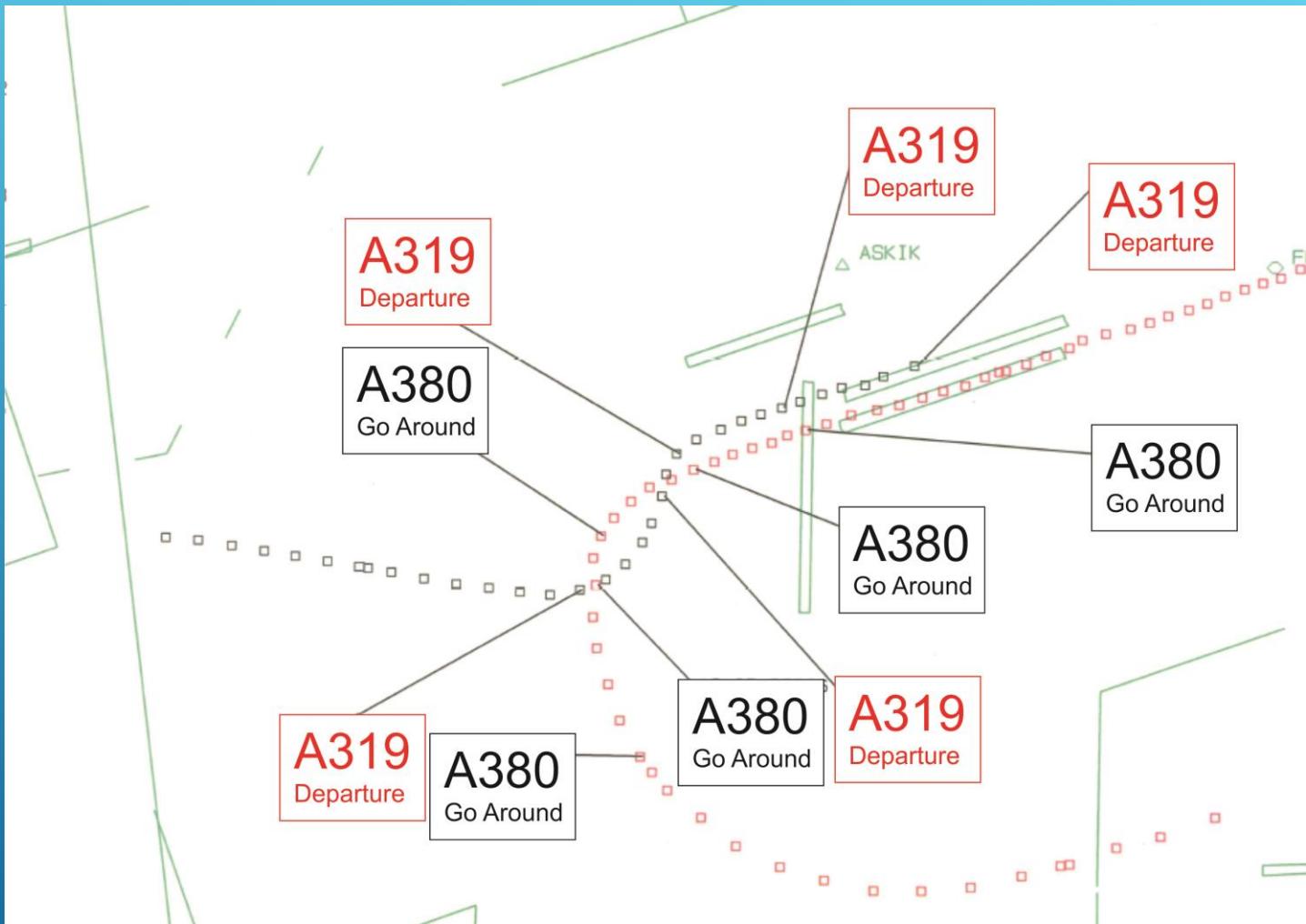


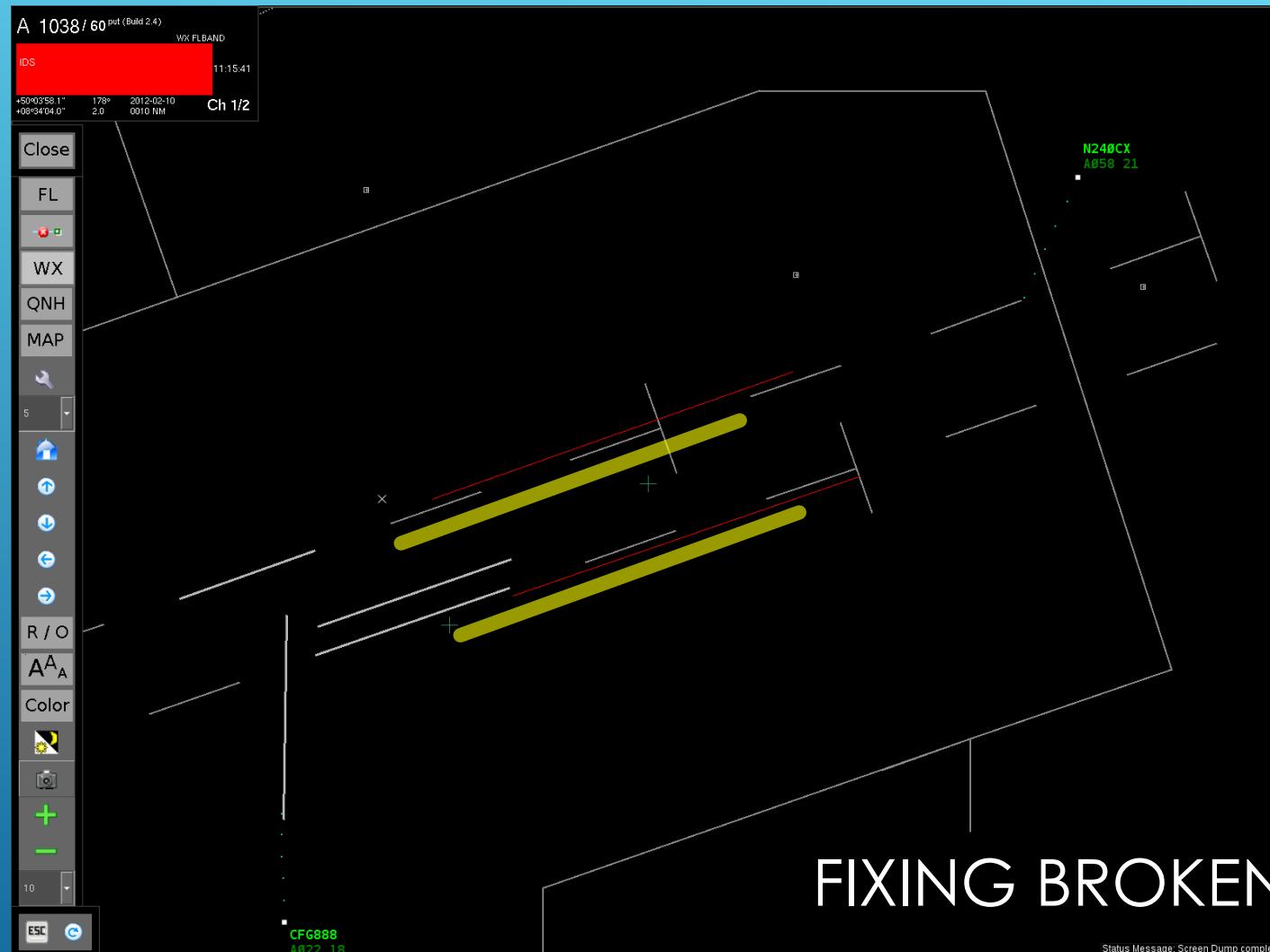
The Easy Way



Noise Abatement SID







