

**NTL project and
concept
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Ontime seminar



TRAFIKVERKET



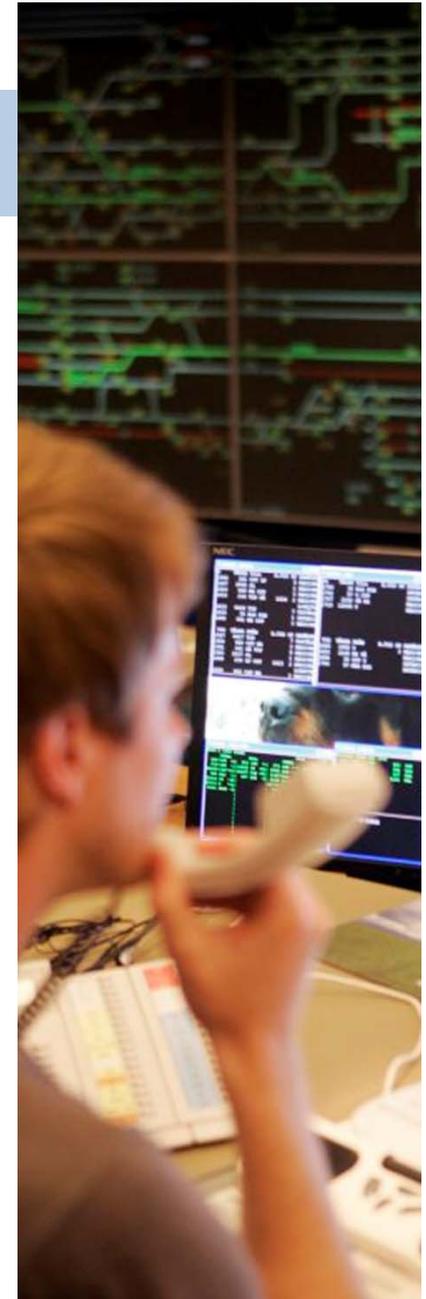
The challenge

Trafikverket is facing

- *Increased traffic*
- *Congestion*
- *Lack of capacity*
- *Infrastructure maintenance work*
- *Higher expectations regarding throughput, punctuality and traffic information*

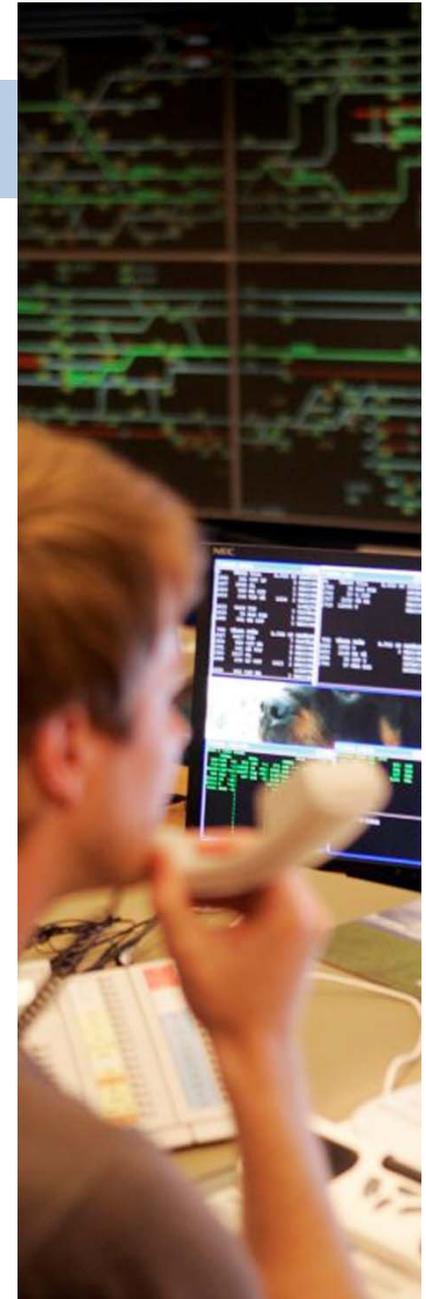
NTL shall together with other initiatives deliver

- *Increased delivery capability*
- *Increased efficiency*
- *Reduced vulnerability*



