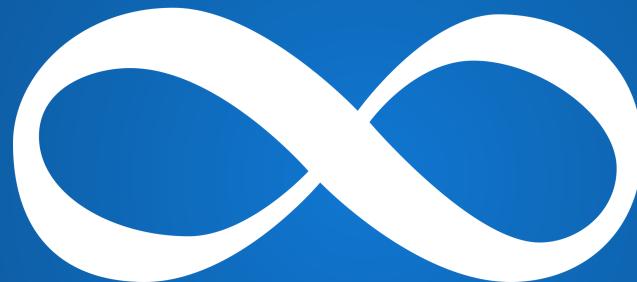


TOTAL atm WORKSHOP



"SHIFTING atm"

A MAKC PRODUCTION



SHIFTING atm





about us

- flemming: greenlander
- robin: european of
english descent
- combined age 100+
- strong family lives
- helicopter pilot
- lawyer
- hiker
- ironman

experience

- 50 years @ 5 accs
- 25 years executive management of multicultural unit
- operational background + holistic business view
 - atco + supervisor
 - senior management roles:
*capacity**
*resource**
*airspace + network**
*Performance**
*customer relationship**
*МАКС - new business unit**







only **4** SPOKES on the WHEEL



SAFETY

GREEN LIGHT



capacity



environment

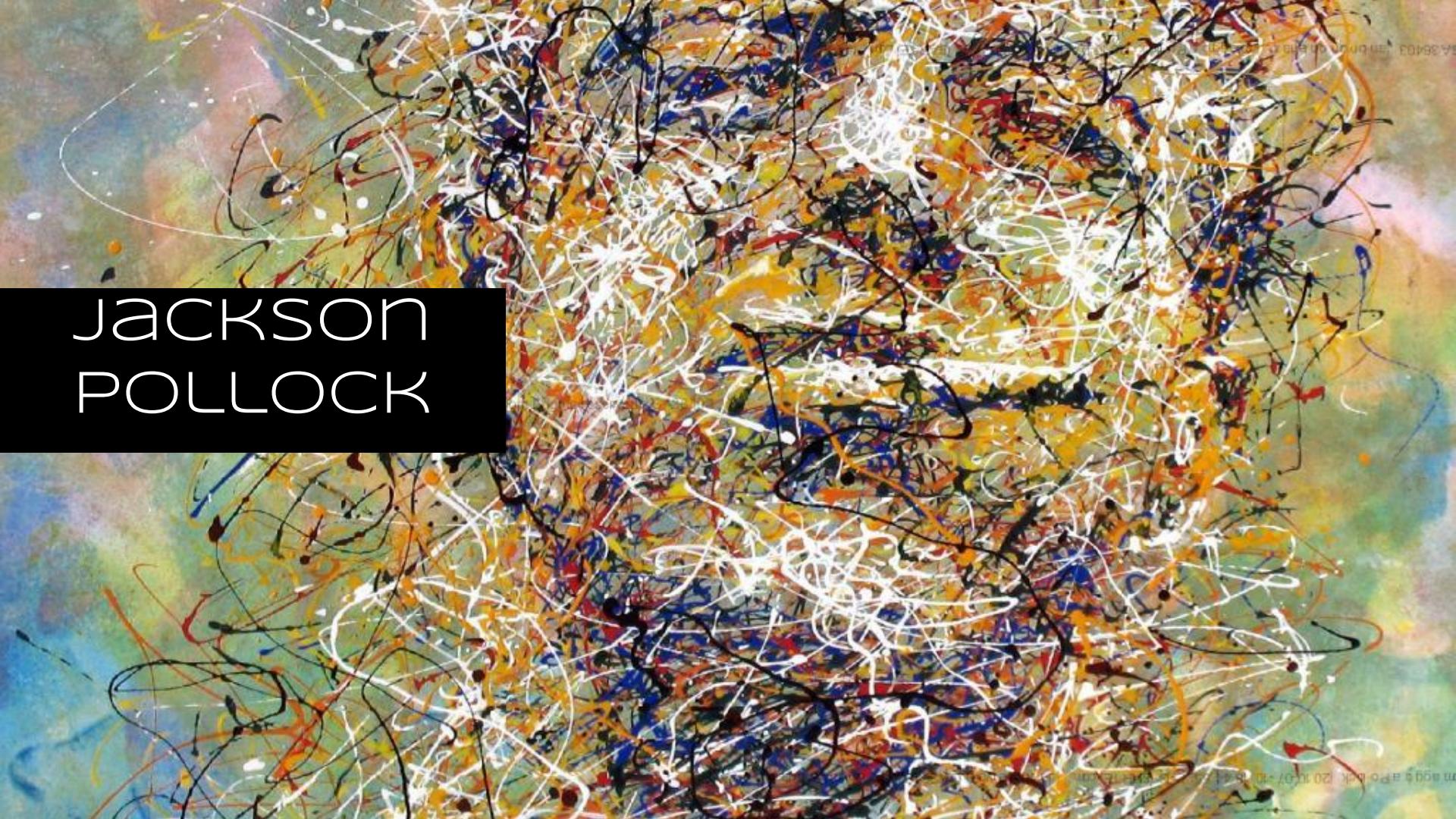


COST-EFFICIENCY



Interdependency

JACKSON POLLOCK

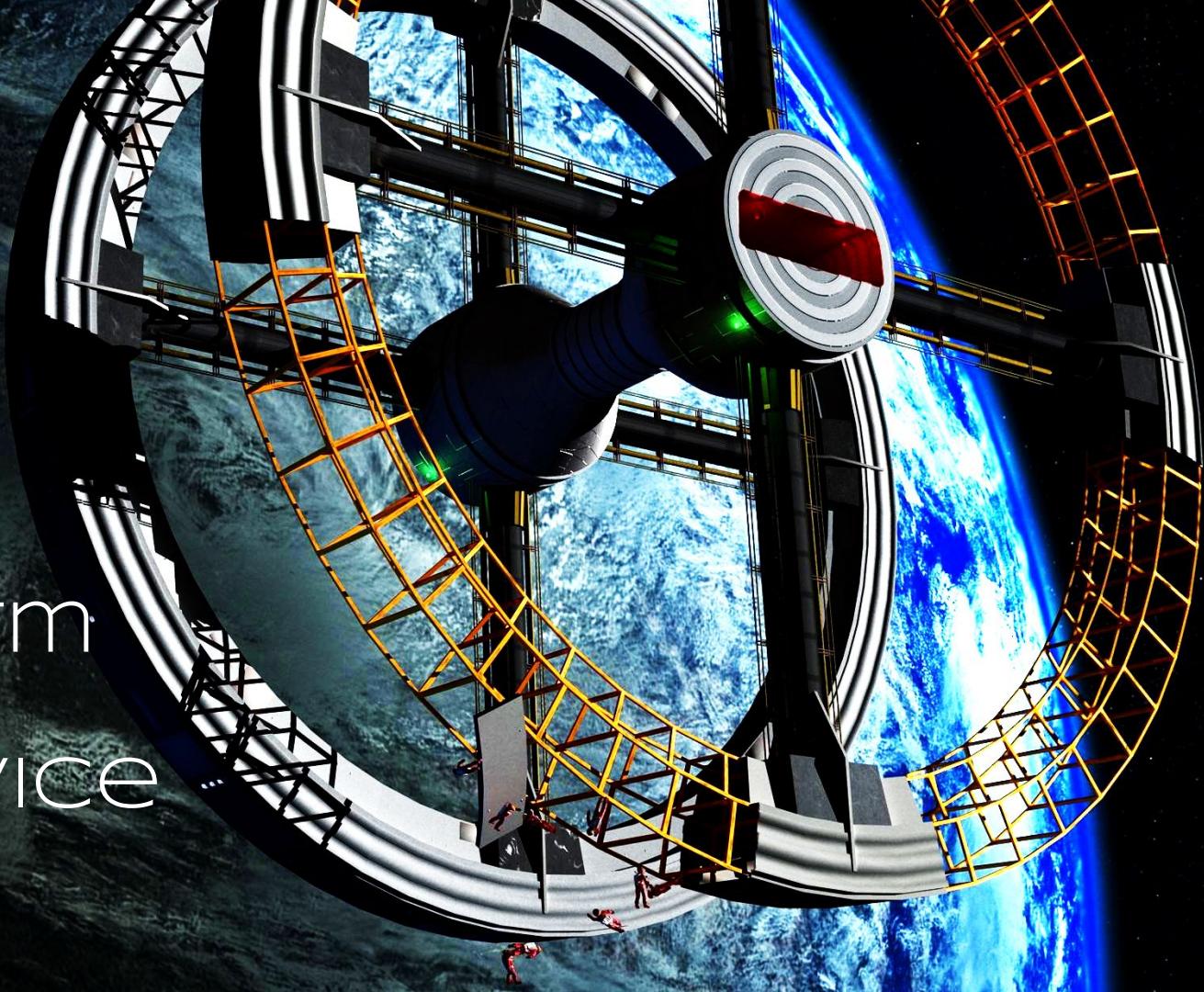


A green and black abstract painting with white text. The painting features a dense, chaotic network of black and white lines and dots on a light green background. A solid black rectangular box is positioned in the upper left quadrant, containing the text "JUST POLLOCKS" in white, sans-serif capital letters.