FIXING BROKEN PARTS



FIXING BROKEN PARTS

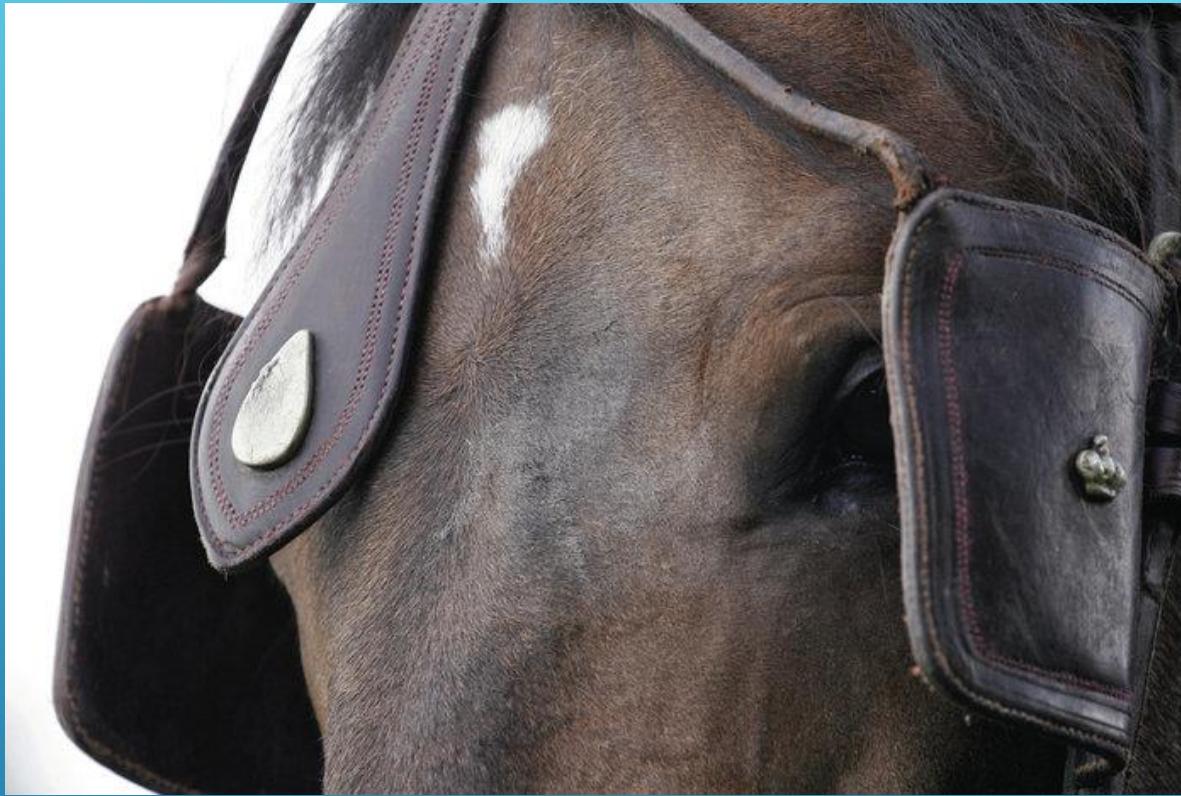


180 %

System
Change

90 %

FROM CAPACITY TO
