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European Transport Workers' Federation
Fédération Européenne des Travailleurs des Transports
Europäische Transportarbeiter-Föderation
Federación Europea de los Trabajadores del Transporte

INLAND WATERWAYS SECTION

SEMINAR ON AUTOMATION IN INLAND WATERWAYS
4-5 September
St. Petersburg, Russia

INVITATION

Dear Colleagues,

We are pleased to invite you to the yearly seminar organised by the ETF Inland Waterways Section that will take place **on 4 and 5 September 2018 in St. Petersburg Russia**.

The theme chosen this year for the Seminar is "**Automation in Inland Waterways**".
Participants are requested to prepare for the Seminar about:

- Pilot projects in automation in inland navigation in their respective countries;
- Consequences on jobs and working conditions;
- Trade union strategies to face these challenges.

Smart Shipping:
Means to an end, or end to a means?

Bart van Gent

Policy Officer | Maritime Affairs

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Technical options for automation in inland navigation and role of the human factor

The need for a definition of levels of automation

Benjamin Boyer, dipl. ing.
Administrator CCNR

Automation & Inland Waterways, Present and Future

Edwin Verberght, *MScRes*.
edwin.verberght@uantwerpen.be

Levels of Automation

			Navigation	Situational awareness	Fall-back
Human execution	0	**No automation**			
	1	**Navigational support** Human execution required			
	2	**Partial automation** Human response required			
Automated execution	3	**Conditional automation** With human response			
	4	**High automation** Context dependent			
	5	**Full automation** No constraints