

# CERN HNF-Europe Workshop

## Welcome

Wolfgang von Rueden

CERN - IT Division

[wolfgang.von.rueden@cern.ch](mailto:wolfgang.von.rueden@cern.ch)



# CERN's Users in the World



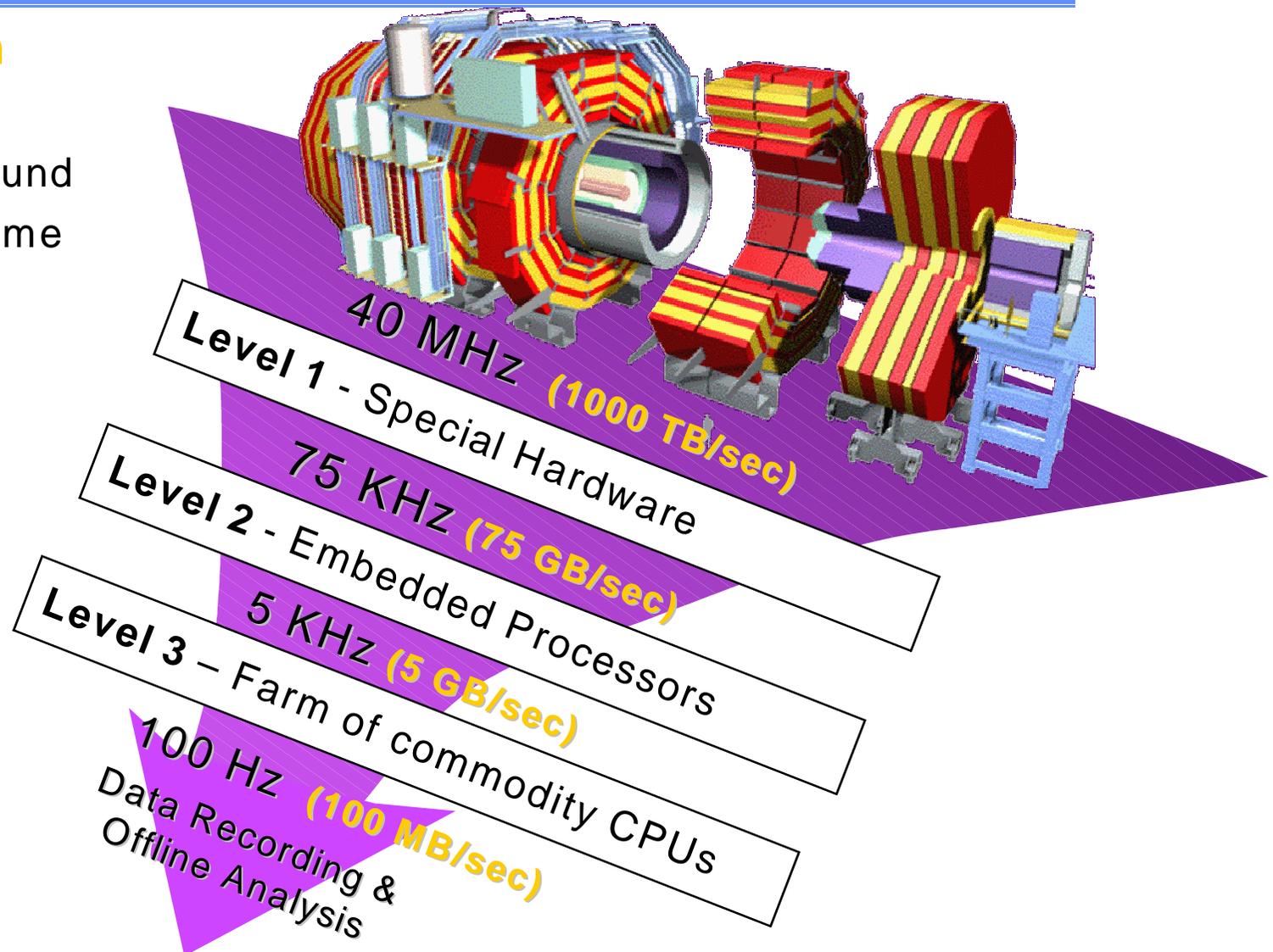
**Europe: 267 institutes, 4603 users**  
**Elsewhere: 208 institutes, 1632 users**