COMPLEXITY !



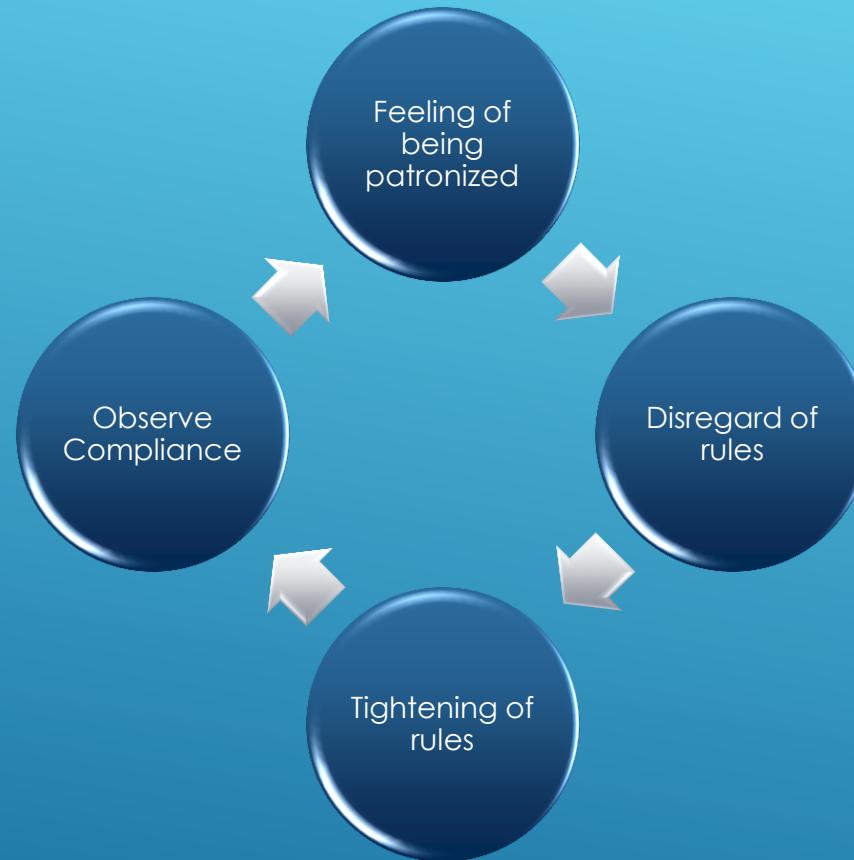
FROM CAPACITY TO
COMPLEXITY !



WHY CAN WE NOT CHANGE THESE RULES ?