Key factors for effective traffic management

- Proactive national planning and execution
- Increased decision support and transparent automations
- Decision relevant information presented at correct time
- Shared execution plans increases participation – increases predictability, facilitates traffic information
- New systems and processes are built on user needs when it comes to solving their tasks



NTL will deliver

PROCESS

Processes belonging to the **Traffic Management Process**

Processes belonging to identified needs and requirements in NTL, ready to be inserted in Traffic Management x.0 including work practices and procedures

Agreed interface between Planera Trafik and Trafikinformerera/Trafikleda

Concerning information content and time of delivery

Supporting processes regarding Maintenance, Development, operations & surveillance

Supporting processes concerning the functional support linked to traffic management through TMS and train traffic simulator

SYSTEM

National Traffic Management System

Completely implemented and deployed work places for traffic management

Railway Simulator

Simulator used in validation, education, role out and maintenance.

Education

Processes within **Traffic Management**

Educational material for education

National traffic management system

Education of

- Operative staff before start of pilot
- Maintenance and surveillance staff
- Educators within certain target groups including maintenance

Train traffic management simulator

Education of

- instructors
- Maintenance and surveillance staff

National Train Traffic Management (NTL)

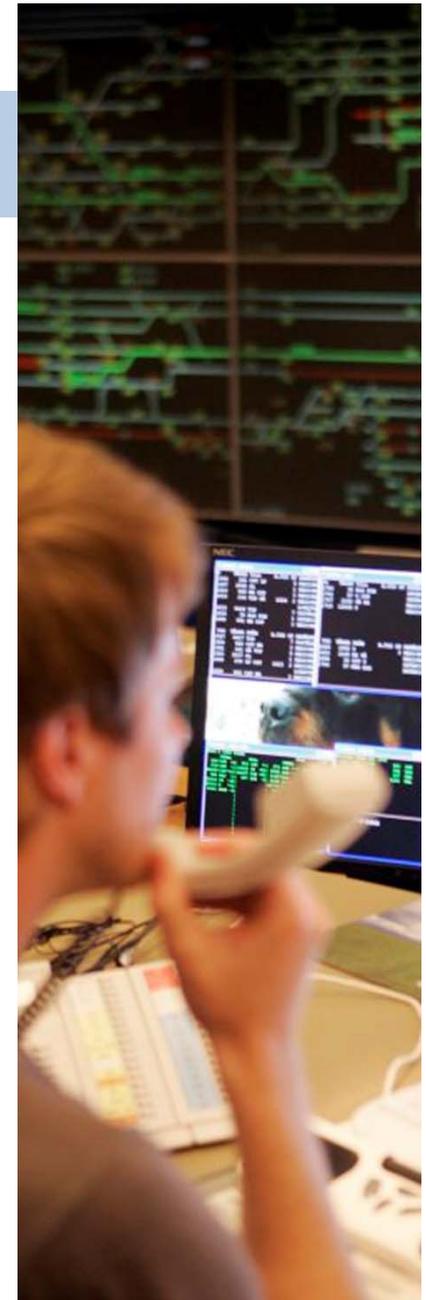
General deliverables

Future train dispatching in Sweden

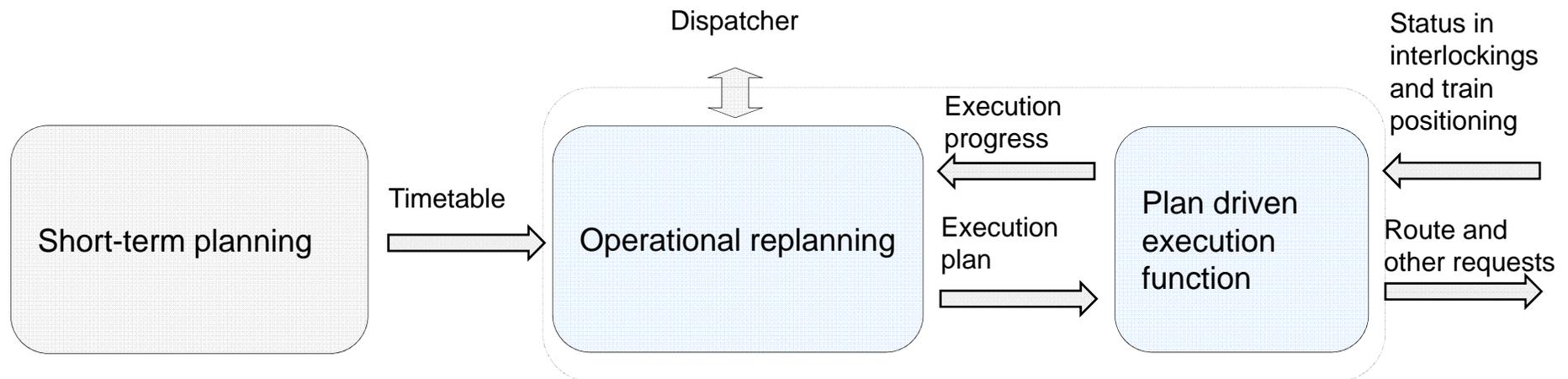
Shifting focus from Direct Control to Operational Planning