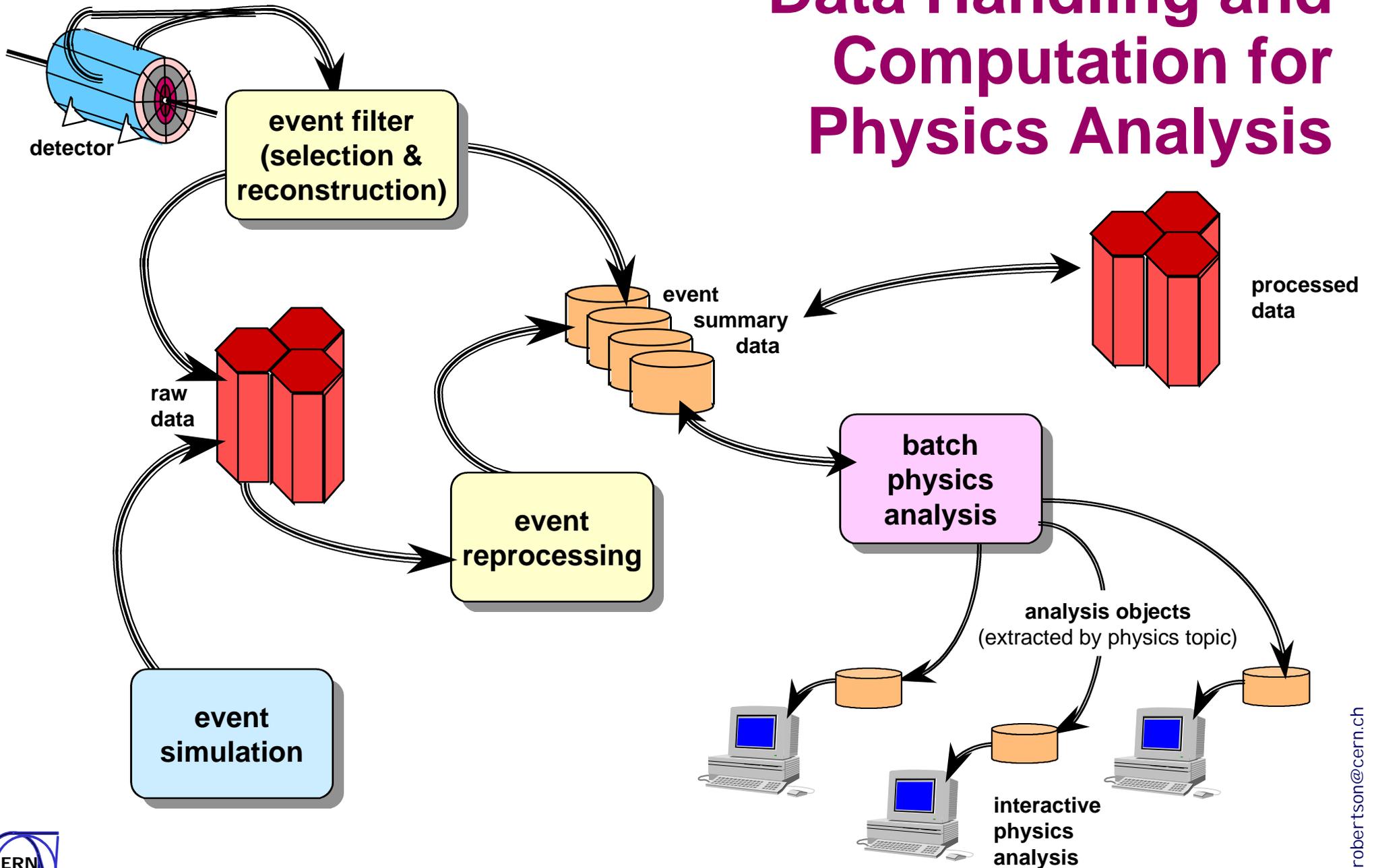


## On-line System

- Multi-level trigger
- Filter out background
- Reduce data volume
- 24 x 7 operation