JUST
POLLOCKS



8 TOTAL atm
Core Service
areas





customer orientation



CULTURE & COMMUNICATION

environment

STAFF resourcing

SAFETY

resilience

capacity

COST efficiency



know your customer



service
FIRST,
sAFETY
always

CULTURE





responsibility



deliver

Balance



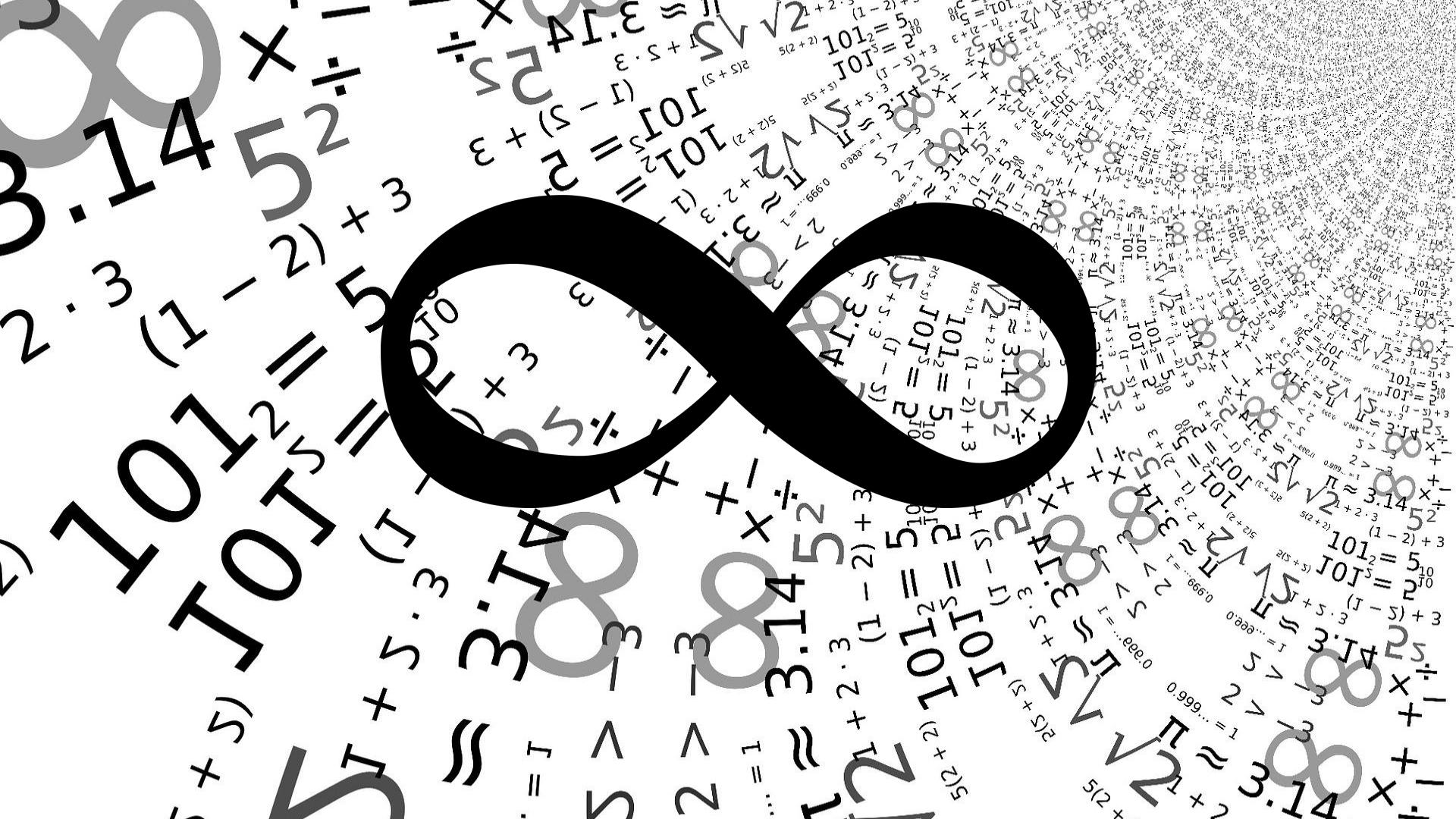


crisis



50%
OF 80%

STAFF resourcing





SUPPLY vs demand



Kim Hansen



forecast



BACKCAST

THE DNA





HUMAN FACTORS



STRUCTURE



FLEXIBLE



PEOPLe
POWER
PLANNING
TOOLS



break

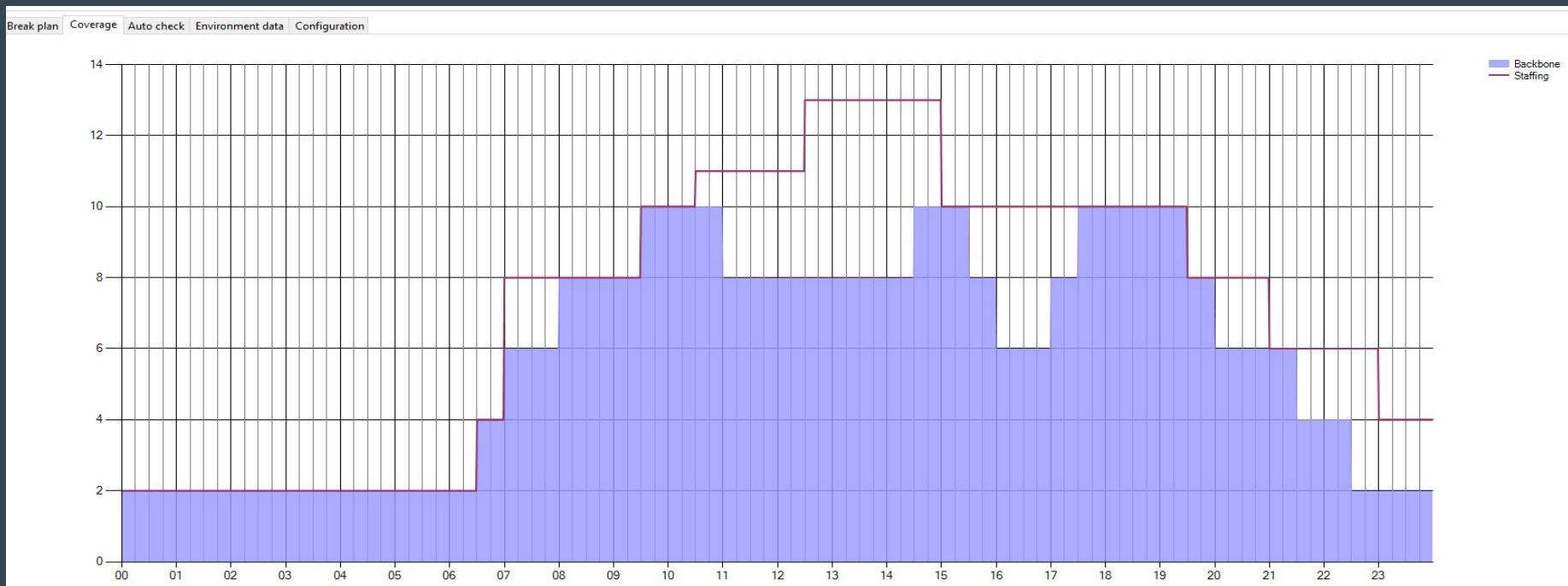
alpha ACC

standard 6-4 roster WITH 5-Team's

ALPHA ACC ROSTER (excerpt)														
STAFF NUMBER	9	9	9	9	9	9	9	9	9	9	9	9	9	9
WEEKDAY	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	
DATE	30	31	1	2	3	4	5	6	7	8	9	10	11	