- Train dispatcher focused on solving conflicts before they affect the traffic
- Plan driven execution of commands
- Higher quality when handling direct commands
- Digitalized procedure handling

Giving higher traffic efficiency and usability



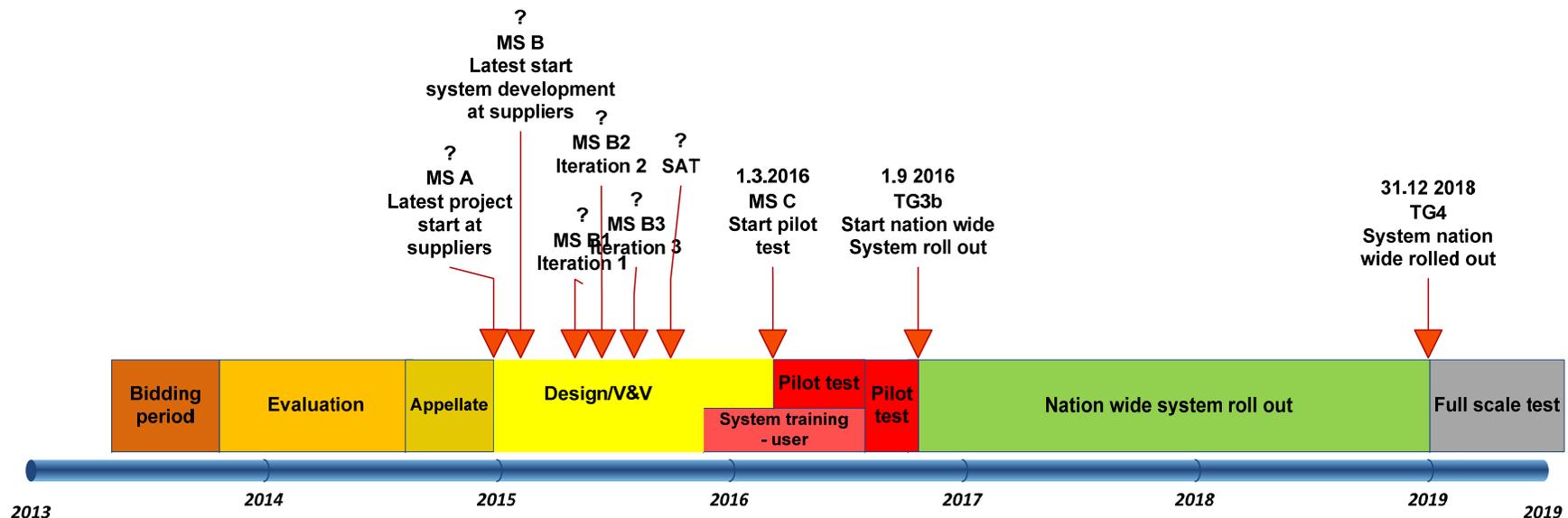
NTL Basic concept and principles for operational planning

