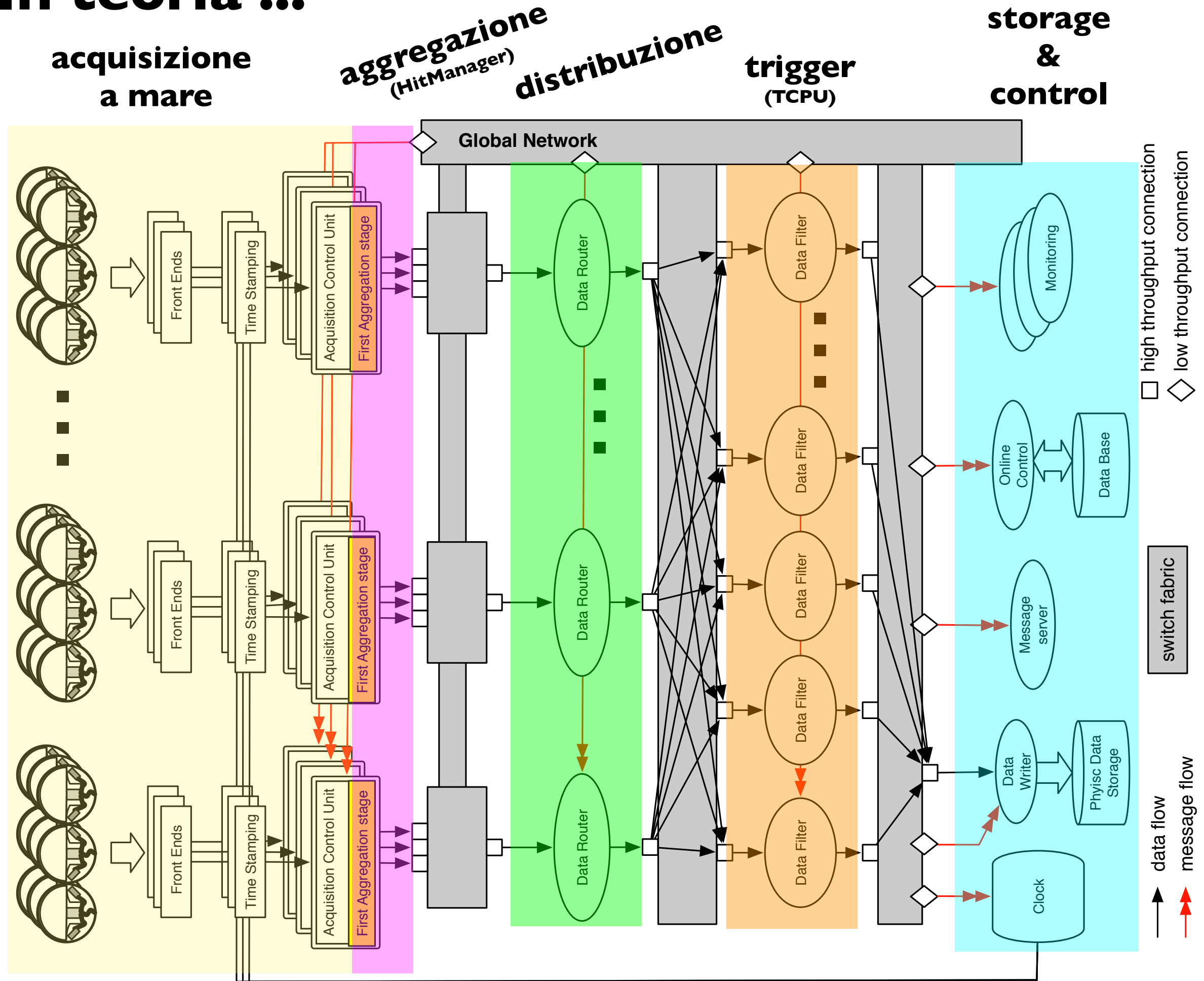


A person's hands are shown in silhouette, reaching out towards a glowing crystal ball. The crystal ball is the central focus, emitting a bright, ethereal light that illuminates the scene. The background is a soft, hazy blue, suggesting a sky or a misty environment. The overall mood is one of mystery and anticipation.

II TriDAS *nel futuro*

T. Chiarusi

In teoria ...



