

# A WOW approach for X centres

## An integral vision on Organisation, Cooperation, Workplace design

TNO Human Factors

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# The issue of X centres

- **Centralisation as trend**
  - e.g. video control centres public domain, bridges & locks control centres, traffic control centres, crisis management centres
- **Problems**
  - often dull simple sustained operator task
  - high responsibility
    - safety, legal matter - control leads to accountability

# Integral vision on design

Organisation



Means

People

- **Organisation of tasks and responsibilities**

- task clusters
- distribution over people
- distribution over means

- WOW -  
*Way of work  
concept*

- **Operate and Co-operate**

- communication, information exchange
- backup, take over tasks

- C&V -  
*compact  
adequate*

- **Work place design**

- ergonomic requirements
- spatial layout

# Analysis and design framework

'What realise'

Operational concept

'How do work'

Way of Work concept

'How support'

Support concept

'How integrate'

Workplace concept

# New RWS bridge/lock centres

Operational  
concept

Way of work  
concept

Support-  
concept

Workplace  
concept

"fast and comprehensive  
24 hours service"

Video en  
controls integration

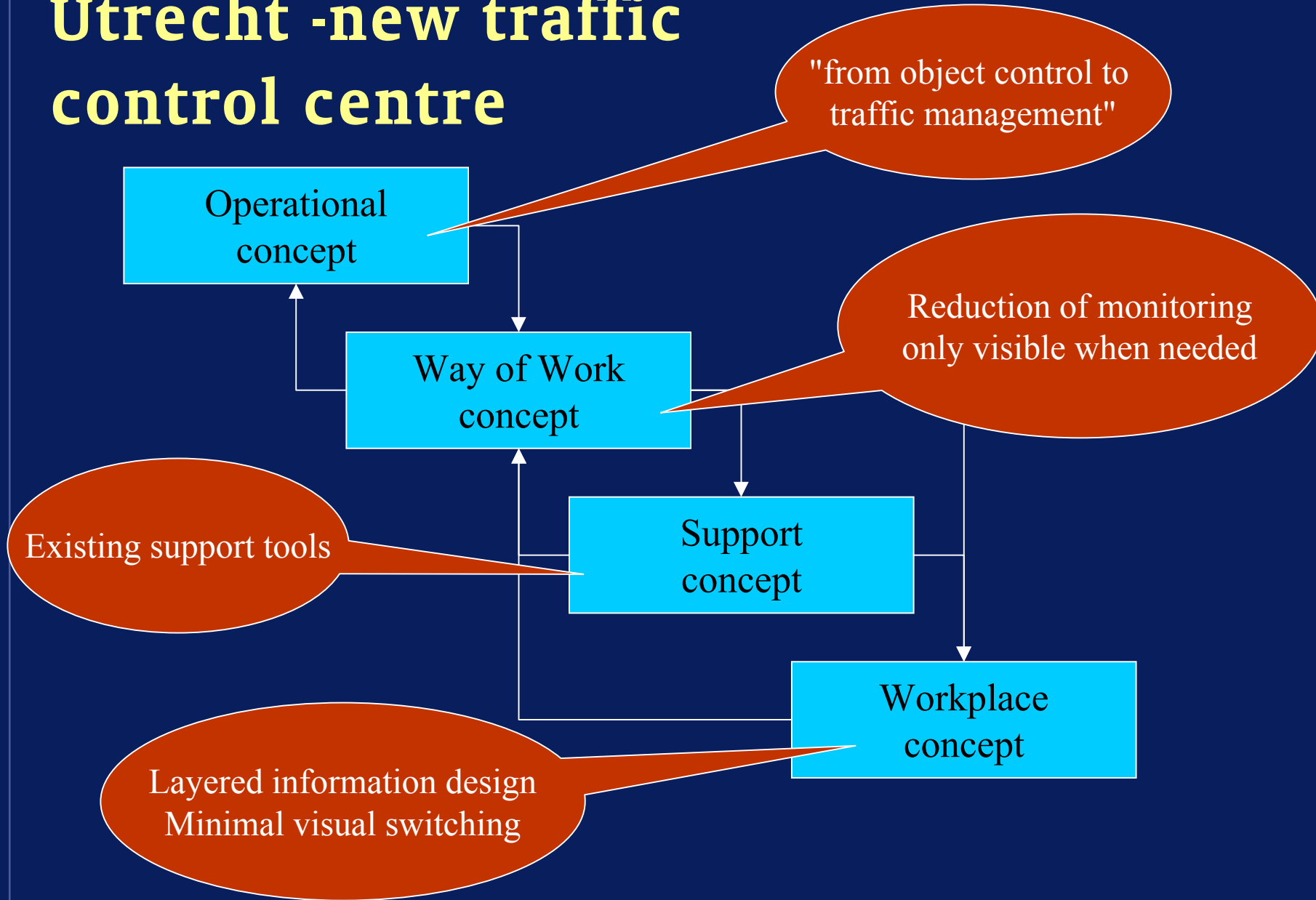
Multiple processes approach  
Team workload adjustment  
Job design

