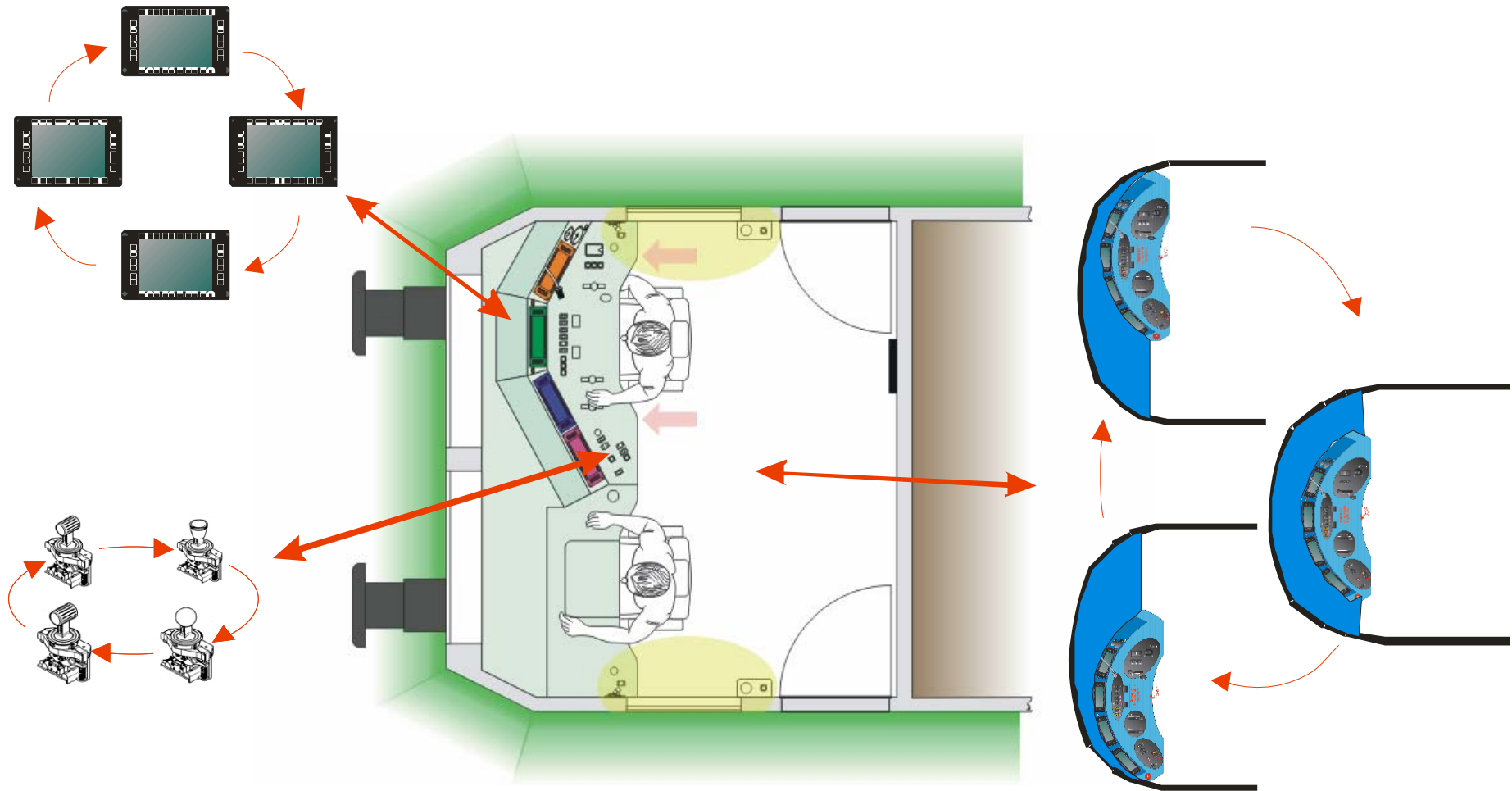
