

Rules and regulations for drones in Germany

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DFS Deutsche Flugsicherung

Drones -

What are the Challenges for ANS?

How DFS sees the future of this new market: Use of Drones could revolutionise the transport sector

On the streets, railways, water and in the air, new technologies in the form of unmanned aerial systems will be used a) for existing areas of use and b) the development of new applications.

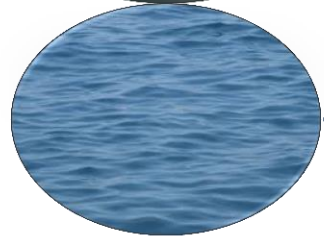
The impact on air transport will be particularly severe as UAS will replace existing modes of transport.



Logistics, inspection
of railways...



Police operations, surveillance,
delivering packages...



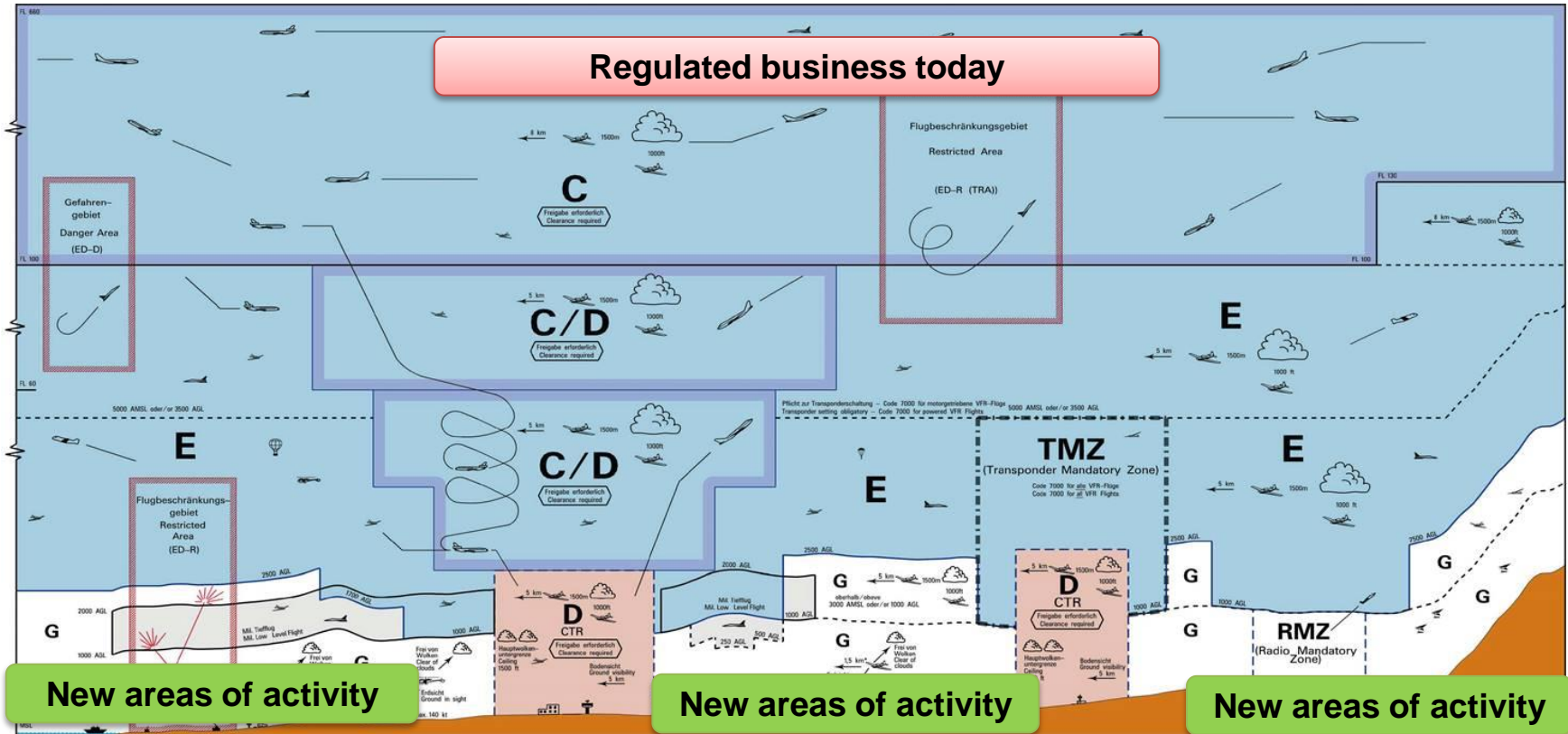
Fishing industry, disaster relief missions
& environmental protection, surveying...



