



# Legal issues of distributed research infrastructures

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# What is a distributed research infrastructure?

## ESFRI

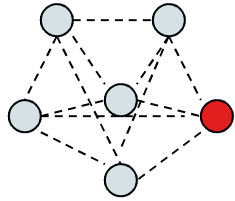
- When a research infrastructure is structured with *more than one site* it can be defined as a distributed infrastructure.
- A European distributed infrastructure is a *singular* research infrastructure, having a *unique name and legal status*, etc.

## ERIC Council regulation

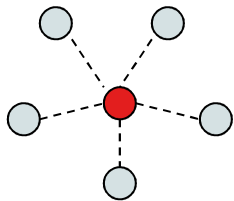
Art 2 (definitions): ... Such infrastructures may be 'single-sited' or 'distributed' (an organised network of resources)



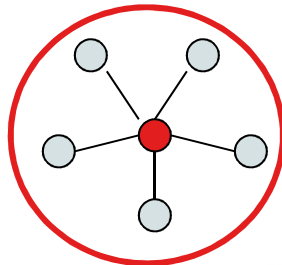
# Models of distributed research infrastructures



Loose interconnected network nodes.  
One (or a few) nodes support the coordination of common operations.



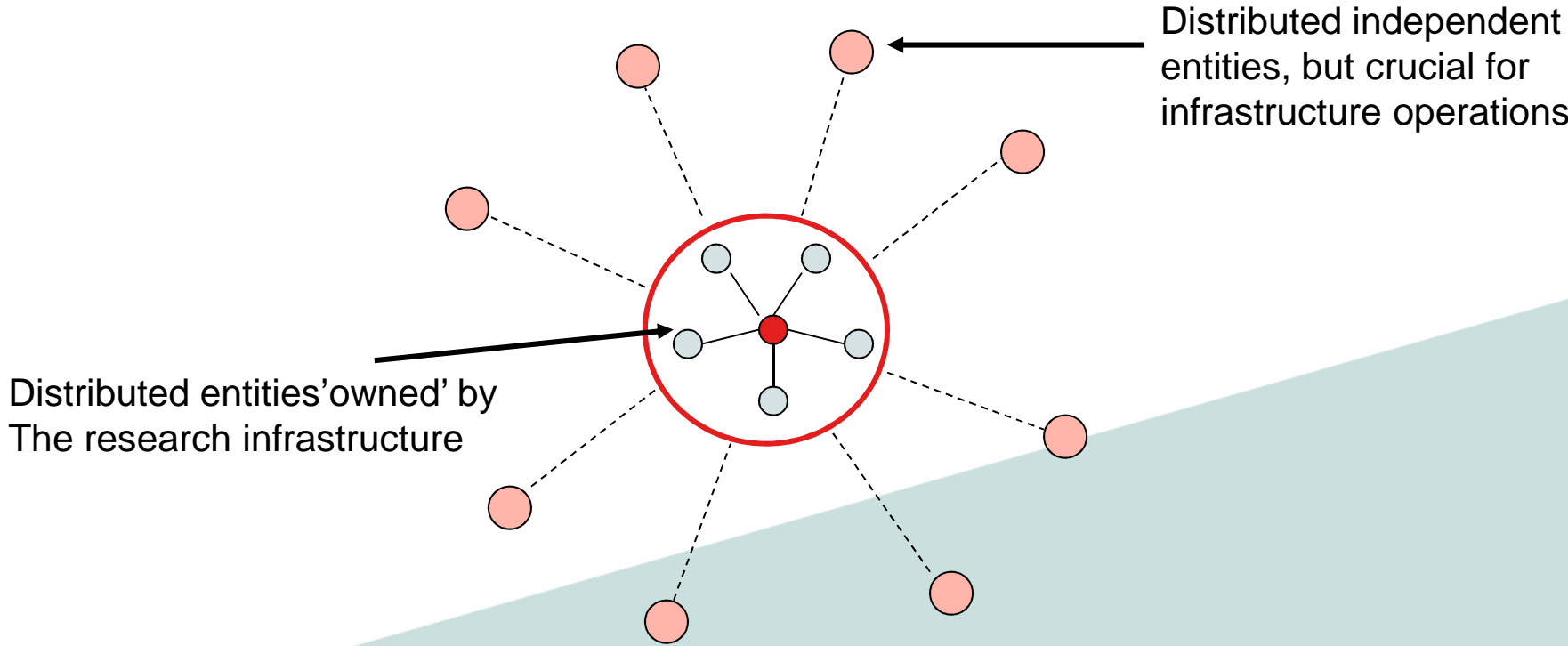
Hub and spokes with dependent operational relations.  
But spokes are not necessarily “owned” by the hub.  
Often e-Infrastructures.