DRIFT

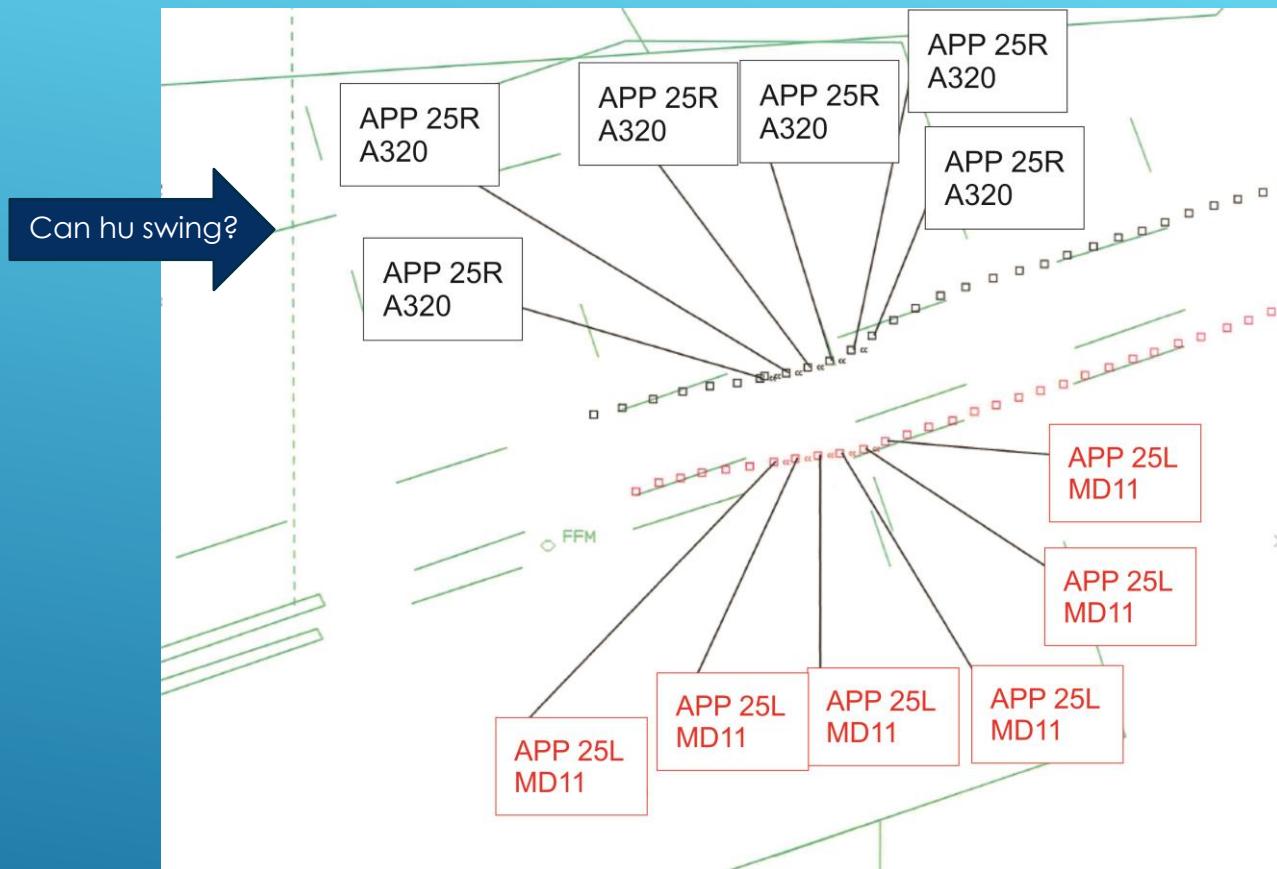




THE MICRO MANAGING DEATH SPIRAL



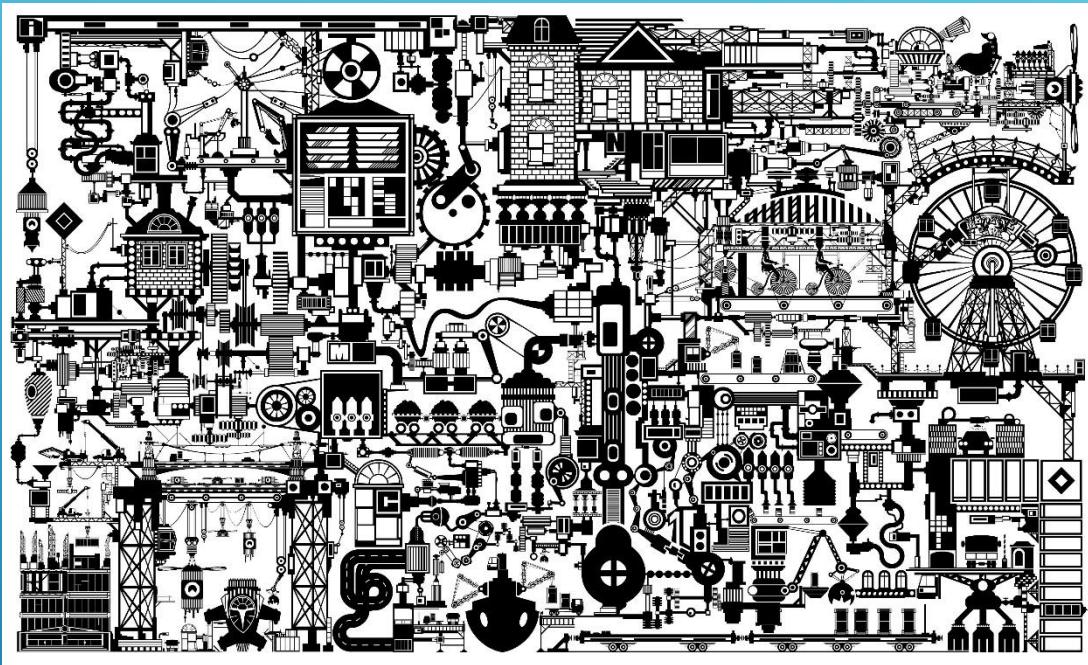
If you take away responsibility
by making more rules, will people
act responsible?