# Data Handling and Computation for Physics Analysis



# The Large Hadron Collider Project

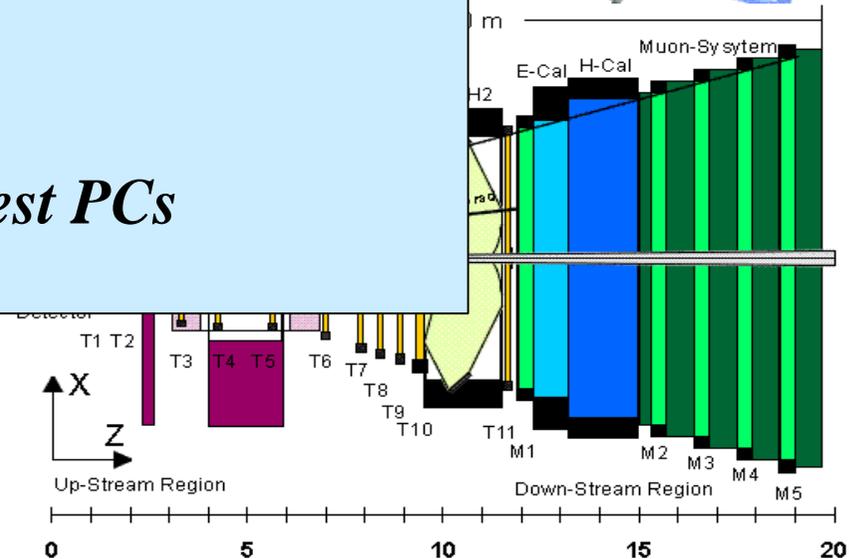
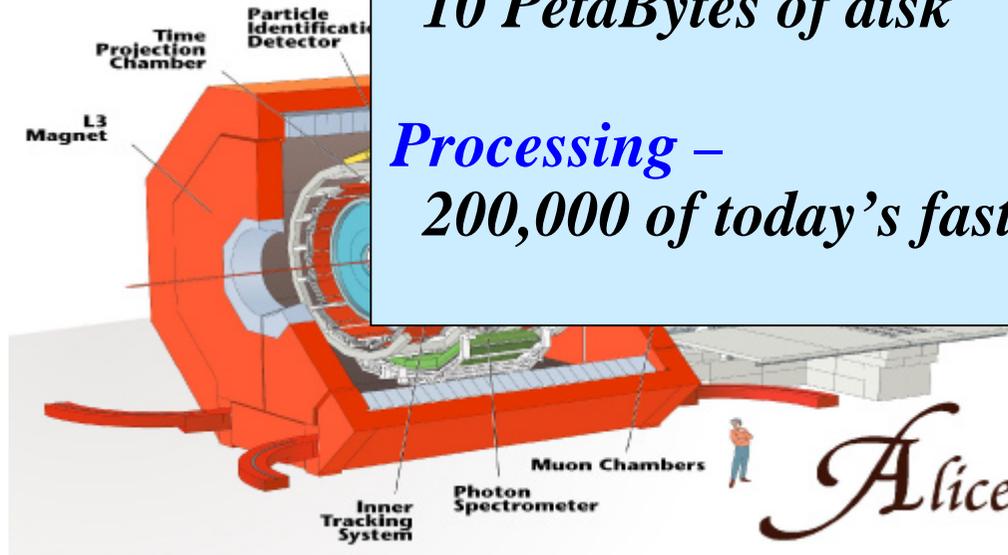
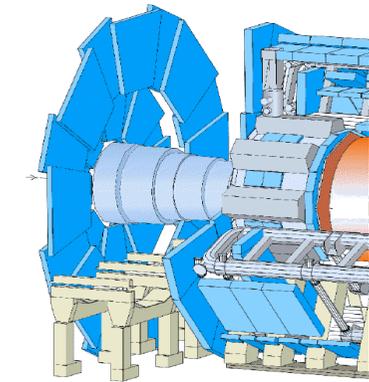
## 4 detectors