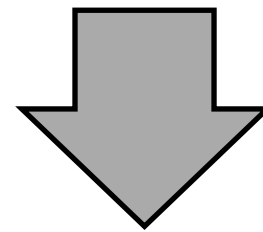
Impossibile fare i conti senza l'host

ecco chi pone i constraint:



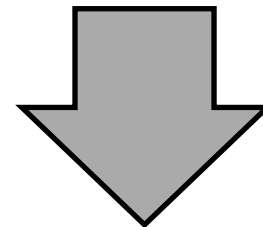
dim. PMT + size
s.p.e. hit

DATA RATE / PMT



N. PMT/piano
+
N piani

MAX THROUGHPUT per DU

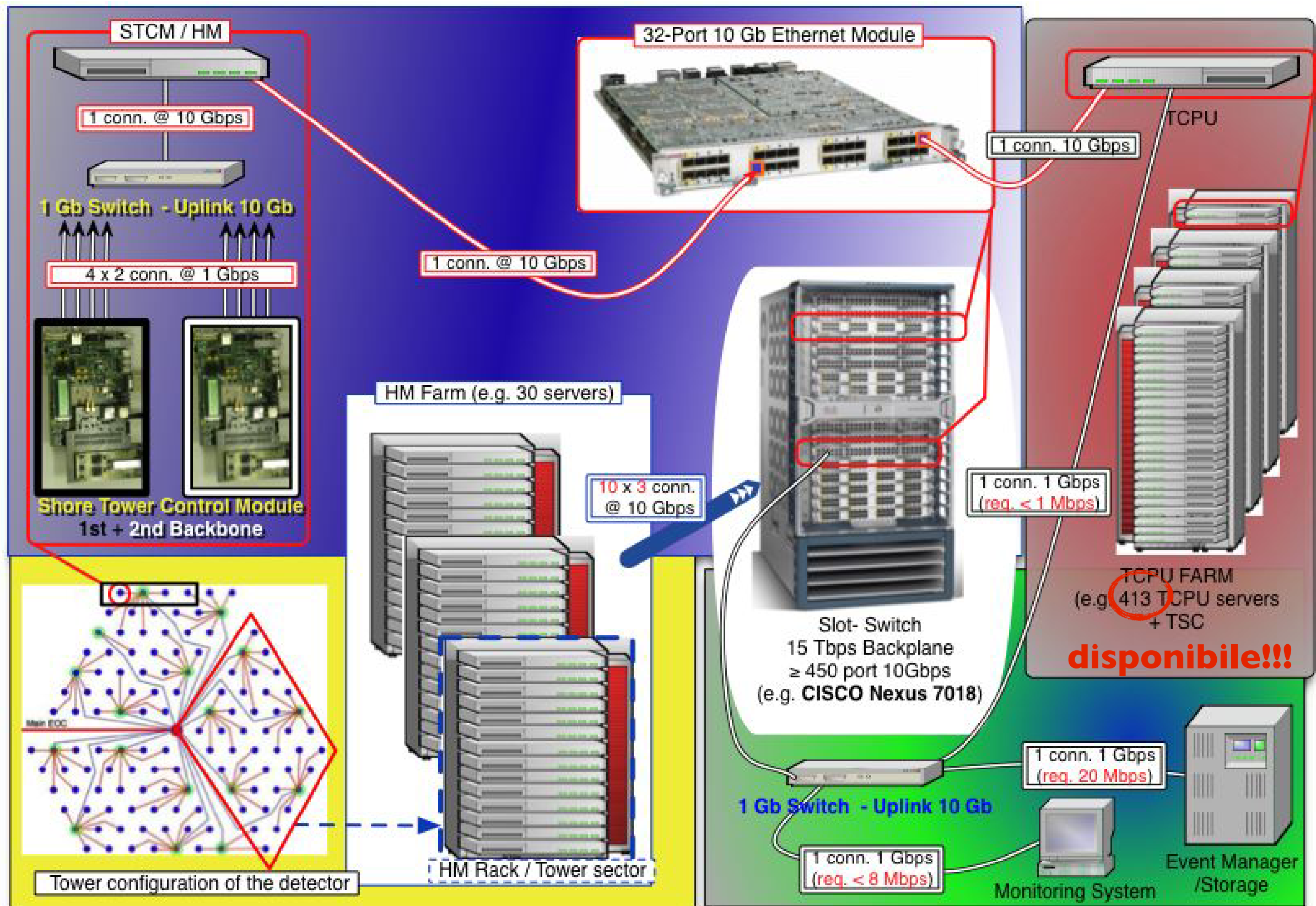


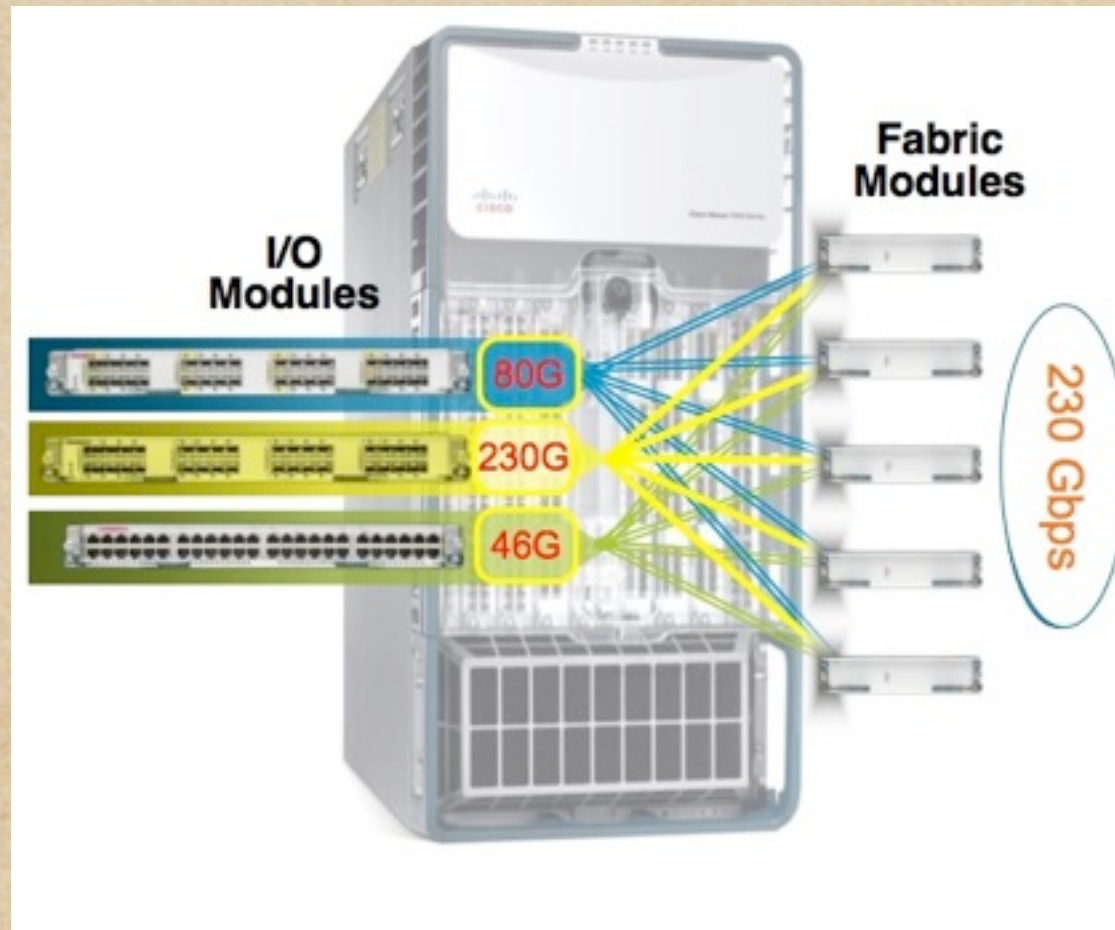
**Infrastruttura di rete
(G)CPU e RAM dei server**

Detector			global DataRate (Gbps) N.B. 150 kHz / PMT single rate	N.HM		N.TCPU	
PMT/ floor	N. floor	N. D.U		N. proc/HM	DR/HM (Gbps)	N. proc/ TCPU	DR/TCPU (Gbps)
Fase 1			0.5	1 MasterCPU			
4	4	1		1		0.5	
Fase 2			1	2		2	
4	8	1		1	0.5	1-2	0.5
Fase 3			2.5 x 8 = 20	8		11	
6	14	8		1	2.5	4	10
KM3Guess			2.5 x 120 = 300	30		125	
6	14	120		4	10	4	10