TEAM 1	AK	A1	A1	OO	M1	M1	N1	N1	SS	OO	OO	A1	A1	OO
	BL	A1	A1	OO	M1	M1	N1	N1	SS	OO	OO	A1	A1	OO
	CM	A1	A1	OO	M1	M1	N1	N1	SS	OO	OO	A1	A1	OO
TEAM 2	HR	OO	OO	A1	A1	OO	M1	M1	N1	N1	SS	OO	OO	A1
	IS	OO	OO	A1	A1	OO	M1	M1	N1	N1	SS	OO	OO	A1
	JT	OO	OO	A1	A1	OO	M1	M1	N1	N1	SS	OO	OO	A1
TEAM 3	OY	N1	SS	OO	OO	A1	A1	OO	M1	M1	N1	N1	SS	OO
	PZ	N1	SS	OO	OO	A1	A1	OO	M1	M1	N1	N1	SS	OO
	QA	N1	SS	OO	OO	A1	A1	OO	M1	M1	N1	N1	SS	OO
TEAM 4	MM	M1	N1	N1	SS	OO	OO	A1	A1	OO	M1	M1	N1	N1
	WG	M1	N1	N1	SS	OO	OO	A1	A1	OO	M1	M1	N1	N1
	XH	M1	N1	N1	SS	OO	OO	A1	A1	OO	M1	M1	N1	N1
TEAM 5	CC	OO	M1	M1	N1	N1	SS	OO	OO	A1	A1	OO	M1	M1
	DD	OO	M1	M1	N1	N1	SS	OO	OO	A1	A1	OO	M1	M1
	EE	OO	M1	M1	N1	N1	SS	OO	OO	A1	A1	OO	M1	M1

CAPACITY/SOT DEFINITION - PEAK DAYS

Driven by 'busiest normal day'; e.g. **THURSDAY** 03/05 in our example. SOT represents acceptable delay target.