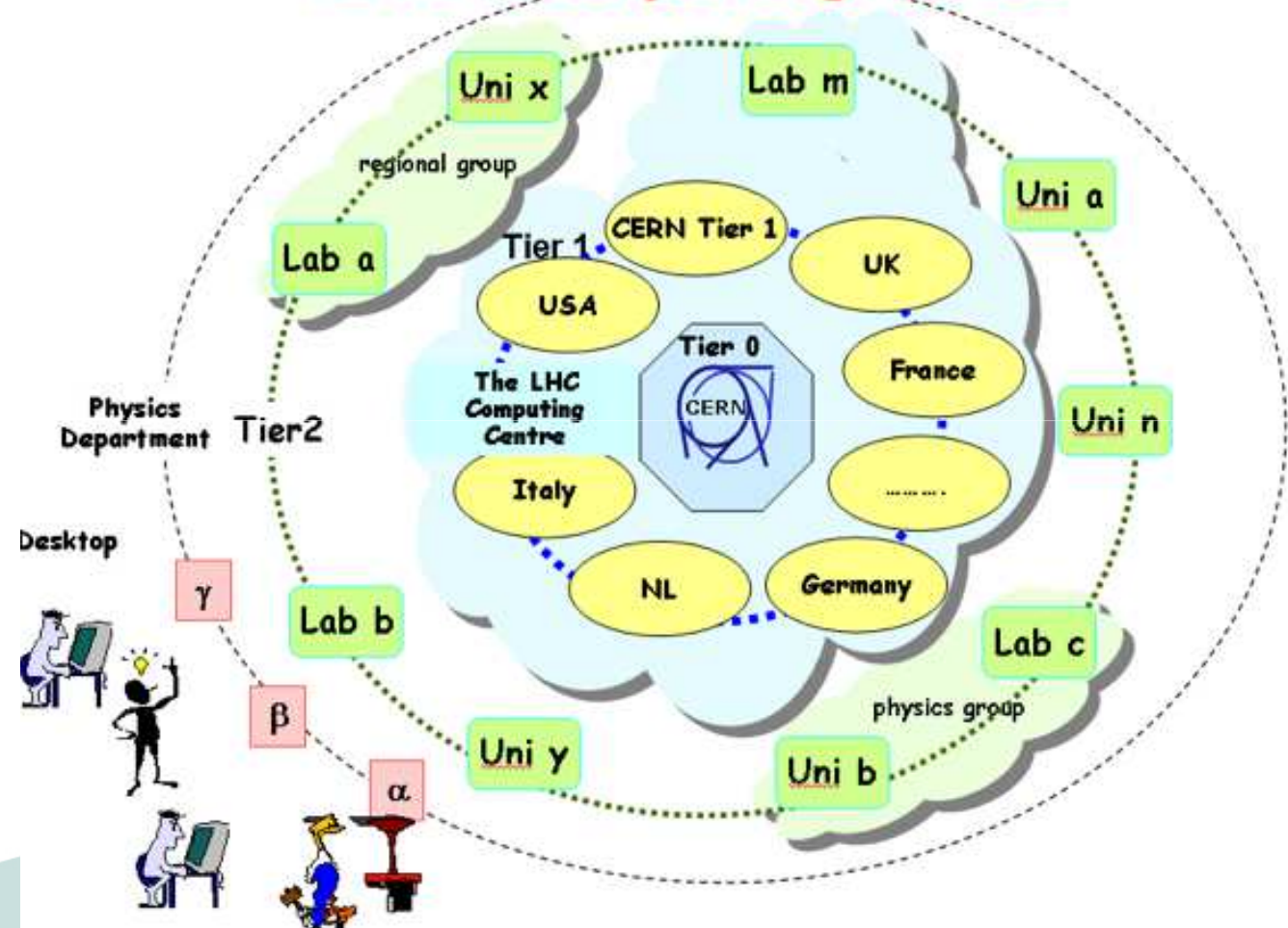
Multiple sites infrastructure, with different places of operation and a coordinating mechanism.