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

Risk Boundary



Increasing Airport Capacity

WEATHER

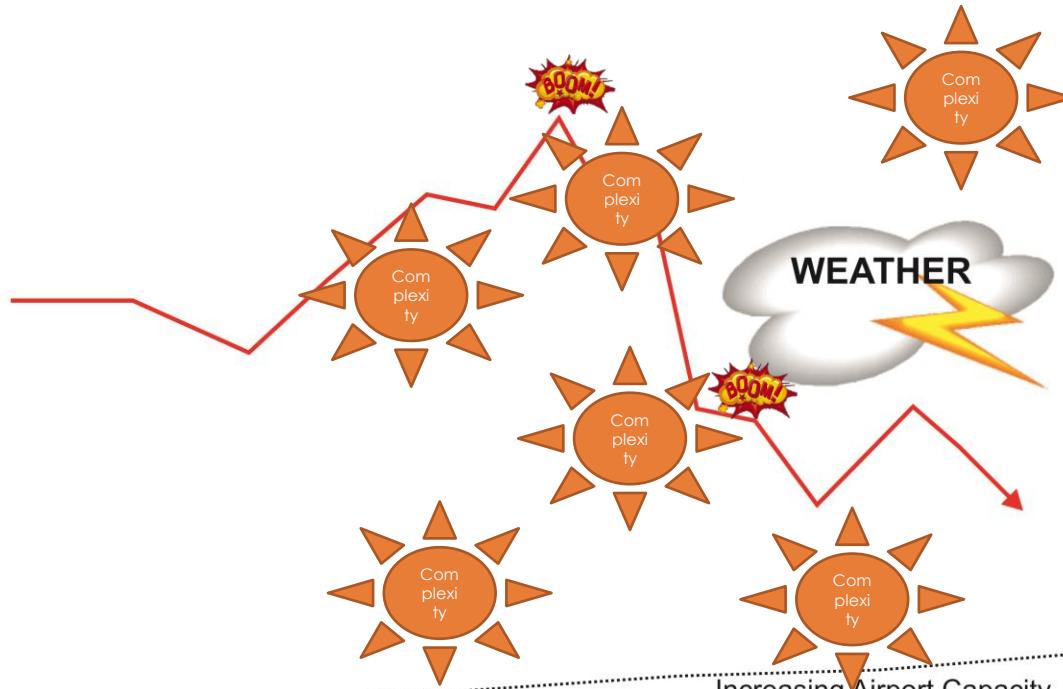
Increasing Airport Capacity

Risk Boundary



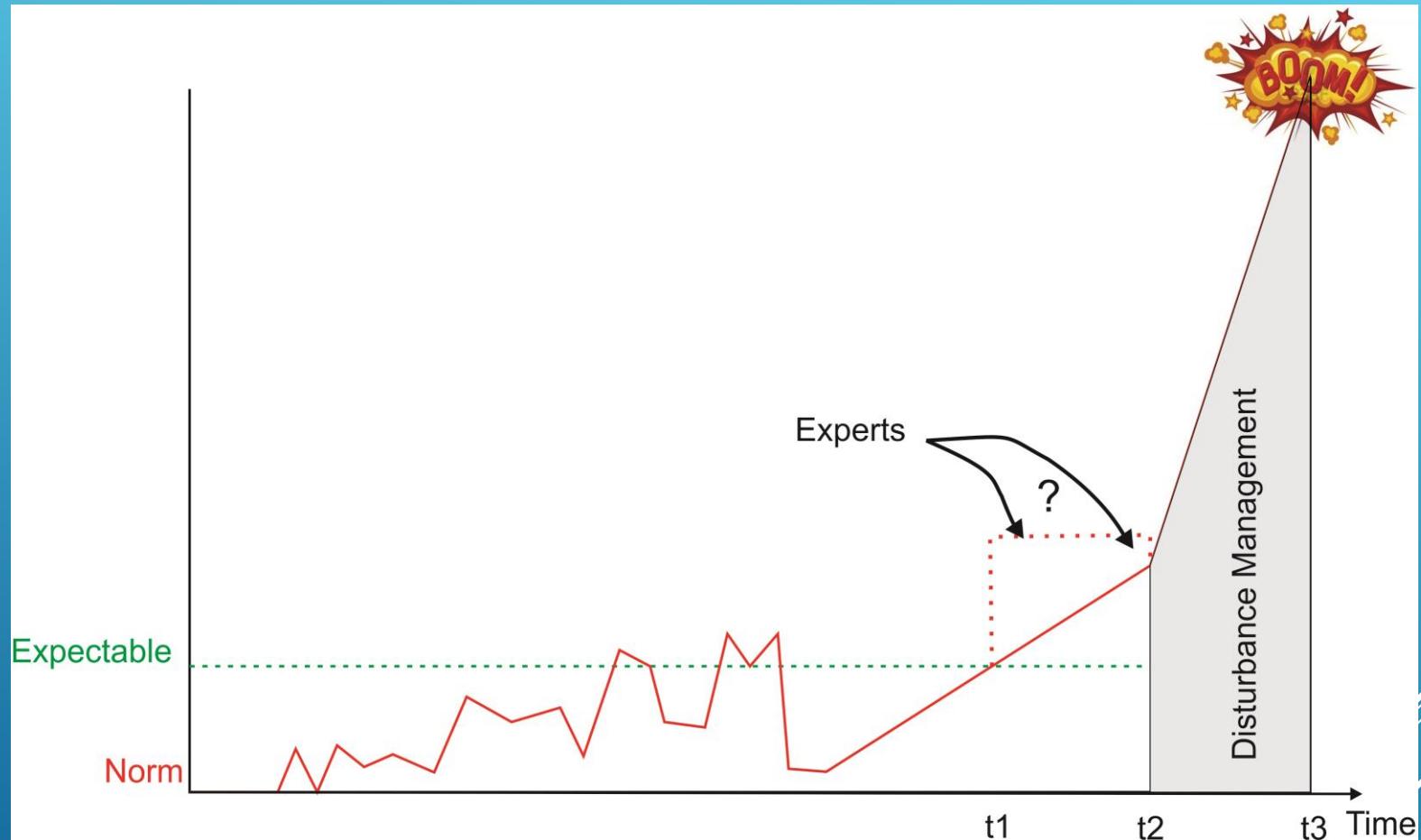
OLD SYSTEM

Risk Boundary



Risk Boundary

NEW SYSTEM



Do you really need your cellphone at work?