STRUCTURAL EFFICIENCY (BY BEST DAY)

ALPHA Teams

81,2%

Team Size

eleven
afternoons

eleven
mornings

	STAFF NUMBERS	30	25	25	26	26
	WEEKDAY	SUN	MON	TUE	WED	THU
	DATE	30	31	1	2	3
TEAM 1	AK	A1	A1	00	M1	M1
	BL	A1	A1	00	M1	M1
	CM	A1	A1	00	M1	M1
	DN	A1	A1	00	M1	M1
	EO	A1	A1	00	M1	M1
	FP	A1	A1	00	M1	M1
	IE	A1	A1	00	M1	M1
	SI	A1	A1	00	M1	M1
	AG	A1	A1	00	M1	M1
	AH	A1	A1	00	M1	M1
	GQ	A1	A1	00	M1	M1

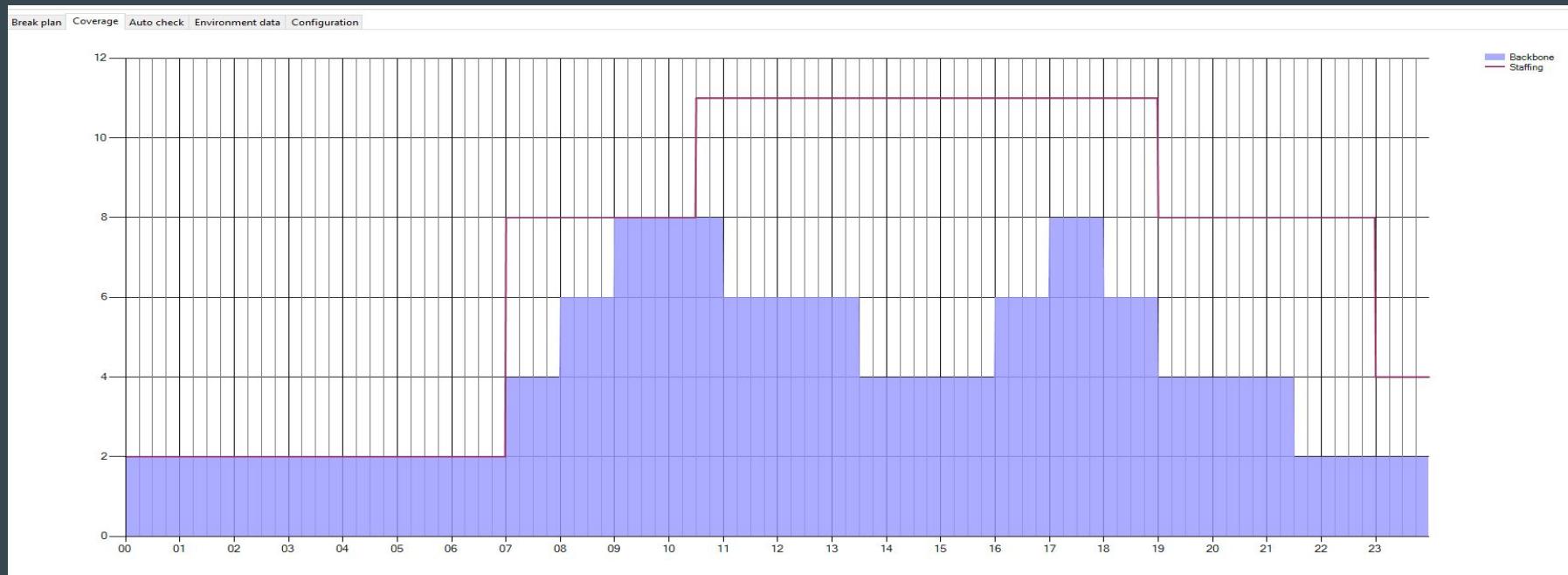
Team size and roster balancing

Four nights;
Four morning
swings

TEAM 5	STAFF NUMBERS	30	25	25	26	26
	WEEKDAY	SUN	MON	TUE	WED	THU
	DATE	30	31	1	2	3
DF	M1	SM	SM	SS	OO	
DG	M1	SM	SM	SS	OO	
CC	OO	M1	M1	N1	N1	
DD	OO	M1	M1	N1	N1	
EE	OO	M1	M1	N1	N1	
FF	OO	M1	M1	N1	N1	
GG	OO	M1	M1	SM	SM	
HH	OO	M1	M1	SM	SM	
MF	OO	M1	M1	TRG	TRG	
JN	OO	M1	M1	LEAVE	LEAVE	
II	OO	M1	M1	LEAVE	LEAVE	
EA	OO	M1	M1	SM	SM	
EB	OO	M1	M1	SM	SM	

CAPACITY/SOT DEFINITION OFF-PEAK DAYS

e.g. **TUESDAY** 01/05 in our example. SOT represents demand.



STRUCTURAL EFFICIENCY (BY CYCLE)

53,5%

OPERATIONAL EFFICIENCY (executed SOT)