Integration of displays  
Separation of processes

# One operator - Two processes - Four screens - Helmond bridge centre

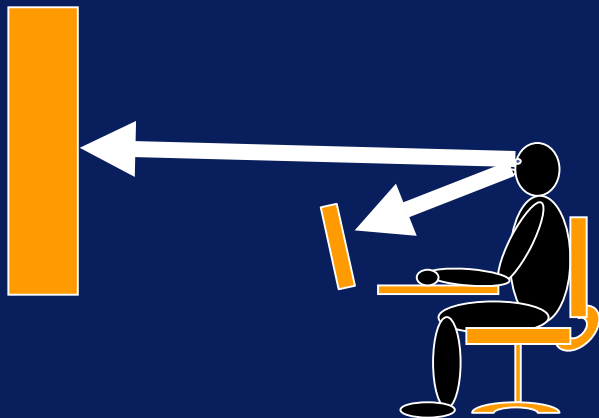


# Utrecht -new traffic control centre

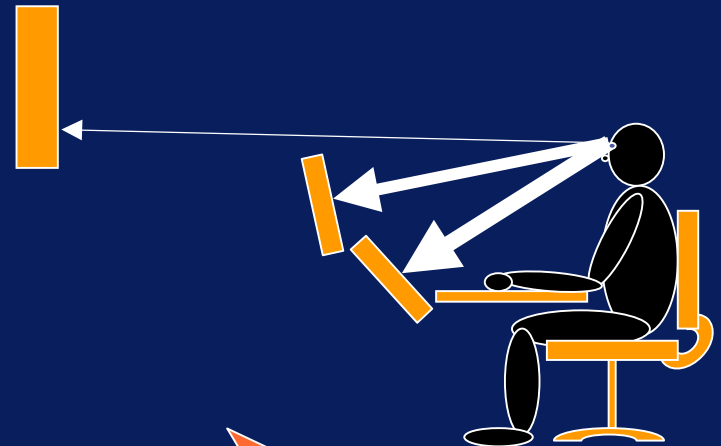


# From 'many' data to 'specific'

Clean desk idea:  
all info on the wall



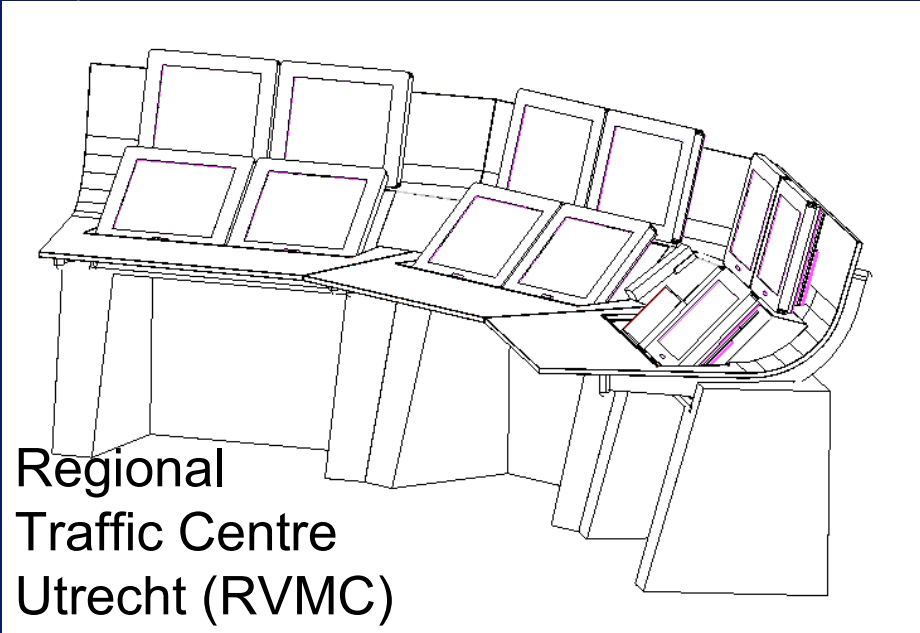
Operator centred idea:  
info there where it is used



