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ERA CCRCC 2017

**Challenges and
solutions for radio
communication -
CCS TSI Certification**

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Agenda

1. European regulation
2. Challenges
3. Status - certifications achieved
4. Standardized test specifications
5. Lessons learned

European Regulation – CCS TSI 2016/919/EC

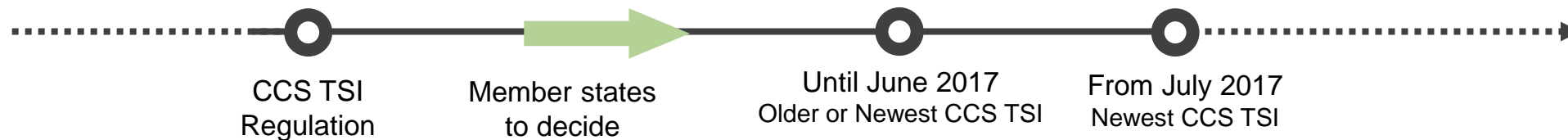
change from decision to regulation – lessons learned

Regulation CCS TSI 2016/919/EC is applicable to

- > new GSM-R networks
- > extensions of GSM-R networks
- > upgrades of GSM-R networks

Member state decision needed

- > Before June 2017, a derogation could have been launched to stay on old CCS TSI
- > Member states had to decide and inform the EC
- > If no derogation requested, all new major changes have to be based on newest CCS TSI



European Regulation – CCS TSI 2016/919/EC

change from decision to regulation – lessons learned

Experience showed that railway operators reacted differently

- > some raised a derogation request
- > others changed the CCS TSI basis of their contract, which led to
 - > high costs
 - > delayed certification and implementation process

=> this should be avoided

=> For future CCS TSIs - Derogation Process for ongoing projects is recommended

However: the current derogation process is complex and time consuming:

Supplier → Railways → NSA → Transport Ministry → EC → ERA
... and sometimes even the way back if clarification is needed

=> Streamlining of the process will further improve the overall situation

Challenges

- > In case of no derogation
 - > **Updates/Upgrades/Extensions network (contract extensions)**
New CCS TSI to be used
 - > **Contract requirement**
What does it mean for contracts based on older EIRENE version where all “MI”s and “M”s had to be implemented?
Does CCS TSI evolution require contract changes?
 - > **NB-Rail Recommendation RFU-CCS-077 “Certificates with restr. and conditions for use”**
Will it help in these cases?
- > Often difficult project set-ups with NoBo/ Independent Engineer/ Infrastructure Manager/ Ministry