49,7%

SOT VARIED TO MEET ACTUAL DEMAND



break



50% TO
80%

OLD

- FIXED STRUCTURE
- STRUCTURALLY INEFFICIENT
- BEST PRACTICES NOT RESPECTED



FIXED STRUCTURE

- 4/2 BACKWARD ROTATION
- 8 SHIFTS (ONLY)
- STRICT ALLOCATION
- DECENTRALISED LEAVE PLANNING



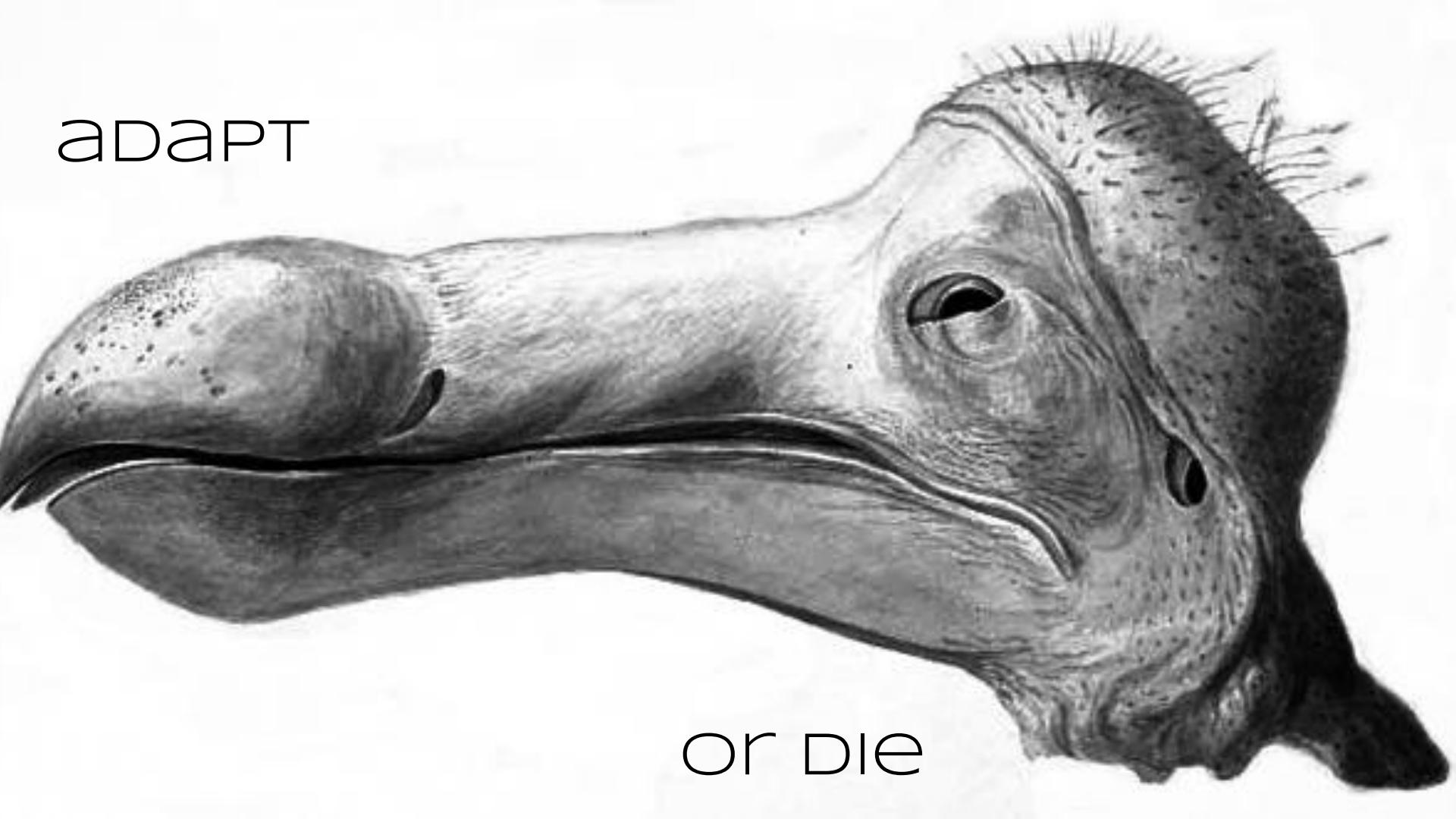
- LONG SHIFTS
- BIG OVERLAPS
- 30-35% LOST UP FRONT
- OVERALL EFFICIENCY <50%

STRUCTURALLY INEFFICIENT

BEST PRACTICES not respected



- backward rotation
- M/N on same day
- 10 HOUR SHIFTS
- 10 HOURS BETWEEN SHIFTS



adapt

or die

saFe & sound

- maximum SHIFT LENGTH
- max time on POSITION
- duration OF breaks
- max # OF consecutive NIGHT SHIFTS



safe & sound

- FORWARD ROTATION IS HEALTHIER
- NIGHT SHIFTS SHOULD FINISH as early as POSSIBLE
- early SHIFTS SHOULD NOT START TOO early
- early/night hours worked SHOULD BE compensated IMMEDIATELY (shorter SHIFT)
- min. 24 hours OFF after NIGHT SHIFT (preferably 48 hours)
- min. 12 hours between SHIFTS
- age amenities (50+)
- max. # OF CONSECUTIVE SHIFTS
- STAFF INFLUENCE on the roster

- create a healthy, flexible and efficient demand based roster
- trade structural inefficiency for less working days/better working conditions