Gli ultimi 2 casi necessitano di analisi/simulazione dettagliata

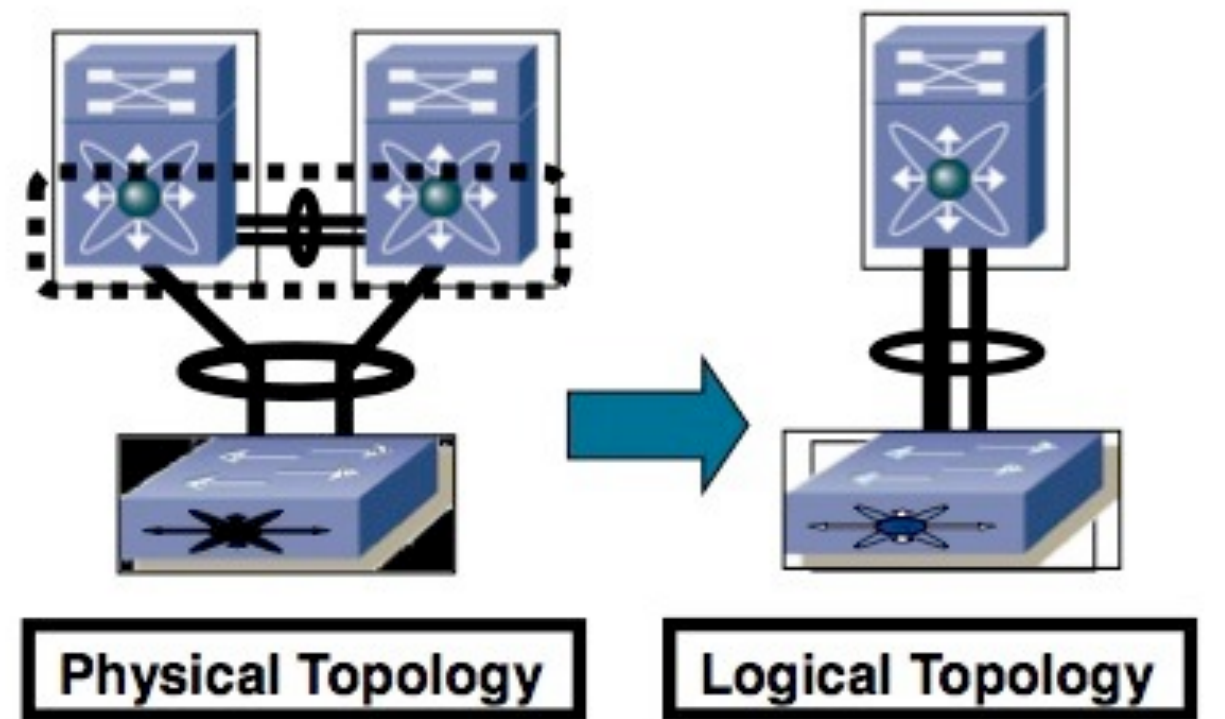
TriDAS visto da lontano ...





