



CENTRE DE SERVEIS CIENTÍFICS  
I ACADÈMICS DE CATALUNYA

## **Anella Científica: Optical core at 100 Gbps**

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**Anella Científica is the research and education network in Catalonia**

**Managed by CESCA since 1993**

**Connected to RedIRIS**

**With nearly 100 points of access of institutions related to research**

GEANT2



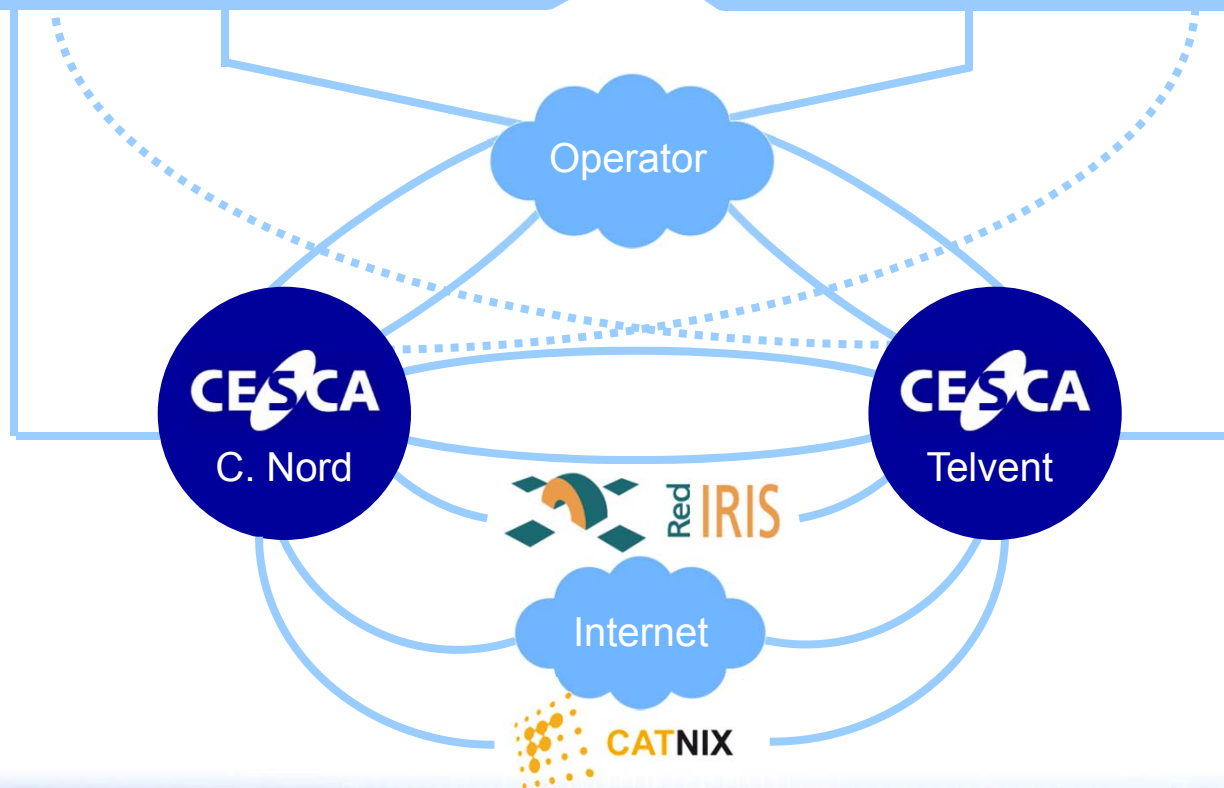
# Anella Científica: Topology

A

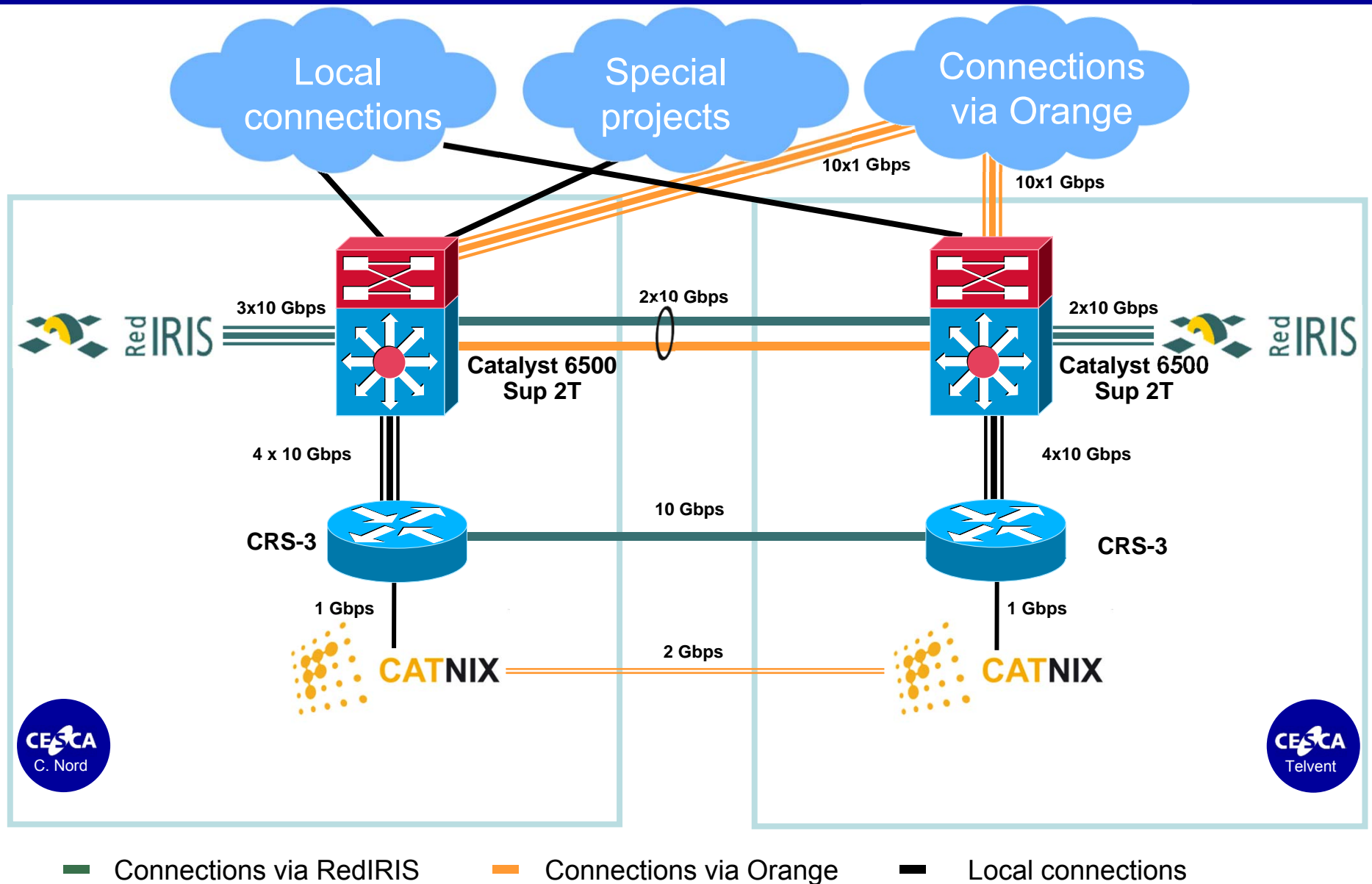
1. Public and private non-profit Universities
2. Official Bodies of Research
3. Other non-profit Research centres
4. Hospital Research centres