BUILD

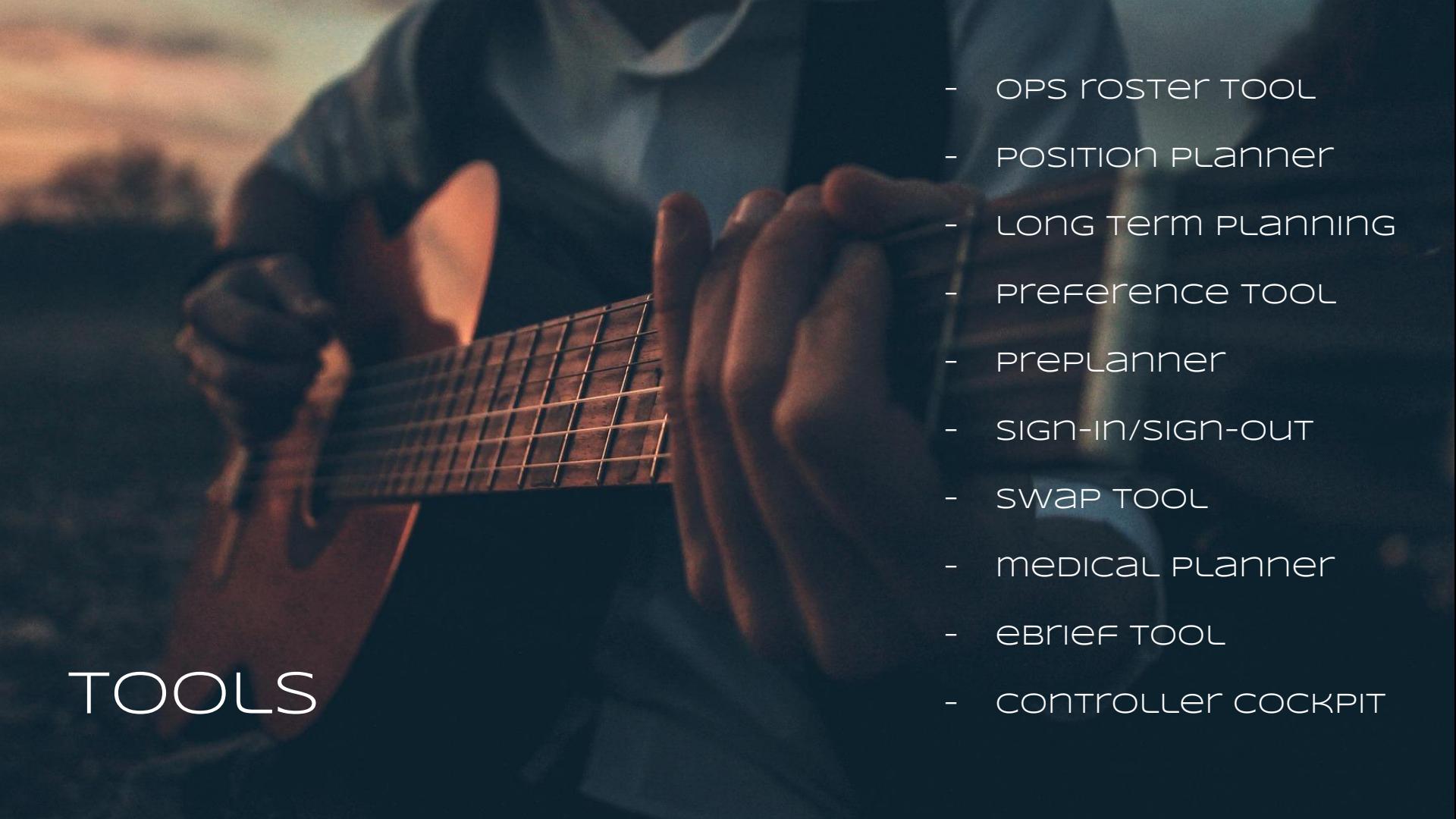


'PIECE OF THE PIE' FOR THE COMPANY

- very strict leave planning
 - 2 weeks off June-September
- staggered shifts
 - every half hour
 - structural efficiency >94%
- 12 hours between shifts
- shift length 7:30 hours
- flex-duties
- stand-by duties
- compulsory overtime

'PIECE OF THE PIE' FOR STAFF

- reduction of 30 working days p.a.



TOOLS

- OPS roster TOOL
- POSITION PLanner
- LONG TERM PLANNING
- preference TOOL
- PrePLanner
- SIGN-IN/SIGN-OUT
- SWAP TOOL
- MEDICAL PLanner
- eBRIEF TOOL
- controller COCKPIT

- ✓ forward rotation is healthier
- ✓ max. # of consecutive shifts
- ✓ maximum shift length
- ✓ min. 12 hours between shifts
- ✓ max time on position
- ✓ duration of breaks
- ✓ early/night hours worked should be compensated immediately
(shorter shift)
- ✓ min. 24 hours off after night shift
- ✓ staff influence on the roster

CHECK

- ❑ night shifts should finish as early as possible
- ❑ early shifts should not start too early
- ❑ age amenities (50+)

STRUCTURAL EFFICIENCY (real example)

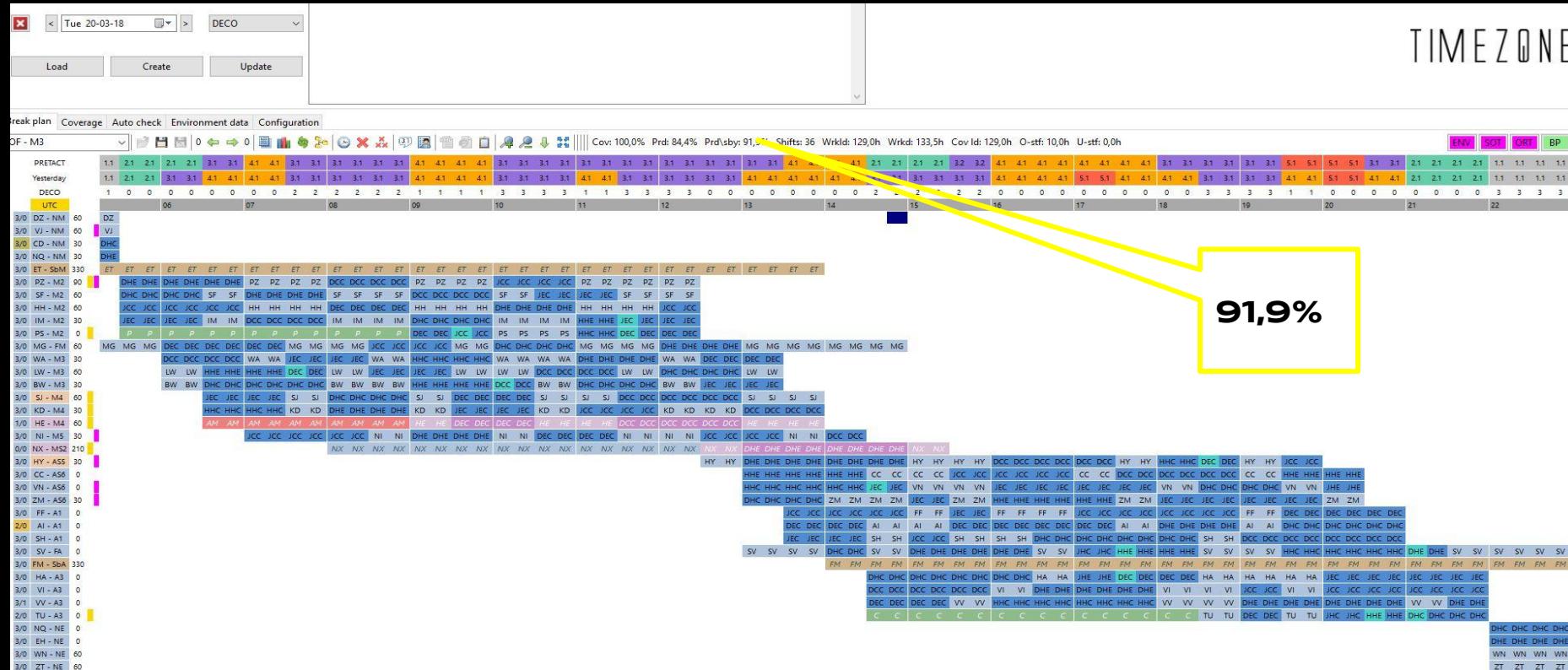
Break plan Coverage Auto check Environment data Configuration

Cov: 100,0% Prd: 90,1% Prdlsby: 96,1% Shrtld: 0 Wrld: 176,0h Wrkd: 176,0h Cov Id: 176,0h O-stf: 6,5h U-stf: 0,0h