=> Certification are more and more extended to project acceptance

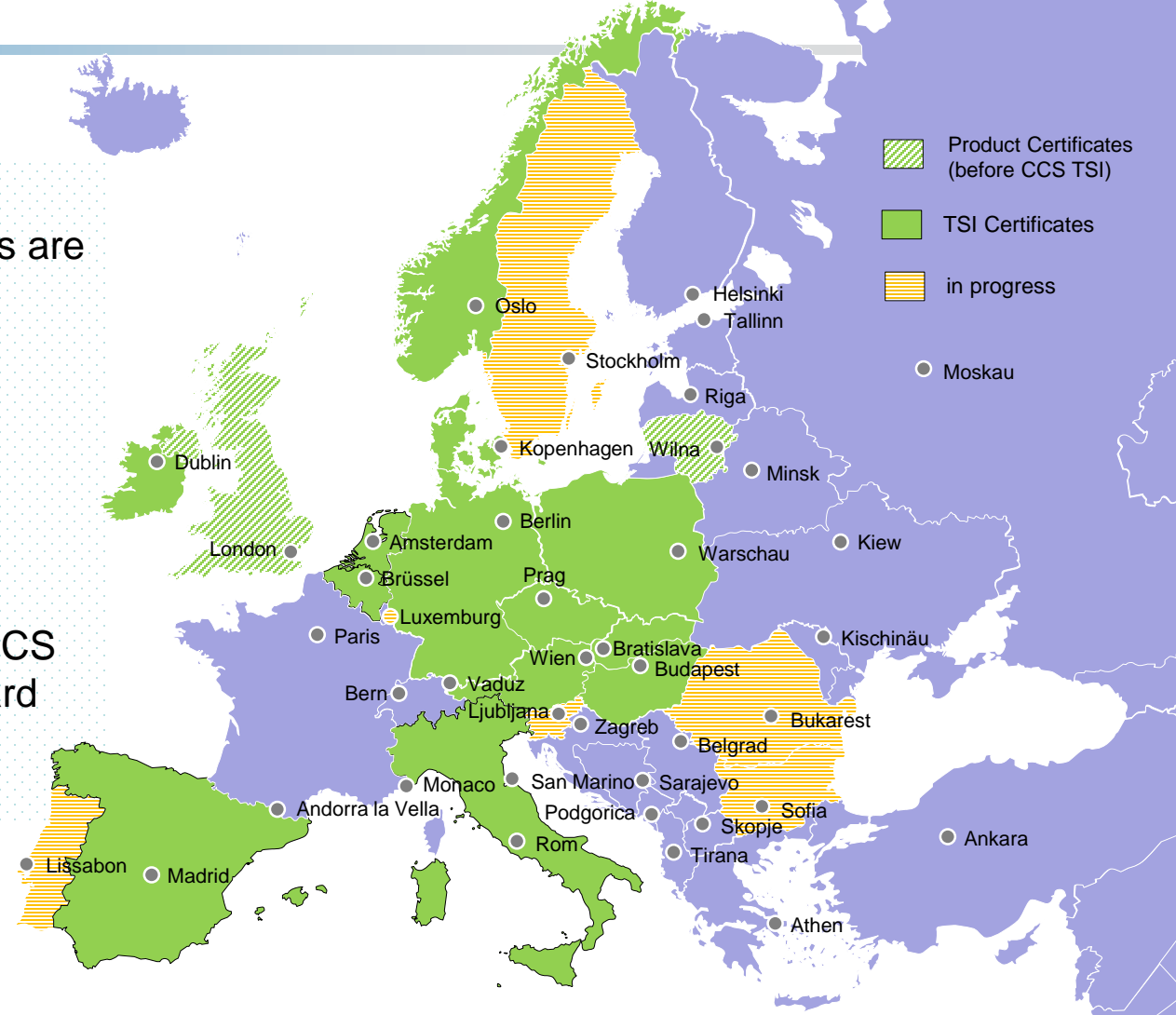
=> Projects are delayed, costs are increased

=> CCS TSI certification and Project acceptance should be clearly separated

Status of GSM-R Certifications/ISVs achieved

by Supplier or Network Operator

- > **Network (see colored map)**
For some countries only some tracks are certified – more to be followed
- > **Cab Radio/EDOR**
European wide CCS TSI certificates exist from all ROC IG cab radio suppliers
- > **Products are already prepared for CCS TSI certification by having all standard product certificates available (EMV, Environmental, ...)**



Standardized Test Specifications - CEF 1st call

Test specifications defined by:

> Industry, Railways, NoBos, UIC together, monitored by ERA

Voice cab radio	EDOR	SIM card	Network
O-3001-1 finalized and published by UIC since September 2017	O-3001-2 finalized and published by UIC since September 2017	O-3001-3 specification in progress	O-3001-4 Final versions exist – will be published by UIC in the upc. weeks

Advantages:

- > Standardized basis for certification
- > Cost-effective
- > Time efficient

All parts being
referenced in
the next ERA
application
guide

Summary / Lessons Learned



CCS TSI

- > Newest CCS TSI is a regulation (European Law) to be taken NOW into account for each SW/HW changes, track extension, ...
- > For new CCS TSIs ... derogation recommended for ongoing projects



Project set-up

- > Project set-up important related to time and effort to be spent to reach a certificate



Timing

- > Do not underestimate the effort and time to support the NoBos for getting a certificate



Testing

- > Use standardized test specification to verify the subsystem / ICs

committed to support Railways in achieving time and cost efficient certifications

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Thank you