B

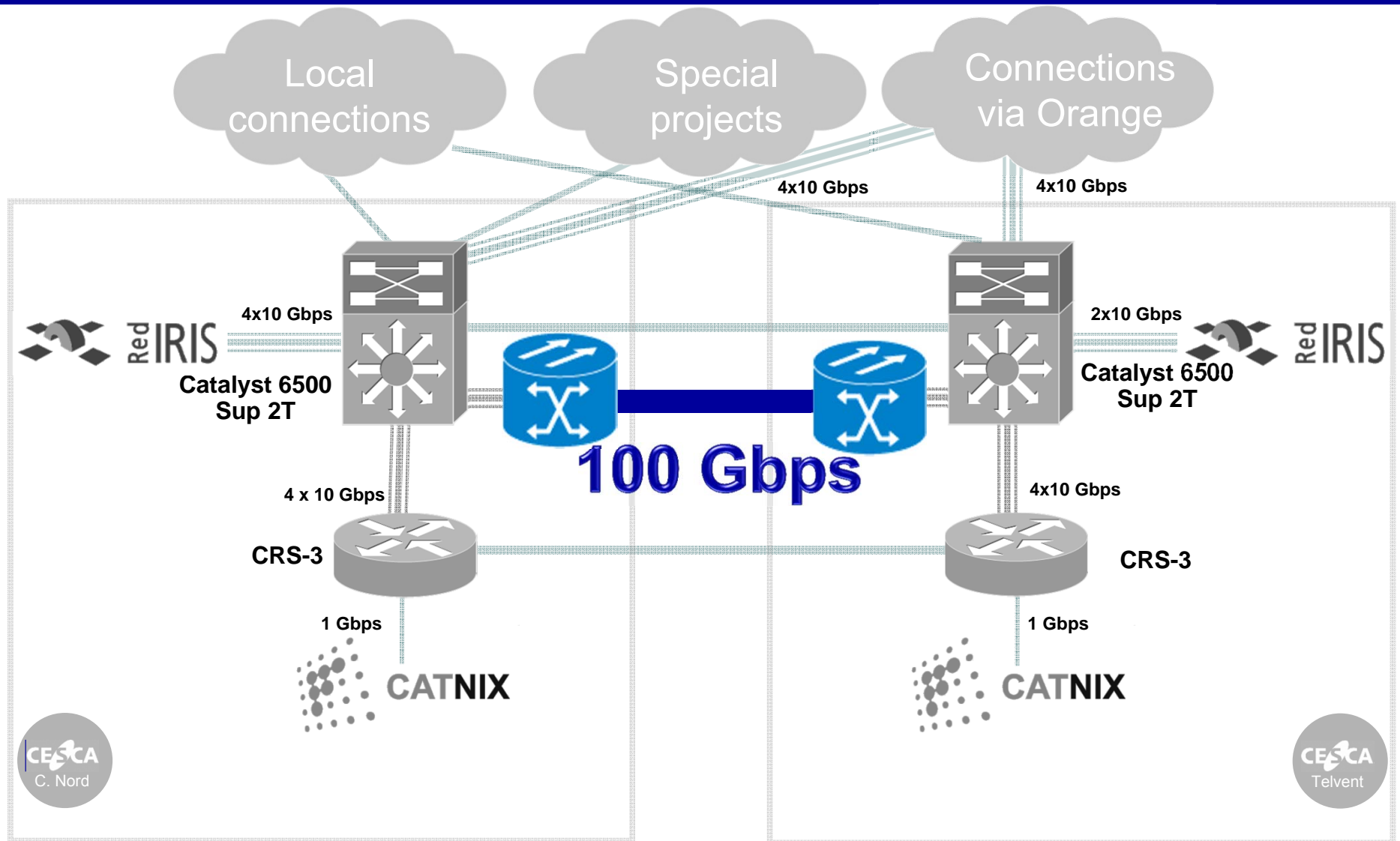
1. Official bodies of R+D management
2. Relevant Digital contents institutions
3. R+D+i participants
4. Science and technological parks
5. Educational centres (not universities)
6. Other special interest entities



## Anella Científica: current topology



## Anella Científica: new topology



## New Optical Core at 100 Gbps

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- ✓ 100 Gbps Optical core in a protected ring.
- ✓ Optical equipment: Alcatel-Lucent 1830PSS-32 with DWDM & OTN.
- ✓ Extendable to 44 channels (2.5Gbps, 10Gbps, 40Gbps or 100Gbps).
- ✓ Disjoint fiber paths with different accesses to both buildings:
  - Route A: 10 km
  - Route B: 30 km
- ✓ Independent main and backup channels (OSNCP prot., 60 ms to switch).
- ✓ T/ROADM (directionless & colorless).
- ✓ Management System: Alcatel 1354 RM-PhM (Photonics Manager).
- ✓ WT (*Wavelength Tracker*) for monitoring and fault location for each  $\lambda$ .
- ✓ The management is shared between Orange and CESCA.
- ✓ The optical equipment will belong to CESCA in 36 months.







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**Thanks for your attention!**

Questions? Suggestions?

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