



TÉCNICO
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Reallocating operating room time: a Portuguese case



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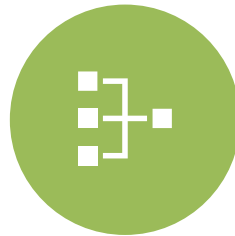
CENTRO HOSPITALAR
LISBOA NORTE, EPE



Hospital do
Évora **Espírito Santo** E.P.E



LINKING
LITERATURE AND
PRACTICE



COMBINE OR AND
MCDA ANALYSIS



DEFINE REAL
NEEDS OF THE
HOSPITAL



IMPROVE
OPERATING ROOMS
EFFICIENCY



The screenshot shows a news article from 'Diário de Notícias' with the headline 'Tempos máximos em cirurgias ultrapassados em doentes prioritários mesmo sem greve'. The article discusses how various hospitals in the National Health Service exceeded maximum response times for priority patients in 2018, even before a nurses' strike. A second article snippet is visible on the right, titled 'Tempos de espera por cirurgias e consultas pioraram nos hospitais e centros de saúde', mentioning that waiting times for surgeries and consultations worsened, and that the Ministry of Health is implementing an action plan to improve access.

MASTER SURGERY SCHEDULE

	OR1	OR2	OR3	OR4	OR5
MON	C. Geral	Urologia		Ortopedia	Oftalmologia
	C. Geral	C.Geral Tira I ou Tira II a)			
TUE	C. Geral	C. Geral		Ortopedia	Oftalmologia
	C. Mama	C. Pl�stica			Oftalmologia
WED	C. Pl�stica	C. Pedi�trica		Ortopedia	Oftalmologia
	C. Ger. Varizes		O.R.L.		
THU	C. Geral	C. Geral		Ortopedia	Oftalmologia
		Urologia	O.R.L.		
FRI	C. Geral	Estomat. ^{b)}		Ortopedia	Oftalmologia
		Implantofix ^{c)}			c/ locais

- Portuguese public hospital
 - 8 surgical specialties
 - High levels of demand (325.327 people; 26% of elderly)
 - Low resources (5 operating rooms)
- High rates of idle OT time (occupancy rate of 51.5%)

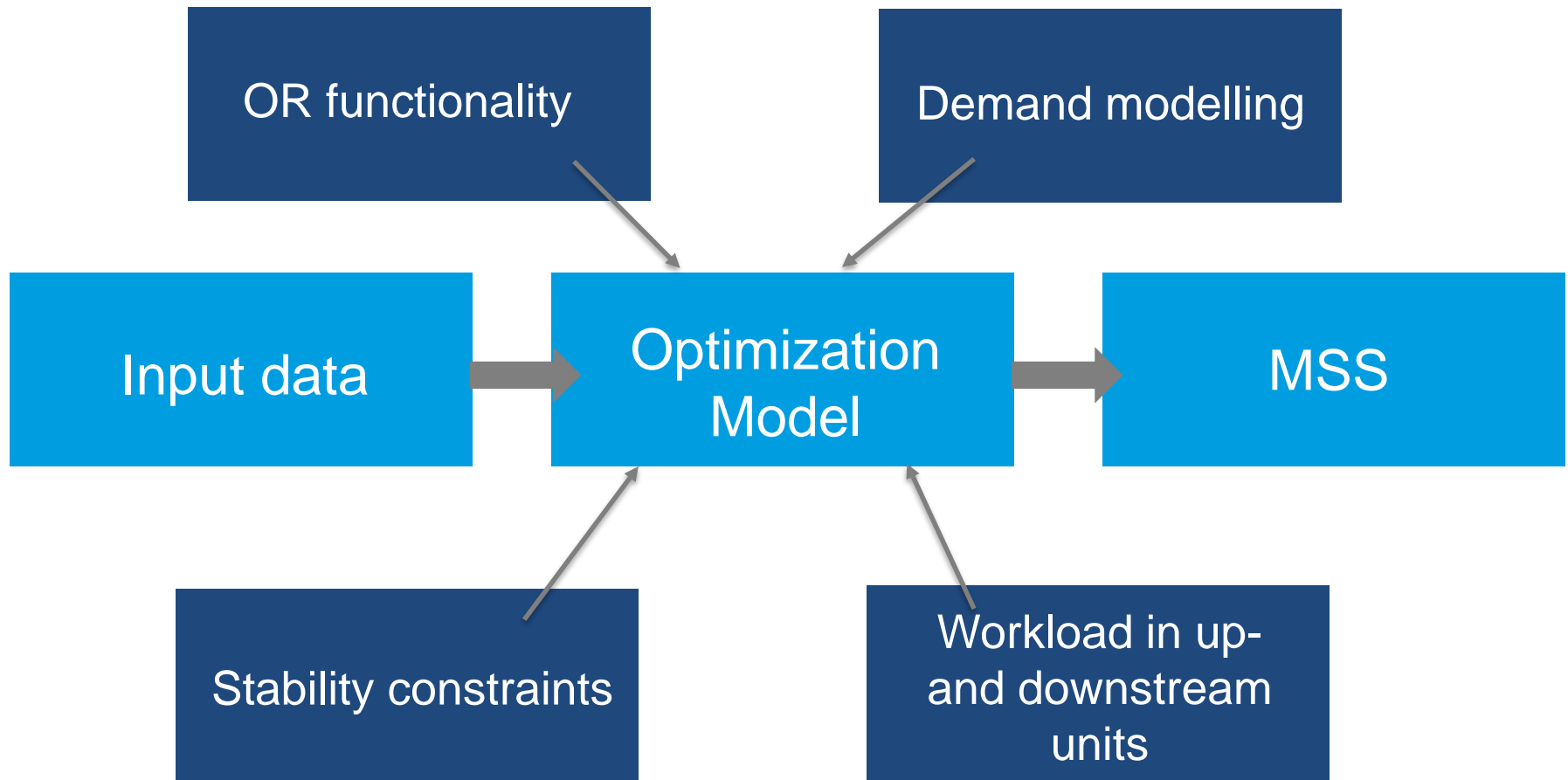


Waiting list 28-12-2018	Priority 1	Priority 2	Priority 3	Priority 4
Total patients	3105	299	49	N/A
% Past due date	21.0%	42.14%	18.37%	N/A
Maximum waiting time	270 days	60 days	15 days	72 hours

- Capacity planning - MSS
 - Tactical (aggregate) level
- Long planning horizon
- MSS stability
- Objectives:
 - Surgical team preferences
 - Supply and demand balance
 - Up- and downstream units workload



Gaps: 0.21-2.34 30min CPU



- Real Instance

- Increased Instance

- Increased Instance without Stability



Specialties at max capacity



Low compliance supply vs demand



Only 55% slots assigned



More flexibility regarding capacity



Better compliance supply vs demand



About 95% slots assigned



More flexibility to chase demand



Potential to schedule more patients



About 95% slots assigned



Doctors not satisfied

Predictive model
for demand
forecast

Consistent
models for
stakeholders'
preferences

Sensitivity
analysis on
stability
parameters

Simulation model
for an evaluation
of the model at
disaggregated
level

Impact of
preferences in OR
utilization

REALLOCATING OPERATING ROOM TIME: A PORTUGUESE CASE

Obrigada!

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