96,1%

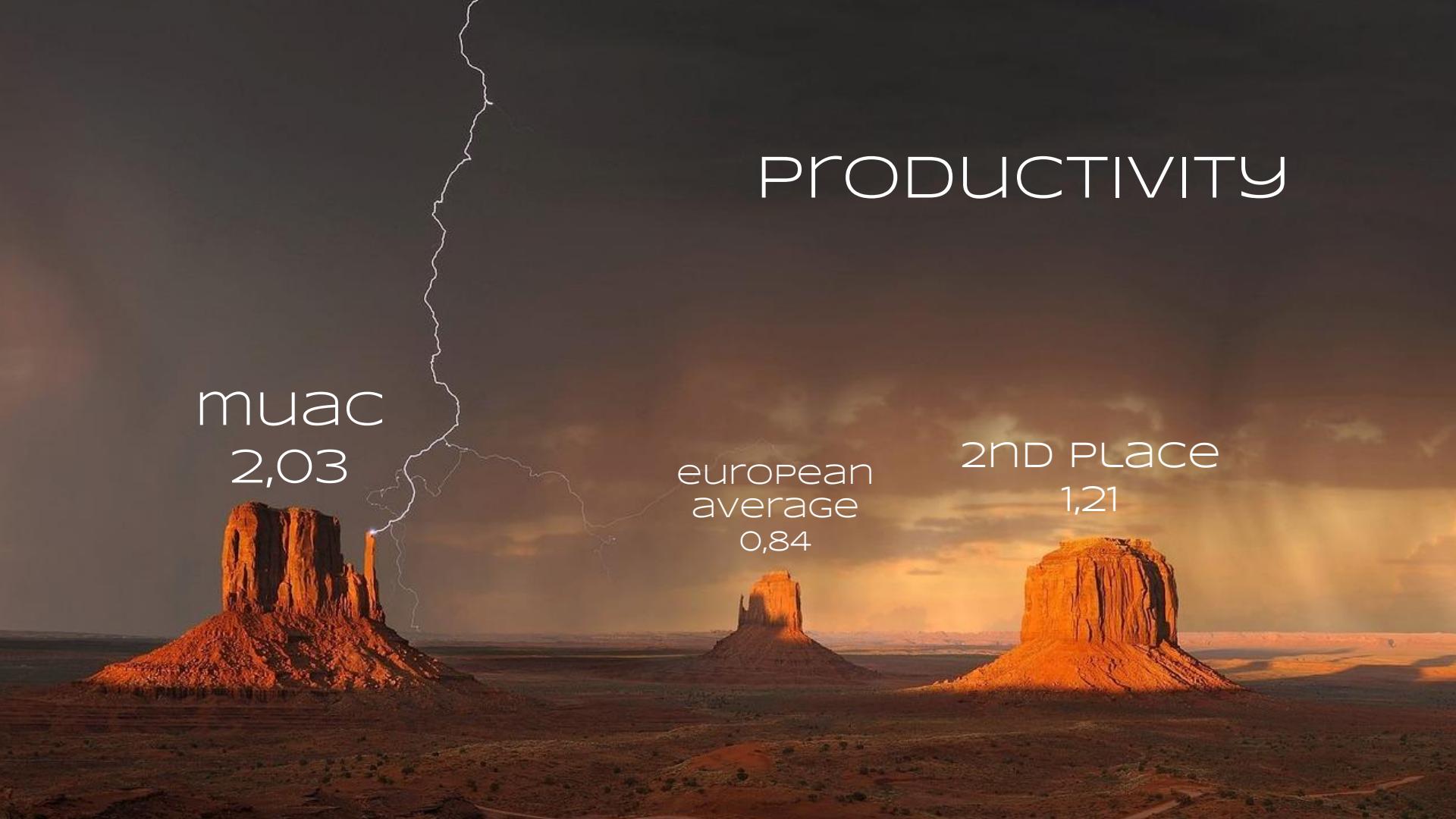
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PLANNING	2,1	4,5	4,5	6,2	6,2	6,2	5,8	5,8	5,8	5,9	5,9	5,9	5,9	5,9	5,9	5,9	5,9
30-06-18	2,1	4,5	4,5	6,2	6,2	6,2	5,8	5,8	5,8	5,9	5,9	5,9	5,9	5,9	5,9	5,9	5,9
BRUS	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	2
UTC		05		06		07		08		09		10		11		12	
3/0 LO - NM	30	OCC															
3/0 CG - SbA	330	CG															
3/0 RM - M2	60	OCC	OCC	OCC	OCC	OCC	RM	RM	RM	NEC							
3/0 VB - M2	60	NHE	NHE	NHE	NHE	NHE	VB	VB	LHE								
3/0 ZP - M2	0	LCC	LCC	LCC	LCC	LCC	ZP	ZP	LHE	LHE	ZP	ZP	NEC	NEC	NEC	NEC	NEC
3/0 GU - M2	60	OEC	OEC	OEC	OEC	OEC	GU	GU	LHC								
3/0 SG - M2	0	LEC	LEC	LEC	LEC	LEC	SG	SG	SG	OCC							
3/0 AH - M2	0	NHC	NHC	NHC	NHC	NHC	AH	AH	LEC	LEC	AH	AH	AH	AH	NCC	NCC	NCC
3/0 BK - M2	0	NCC	NCC	NCC	NCC	NCC	BK	BK	OEC	OEC	OEC	BK	BK	BK	BK	NHC	NHC
3/0 PV - M2	30	NEC	NEC	NEC	NEC	NEC	PV	PV	PV	NCC	NCC	NCC	NCC	NCC	PV	PV	LHC
3/0 FN - FM	30	FN	FN	FN	KEC	KEC	KEC	OCC	OCC	OCC	FN						
3/0 SN - M3	30	LHC	LHC	LHC	LHC	LHC	SN	SN	OEC	OEC	OEC	SN	SN	SN	LCC	LCC	LCC
3/0 FR - M3	0	KCC	KCC	KCC	KCC	KCC	LEC	LEC	FR	FR	NHE	NHE	FR	FR	OCC	OCC	FR
3/0 RC - M3	30	LHE	LHE	LHE	LHE	LHE	RC	RC	LCC	LCC	LCC	RC	RC	RC	OCC	OCC	OCC
3/0 EY - M3	30	EY	EY	EY	EY	EY	LHC	LHC	EY	EY	NCC	NCC	NCC	EY	EY	EY	NEC
1/0 RV - M3	30	RV	RV	NCC	NCC	NCC	RV	RV	RV	NHC	NHC	NHC	RV	RV	NHC	NHC	NHC
3/0 PJ - M4	0	NHE	NHE	NHE	NHE	NHE	PJ	PJ	PJ	LCC	LCC	LCC	PJ	PJ	LEC	LEC	LEC
3/0 BU - M5	0	NHC	NHC	NHC	NHC	NHC	BU	BU	BU	OEC	OEC	OEC	BU	BU	NHE	NHE	NHE
3/0 JV - A5	0														LEC	LEC	LEC
3/0 LU - A5	0														OEC	OEC	OEC
3/0 ZS - A5	0														LHE	LHE	LHE
3/0 TG - A5	30														NCC	NCC	NCC
1/0 KH - A5	330														KH	KH	KH
1/0 AU - A5	0														NHE	NHE	NHE
3/0 AG - A1	0														NHC	NHC	NHC
3/0 IN - A1	0														LHC	LHC	LHC
3/0 PY - A1	0														NEC	NEC	NEC
3/0 OP - A2	0														OCC	OCC	OCC
3/0 WK - SbA	330														WK	WK	WK
3/0 WO - A3	0														LCC	LCC	LCC
3/0 GL - A3	0														OEC	OEC	OEC
3/0 FW - A3	0														DEC	DEC	DEC
3/0 OA - A3	0														NHE	NHE	NHE
3/0 HU - A3	0														LHE	LHE	LHE
3/0 HZ - A3	0														NCC	NCC	NCC
3/0 RQ - NE	0														DEC	DEC	DEC
3/0 SO - NE	0														DEC	DEC	DEC
3/0 VY - NE	60														DEC	DEC	DEC
3/0 RI - NE	60														DEC	DEC	DEC