Today, DFS is responsible for the safe, orderly and expeditious handling of air traffic in Germany.

New areas of activity

Regulated business today

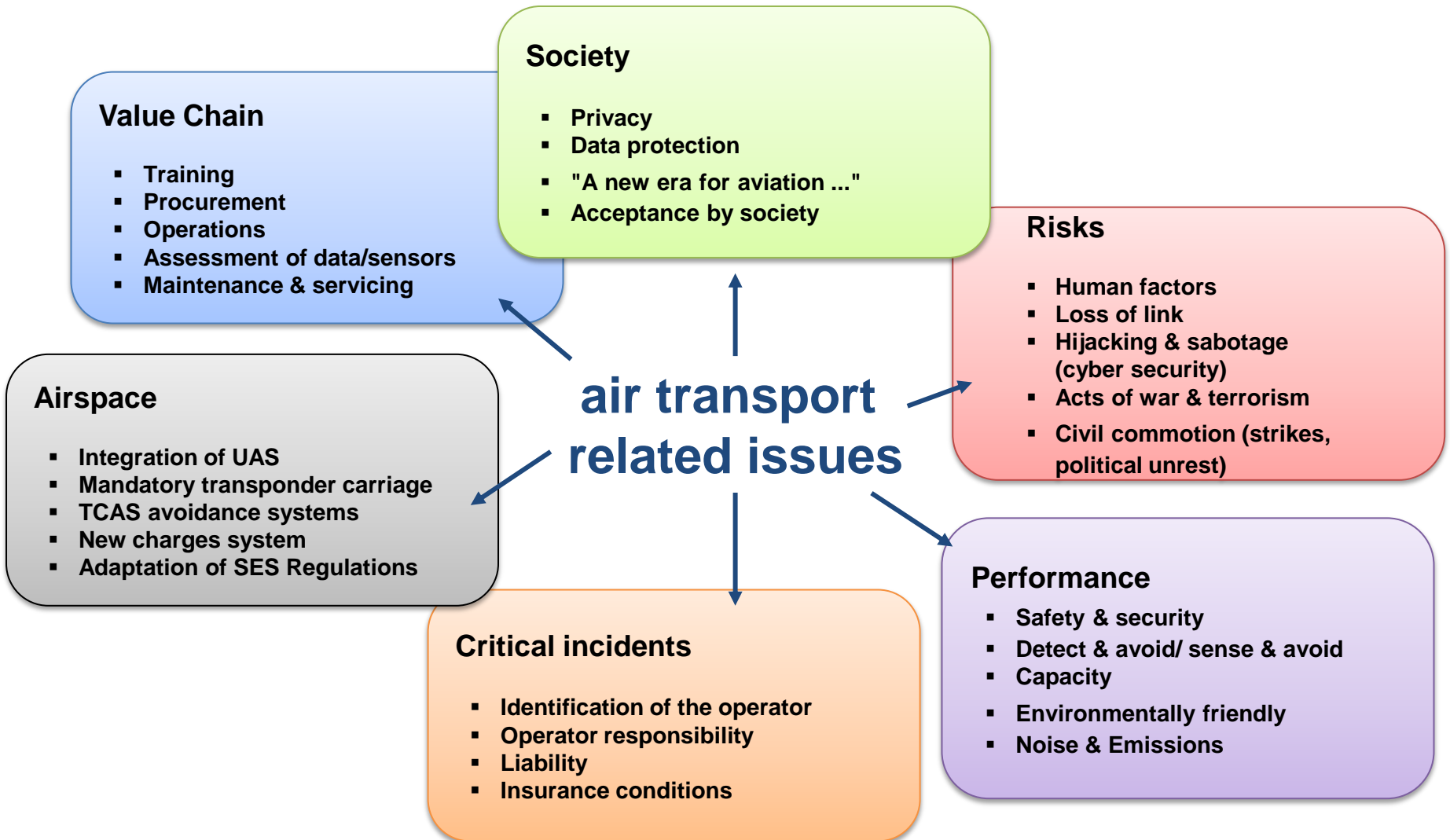


- ▶ With the integration of drones new areas of activity may be added in fields without service provision today!