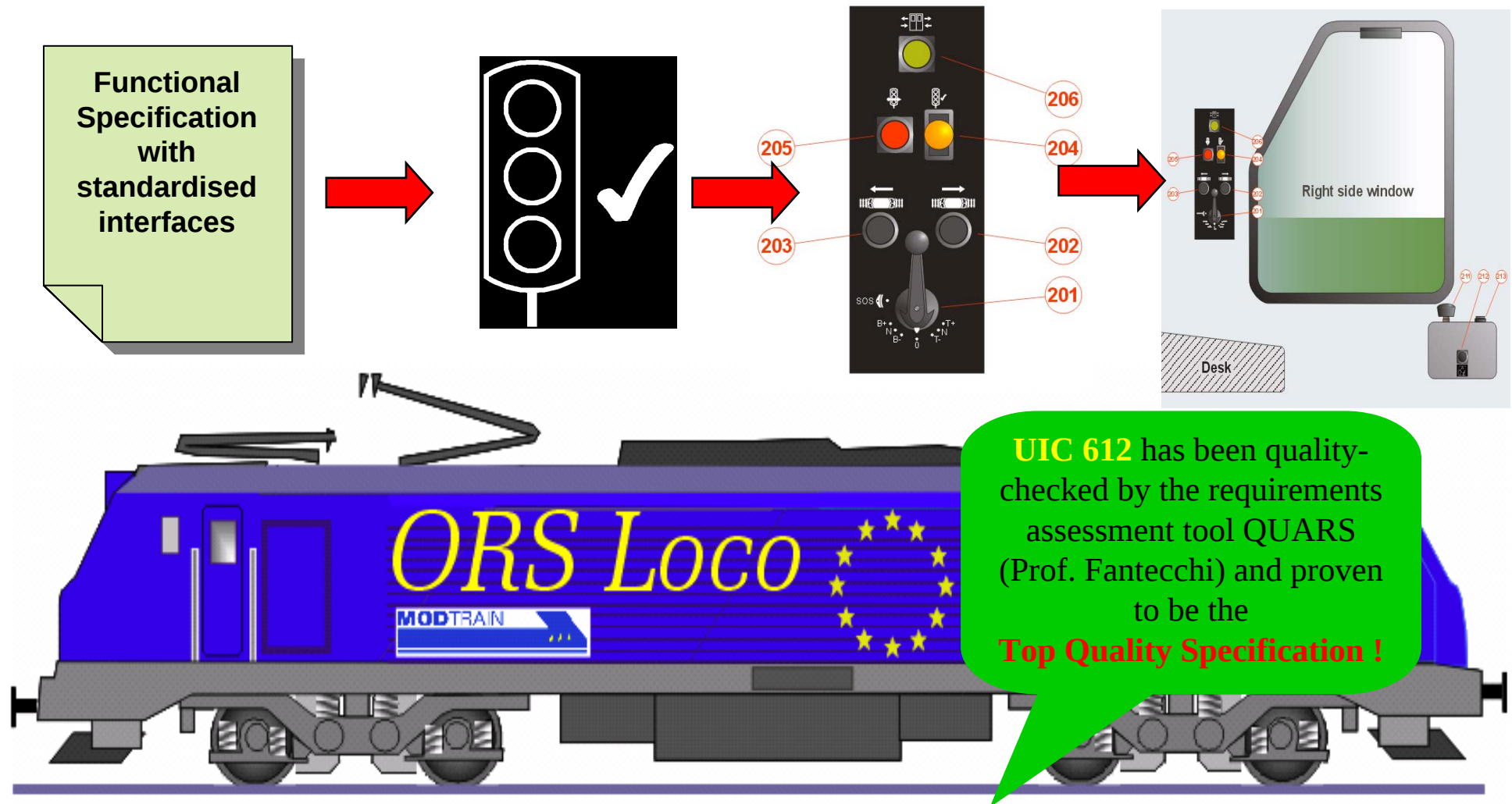