# Mixed model



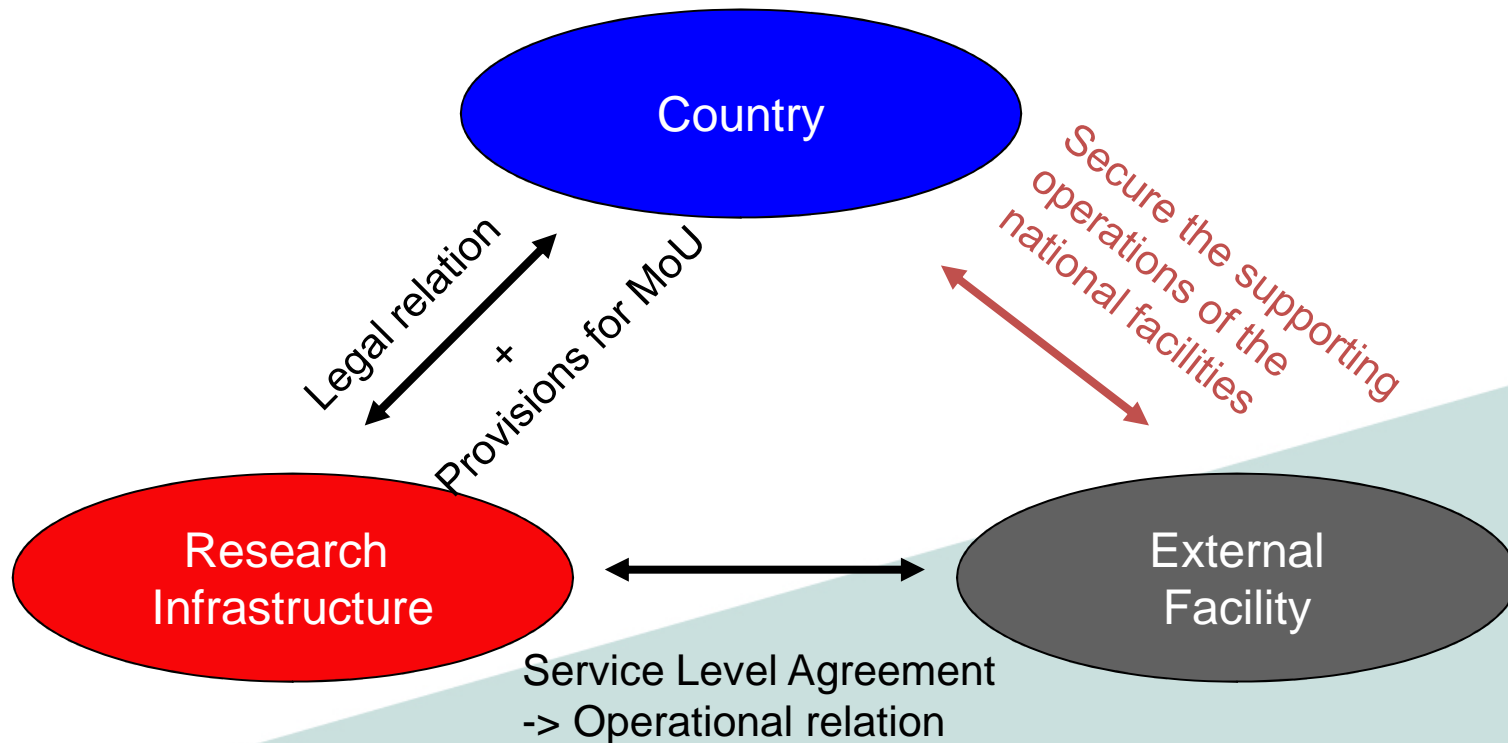
## LHC Computing Model



e-infrastructures especially often depend on the operations of other facilities, not necessarily part of the infrastructure's legal entity.



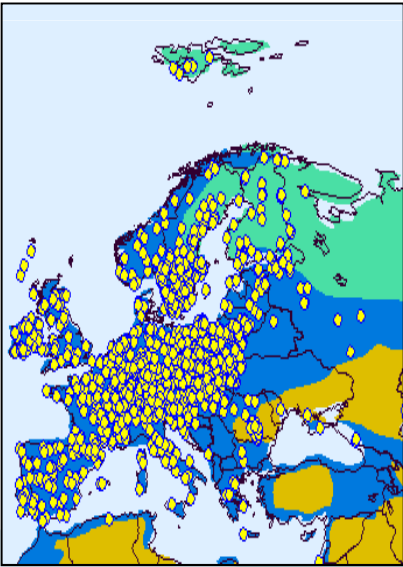
# How to regulate crucial relations with 'not owned' facilities?