Uplink fabric
ready in 2010

Virtual Port Channel



Costo ~ 1. D.U.
(Fabric + UPS + sistema di
raffreddamento)
~ NO PCs

Quindi il futuro *richiede*

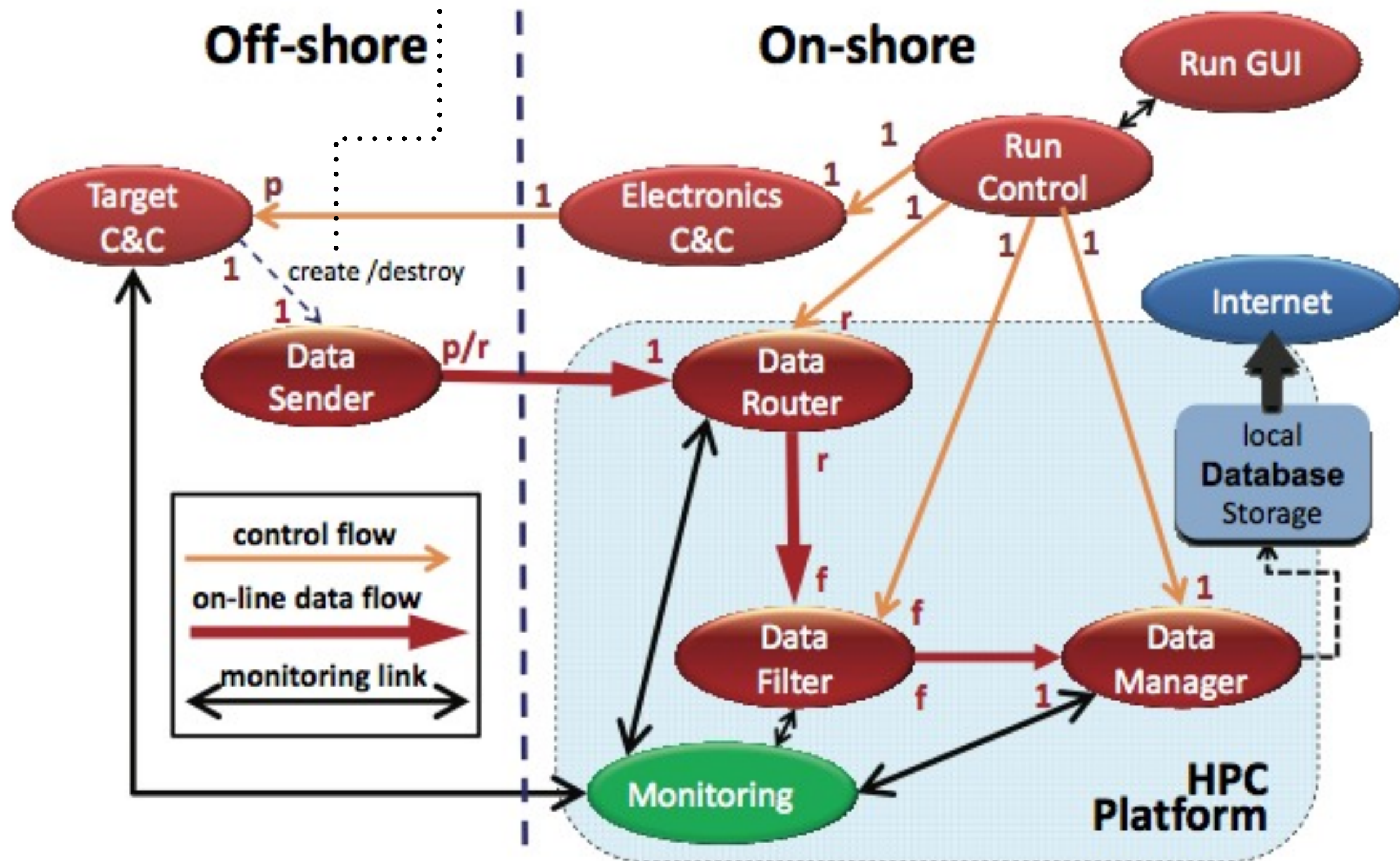
- Brain-storming
- trigger simulation
- test-bench

Target finale: **computing model** dettagliato
con contributi

- **DAQ W.G** (elettronica, TriDAS, storage, slow-control)
- **Analisi W.G.**

SPARE

Se si richiede la flessibilità di progetto ...



Approximative computations according to the KM3 document

Atmospheric Muon Signal (@ 3000 m depth)

- assuming - Rate μ_{atm} : **100 Hz**
- Rate bkg : **300 kHz**
 - N. PMTs: **8000**
 - Rec. time window: **6 μs**

Post-Trigger data rate: $\sim 40 \text{ MBps}$

Stored data /day $\sim 1 \text{ TB} \text{ !!!!}$

Upgoing Neutrino Signal

- assuming - Rate ν : **$< 4 \cdot 10^{-3} \text{ Hz}$**
- Rate bkg : **300 kHz**
 - N. PMTs: **8000**
 - Rec. time window: **6 μs**

Post-Trigger data rate: $\approx 2 \text{ kBps}$

Stored data /day $\approx 150 \text{ MB} \text{ !!!!}$

For 1 D.U. the throughput is to reduce from 256 MBps $\rightarrow$ 400 kBps (3 GB/day)