The better concept

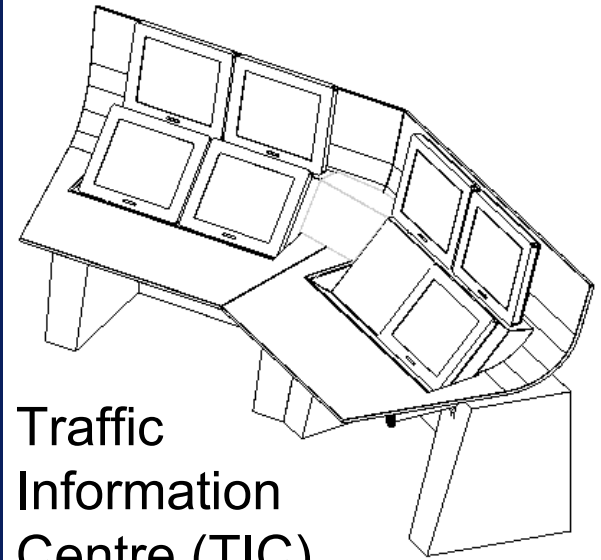


# Concept work places Traffic Centre Utrecht Oudenrijn

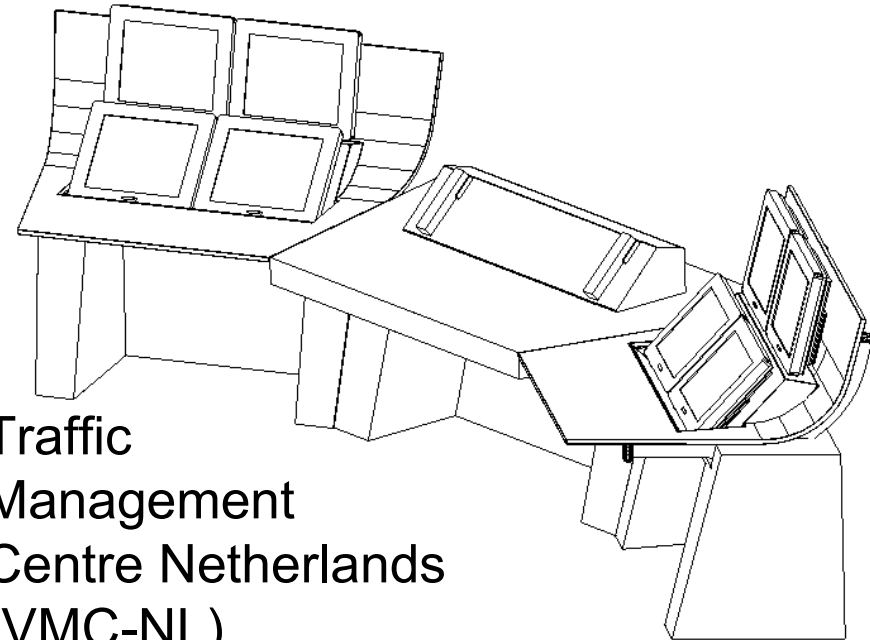


Regional  
Traffic Centre  
Utrecht (RVMC)

*TNO Human Factors  
TNO Industry*



Traffic  
Information  
Centre (TIC)



Traffic  
Management  
Centre Netherlands  
(VMC-NL)

# Our concept implemented

## Utrecht Traffic Control Centre



# Closing remarks

- **Integral approach**
  - Vision on work + technology + ergonomics + design
- **Applied in several applied projects**
- **Way of Work approach successful**
  - really user-centred