*Harmonised and PRECISE operators requirements specifications are the preconditions for economic benefits by scale-effects due to **standardisation and modularisation***



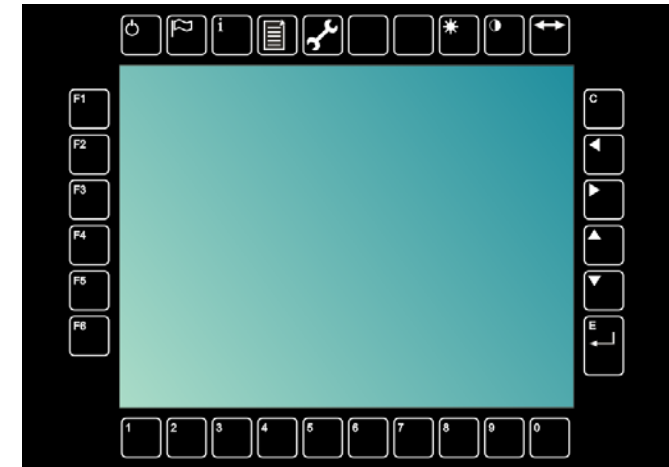
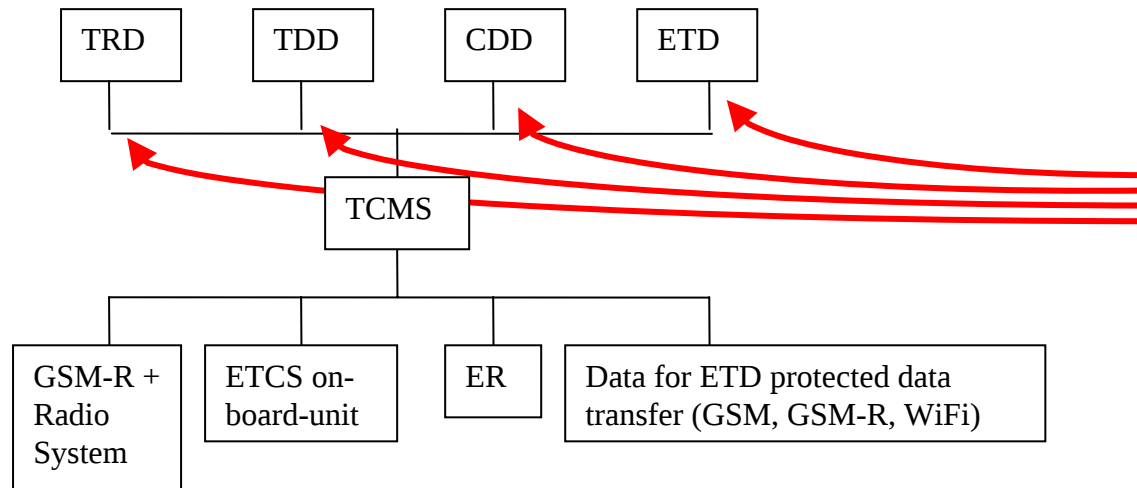
# *UIC 612 – the main achievements:*

## *Harmonised requirements drive standardisation of components*



# *UIC 612-0x is driving standardisation:*

## *Applications based on a standardised display*



Key is the independence of the displays from the applications, that are using them for Driver-machine-interactions !

This will improve **rolling stock reliability** in case of a faulty display and non-faulty application. The application simply uses one of the remaining displays, possibly by merging essential information.

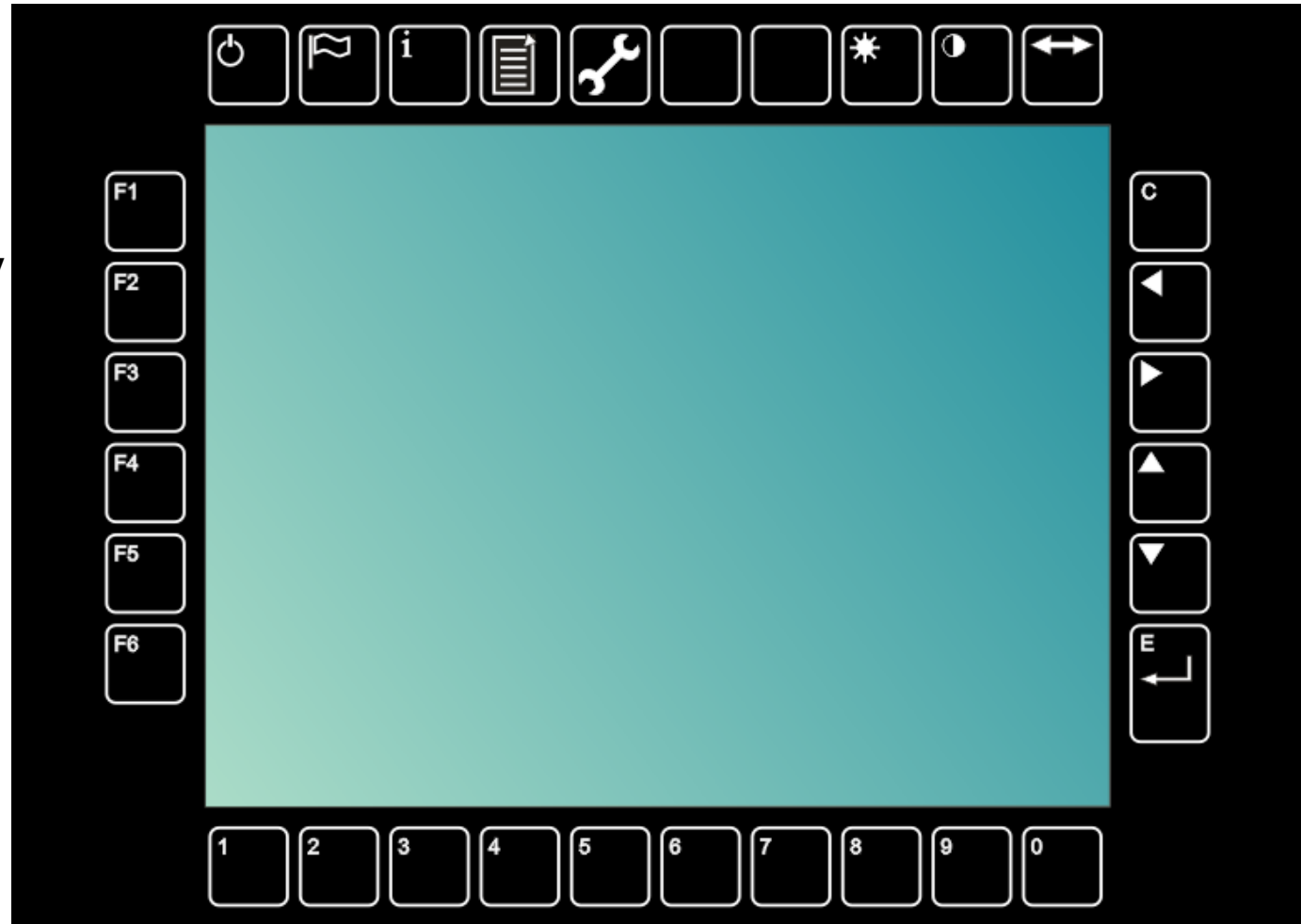
# UIC 612-0x:

## *Applications based on a standardised display*

The interchangeable display is a big step forward in terms of harmonisation of operational requirements, train reliability and true competition on module level.

**Operators** did their job and standardised the interfaces to the driver.

**Manufacturers** are still requested to standardise the interfaces to the cab and control system.



# UIC 612 – Structure of the leaflets

|                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <div>UIC 612 - 0</div> <div>→ UIC 612 - 1</div> <div>→ UIC 612 - 2</div> <div>→ UIC 612 - 3</div> <div>→ UIC 612 - 01</div> <div>→ UIC 612 - 02</div> <div>→ UIC 612 - 03</div> <div>→ UIC 612 - 04</div> <div>→ UIC 612 - 05</div> | <div>Driver Machine Interfaces for EMU/DMU, Locomotives and Driving Coaches – Functional and System Requirements associated with harmonised Driver-Machine-Interfaces</div> <div>Provides the location and precise functional requirements for each operating and displaying element – not only on the driver desk, but for all MMI in and outside the rolling stock. It is the „head document“ for their operation.</div> | Rolling Stock<br>Operation and MMI |
|                                                                                                                                                                                                                                     | <div>Rolling Stock configurations and main activated functions for EMU/DMU, Locomotives and Driving Coaches – Operational configurations and driver procedures</div> <div>Specifies the various train configurations and indicates the available functions. Specifies also the transition from one configuration to another one.</div>                                                                                     |                                    |
|                                                                                                                                                                                                                                     | <div>Specific sub-system requirements (traction, braking, etc.) for EMU/DMU, Locomotives Driving Coaches – Requirements allocated to each sub-system of the rolling stock</div> <div>Specifies the dedicated sub-system requirements for the main functional modules of the traction unit or the train.</div>                                                                                                              |                                    |
|                                                                                                                                                                                                                                     | <div>Design requirements for driver cab and driver working areas</div> <div>Specifies the functional and system requirements associated with harmonised driver cab and driver working areas</div>                                                                                                                                                                                                                          |                                    |
|                                                                                                                                                                                                                                     | <div>Display System in driver cab (DDS) – General Requirements, Set Up and Technical Specifications</div> <div>Specifies the hardware requirements for displays and also software requirements valid for all display applications (e.g. use of colours).</div>                                                                                                                                                             | Displays                           |
|                                                                                                                                                                                                                                     | <div>Display System in driver cab (DDS) – Control-Command-Display (CCD)</div> <div>Specifies the ETCS information and TCMS information in addition to TSI CCS and TS 50459. Displays a clear and user friendly tree diagram for the driver.</div>                                                                                                                                                                          |                                    |
|                                                                                                                                                                                                                                     | <div>Display System in driver cab (DDS) – Technical and Diagnostic Display (TDD)</div> <div>Specifies the TCMS information in addition to the CCD (e.g. main machine data and failure management). Displays a clear and user friendly tree diagram for the driver.</div>                                                                                                                                                   |                                    |
|                                                                                                                                                                                                                                     | <div>Display System in driver cab (DDS) – Train Radio Display (TRD)</div> <div>Specifies the Train Radio information. Displays a clear and user friendly tree diagram for the driver.</div>                                                                                                                                                                                                                                |                                    |
|                                                                                                                                                                                                                                     | <div>Display System in driver cab (DDS) – Electronic Timetable Display (ETD)</div> <div>Specifies the Electronic Timetable information in addition to the CCD in case of ETCS operation and STM operation. Displays a clear and user friendly tree diagram for the driver.</div>                                                                                                                                           |                                    |
|                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                    |