Drones -

**What is needed in terms of
regulatory or legal framework?**

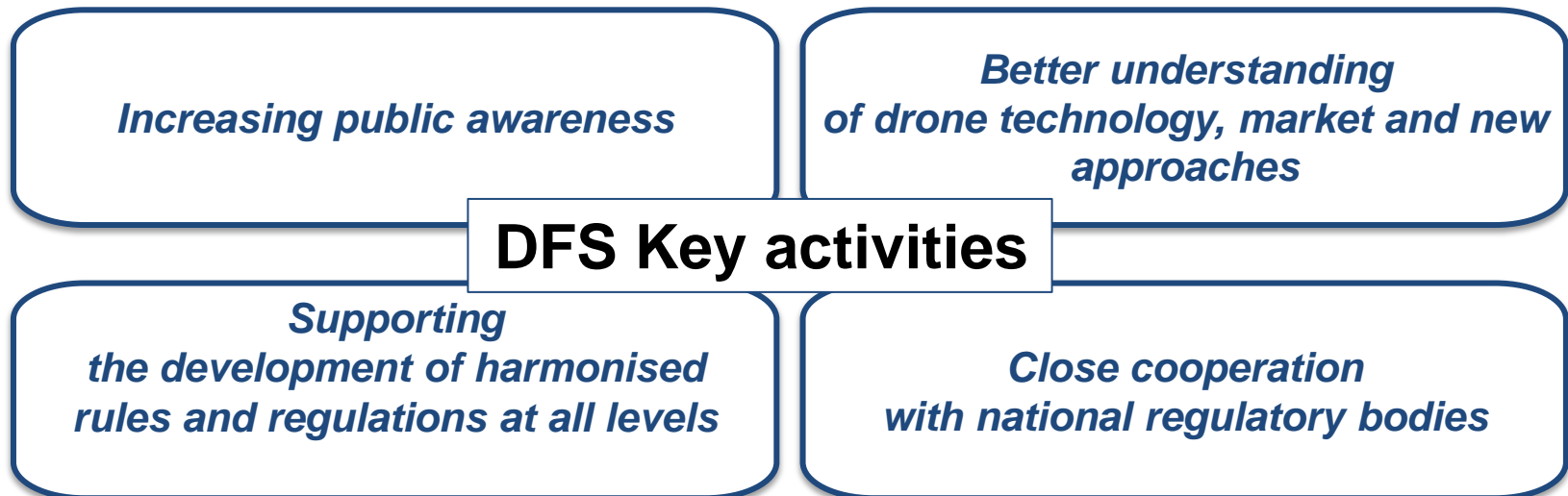
The operation of drones raises new questions and demands to rethink a number of air transport related issues



Existing rules and regulations in Germany will have to be amended due to the rise of new technologies

“Enforcement – Can new rules for drones help to enforce existing regulation on privacy and security on the national and local level?”

A new regulatory framework is needed that would guide the use of drones



Proposals from DFS to Legislator



What we propose...

- **For large RPAS**, such a cargo aircraft, the **same procedures should be applied to both manned and unmanned aircraft**
- **Standardised emergency procedures** need to be developed (loss of data connection, engine failure, failure of navigation equipment)
- **Right-of-way rules and avoidance procedures** – similar to see and avoid – technical avoidance systems **similar to TCAS**
- **Mandatory registration** (registration mark) for smaller unmanned aircraft systems and model aircraft– to clarify liability in the event of damage
- **Mandatory lighting** (anti-collision lights, lighting at night)
- **Training for operators** – it needs to be ensured that the operator is familiar, in particular, with the rules of the air and airspace structure
- It may be necessary to **make transponder carriage mandatory** for unmanned aircraft with a total weight of 25 kg (use of TCAS)

Thank you