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

**Do you not make an entry into the electronic
Log?**

ASK QUESTIONS

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

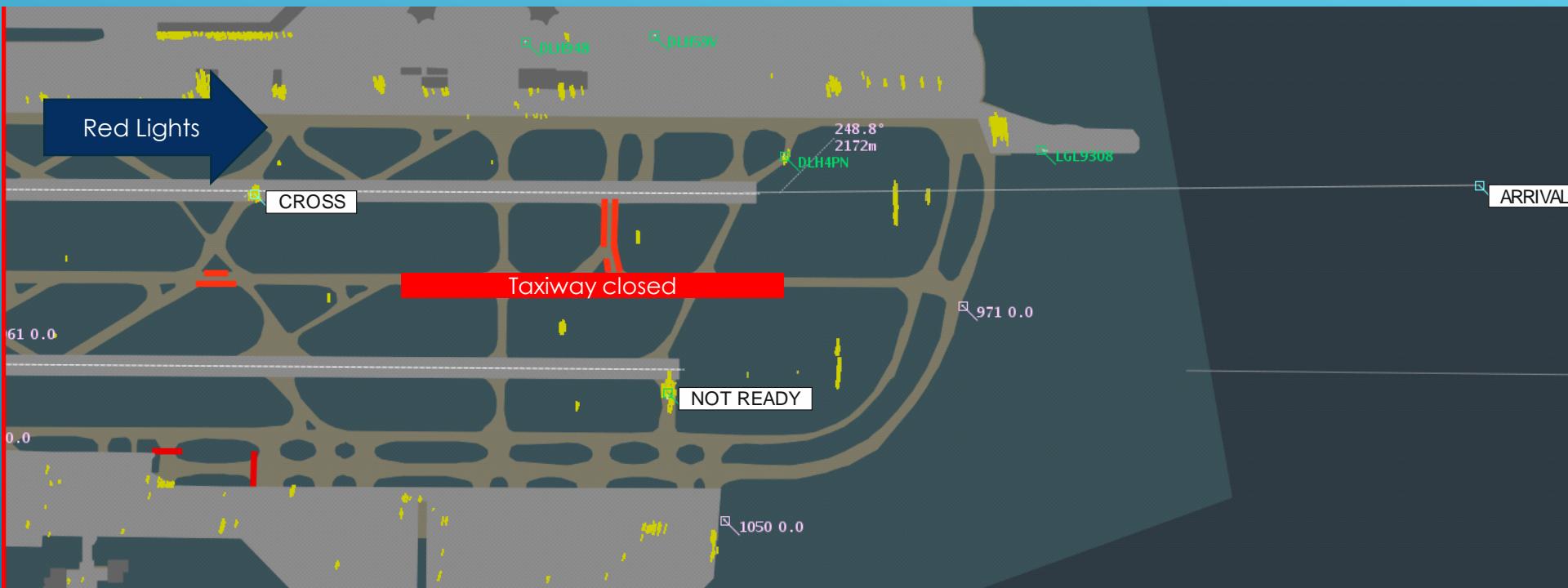


- ▶ Put trust into the people working it
- ▶ Bring back the individual right for responsibility
- ▶ Give a free space to work in
- ▶ Pick up on ATCO suggestions
- ▶ Follow the sharp end wherever you can
- ▶ Ask WHY if confronted with an unwanted behavior
- ▶ Don't micro manage or fix broken parts
- ▶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