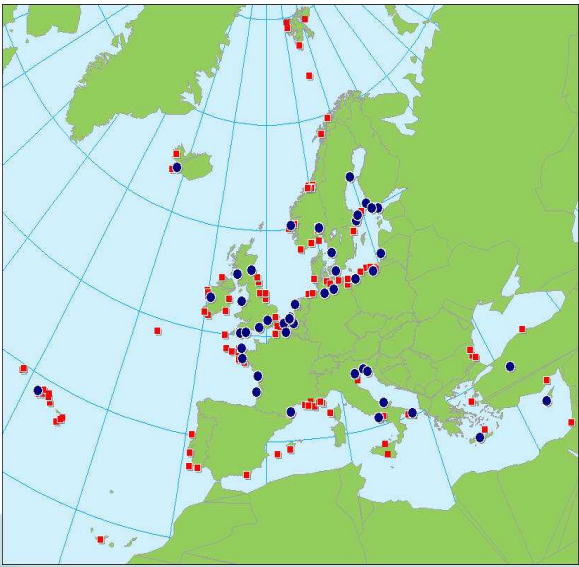


# Distributed data generation

Terrestrial monitoring



Marine monitoring



Natural science collections



Earth observation





Applications



Analysis/  
Modelling



Data integration



Data management



Data generation  
(digitizing; sampling;  
sensing)

Research  
Infrastructure

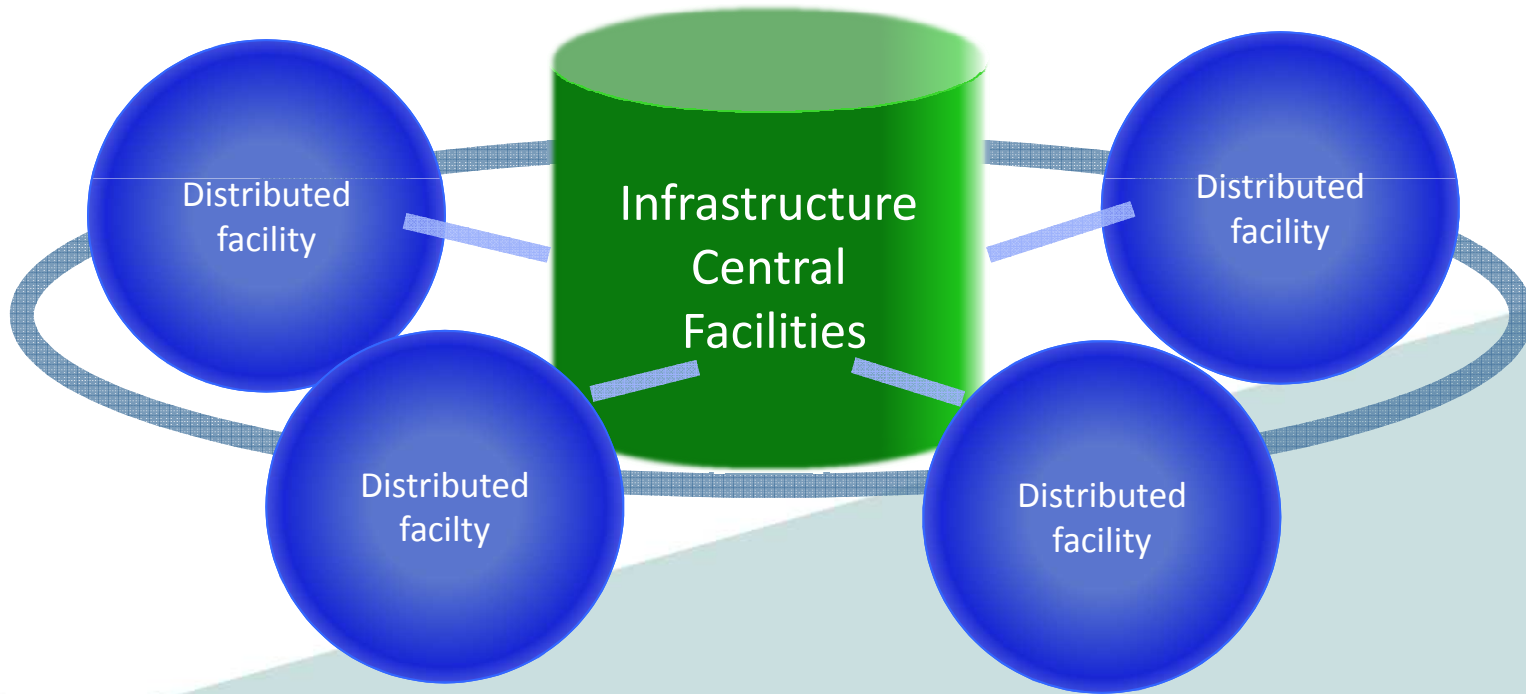
Data filtering  
in national  
computing centres

Distributed  
(independent)  
Data generators

Large Hadron Collider  
case

LifeWatch case







Countries

Governing Board

ERIC organisation  
Executive Management

Service level agreements  
(Independent) Centres  
Operational relations

Community (individuals)



“Apache” model, formalizing community power