OPERATIONAL EFFICIENCY (real example)





GUARDIAN



PRODUCTIVITY

muac

2,03

european
average
0,84

2nd Place
1,21



break



THE VOYAGE

THE GRASS IS GREENER





Preparing for the voyage



'all aboard'

THE VOYAGE





arriving at 'THE Promised Land'



Life in 'The Promised Land'

THE GRASS IS GREENER

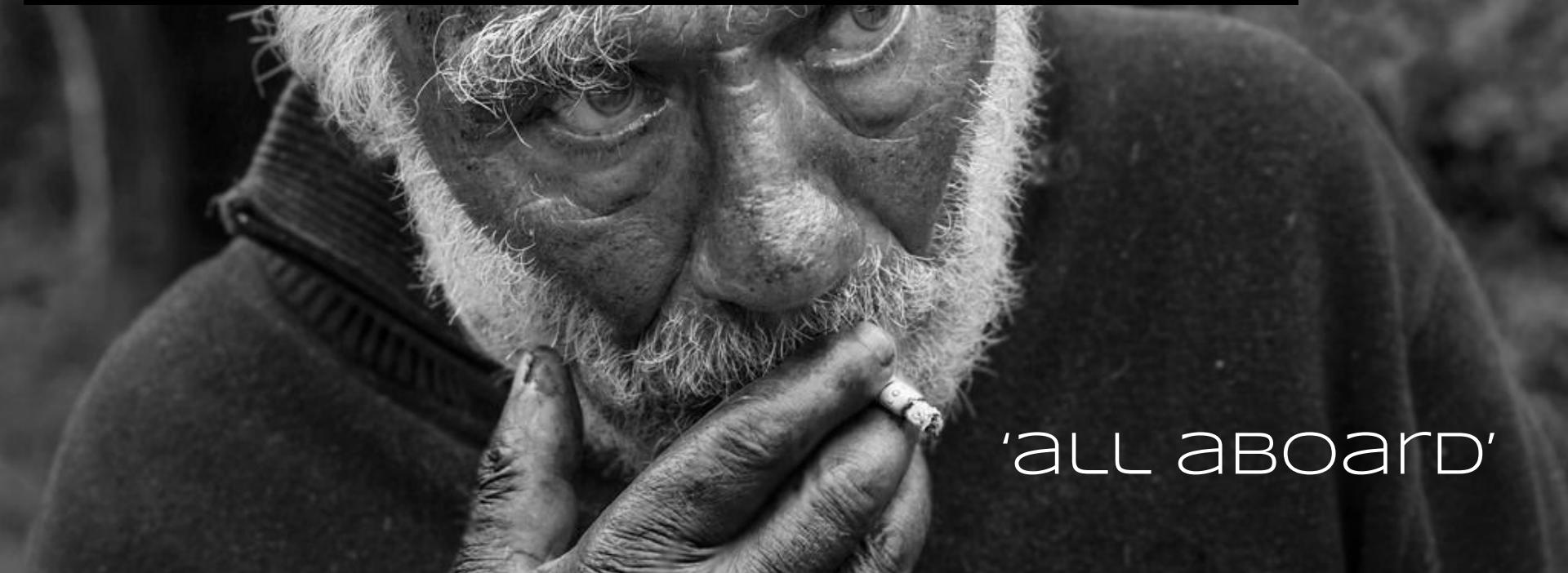


- WHY DO YOU NEED TO CHANGE?
- ARE THERE OUTSIDE FACTORS REQUIRING THE CHANGE (FINANCIAL, SOCIAL ETC.)?
- CAN YOU CONTINUE WITHOUT CHANGING?

- WHO WANTS THE CHANGE?
- CAN YOU CLEARLY DEFINE WHAT YOU WANT?
- ARE YOU RESTRICTED IN YOUR SEARCH OPTIONS (FINANCIALLY, SOCIALLY ETC.)?
- WHO IS GOING TO DRIVE/STEER THE CHANGE PROCESS?

PREPARING FOR THE VOYAGE

- WHO AND WHAT DO YOU NEED TO TAKE WITH YOU?
- DEFINE 'RULES OF THE GAME' FOR THE CHANGE PROCESS
- WHAT IS YOUR (INITIAL) GOAL? (HF, EFFICIENCY, FLEXIBILITY, COST REDUCTION ETC.)
- HOW WILL YOU CELEBRATE YOUR DECISION TO CHANGE?



'ALL ABOARD'

THE VOYAGE

- WHO LEADS (TAKES OVER) WHEN THE GOING GETS TOUGH?
- WHAT IS THE WORST 'STORM' YOU COULD EXPERIENCE (SOCIAL CONFLICT, INDUSTRIAL ACTION)?
- CAN YOU CHANGE THE PLAN WHILE GOING?





- IS YOUR SOLUTION ACCEPTABLE (TO YOU AND YOUR PARTNERS)?
- HOW WILL YOU CELEBRATE YOUR SUCCESS?
- DESCRIBE YOUR AGREEMENT (AS YOU SEE IT)
- CAN YOU IMPLEMENT IMMEDIATELY (NEW TOOLS, NEW PROCESSES)?

ARRIVING AT 'THE PROMISED LAND'



- DOES THE NEW SITUATION SOLVE YOUR 'OLD PROBLEMS'?
- DO YOU NEED FURTHER CHANGE IN THE (NEAR) FUTURE?
- DID YOU 'BURN' ANYBODY ON THE WAY?

Life in 'The Promised Land'

Harvard method of negotiation

"seParate the people from the problem"

"FOCUS on interests, not positions"

"invent options for mutual gain"

"insist on using objective criteria"

"know your BATNA (best alternative to
negotiated agreement)"

negotiate



total atm

future atm

∞