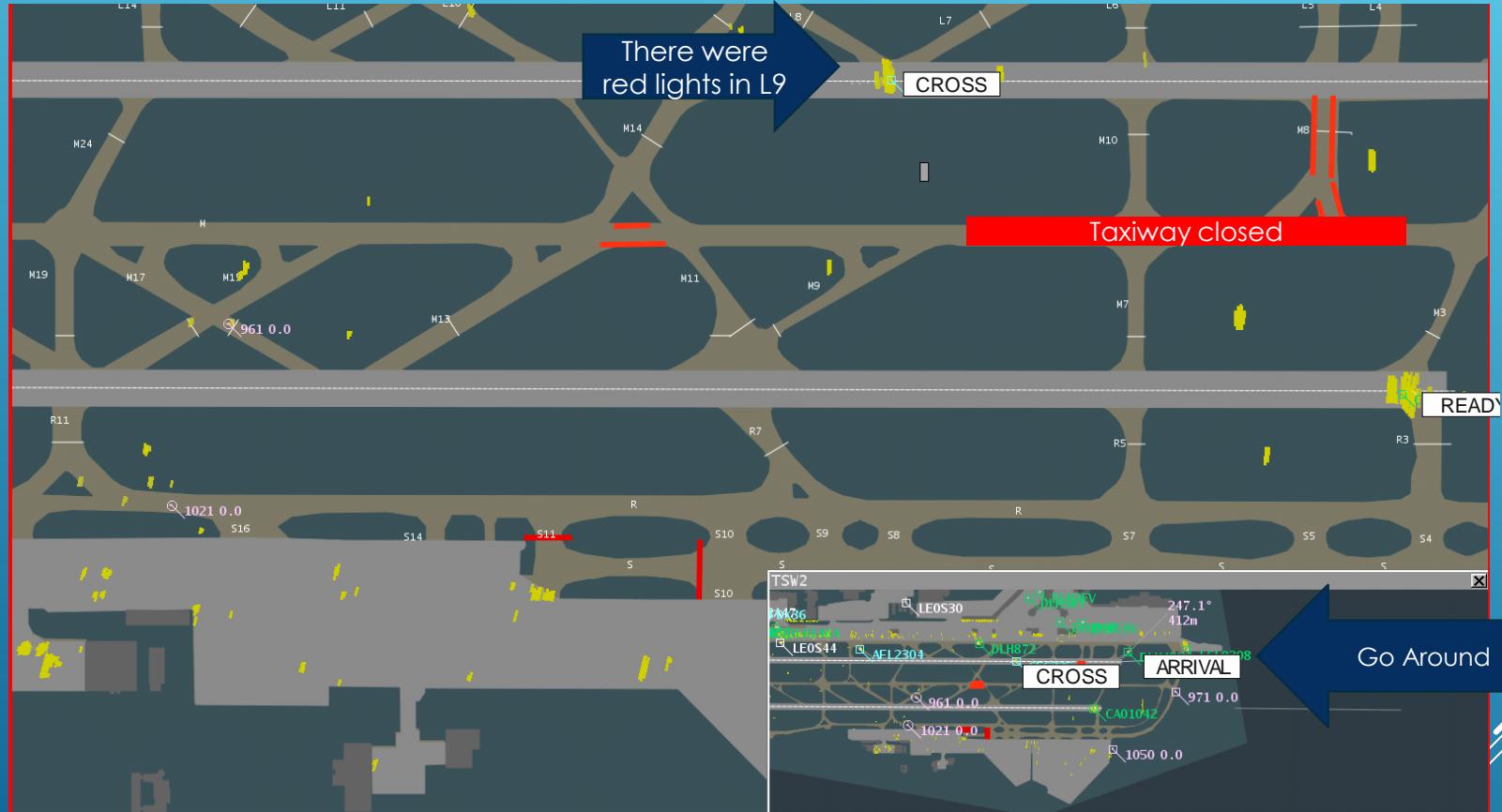
WHAT WE ARE DOING