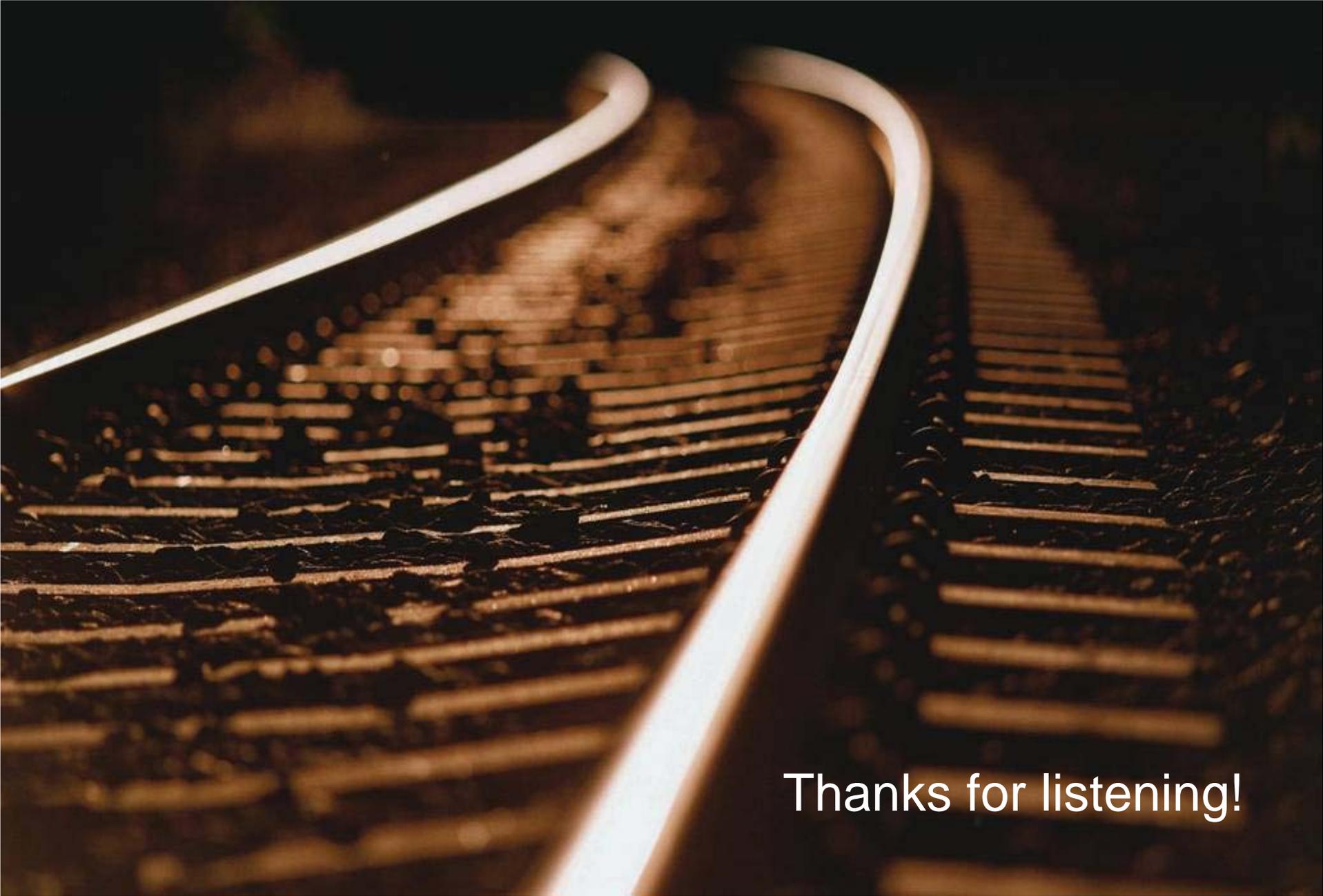


- Very efficient dispatcher tool for on-line replanning including train and shunting planning as well as track maintenance planning
- Operational planning tool continuously available and updated
- Real time replanning horizon down to the moment of execution
- All conflict detection and resolution and other planning support integrated in the real time planning tool
- Fully executable timetable (Execution plan)
- The Execution plan is fully visible and transparent to the dispatcher before, during and after execution
- The Execution plan is automatically executed without any changes in the plan concerning path for each train and train order for each (track) resource (unless so configured for a specific situation)
- Automatic execution is just in time
- The automatic execution progress is fully transparent to the dispatchers

NTL Current status

- We are currently being challenged in awarding Alstom the contract.
- The contract regarding the railway simulator is awarded Scheidt & Bachmann and their solution BEST.
- Setting up strategies for Verification & Validation.
- Testing prototypes and concepts for complex stations (Stockholm)





Thanks for listening!