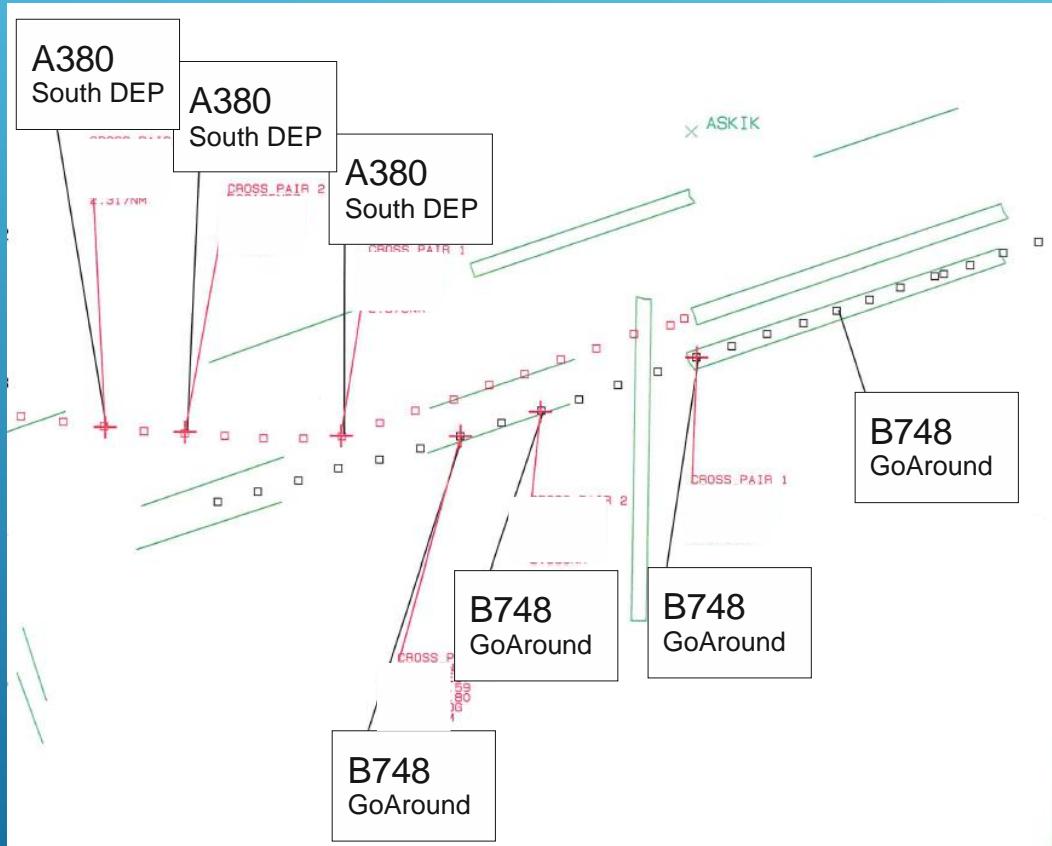
WHAT WORKS !!



WHAT WORKS !!



WHAT WORKS !!



SUMMARY