ATLAS

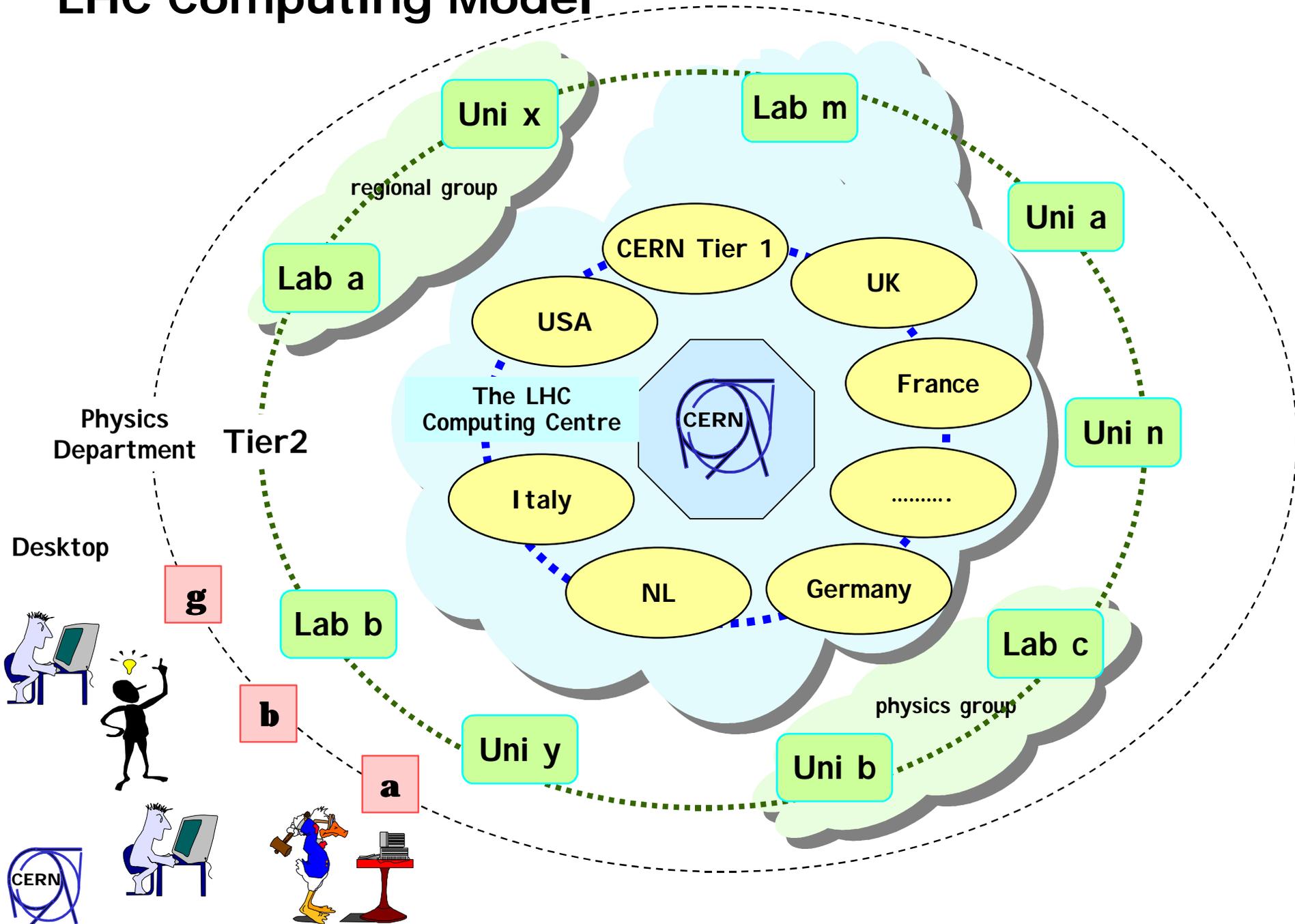
CMS

*Storage –*  
*Raw recording rate 0.1 – 1 GBytes/sec*  
*Accumulating at 5-8 PetaBytes/year*  
*10 PetaBytes of disk*

*Processing –*  
*200,000 of today's fastest PCs*



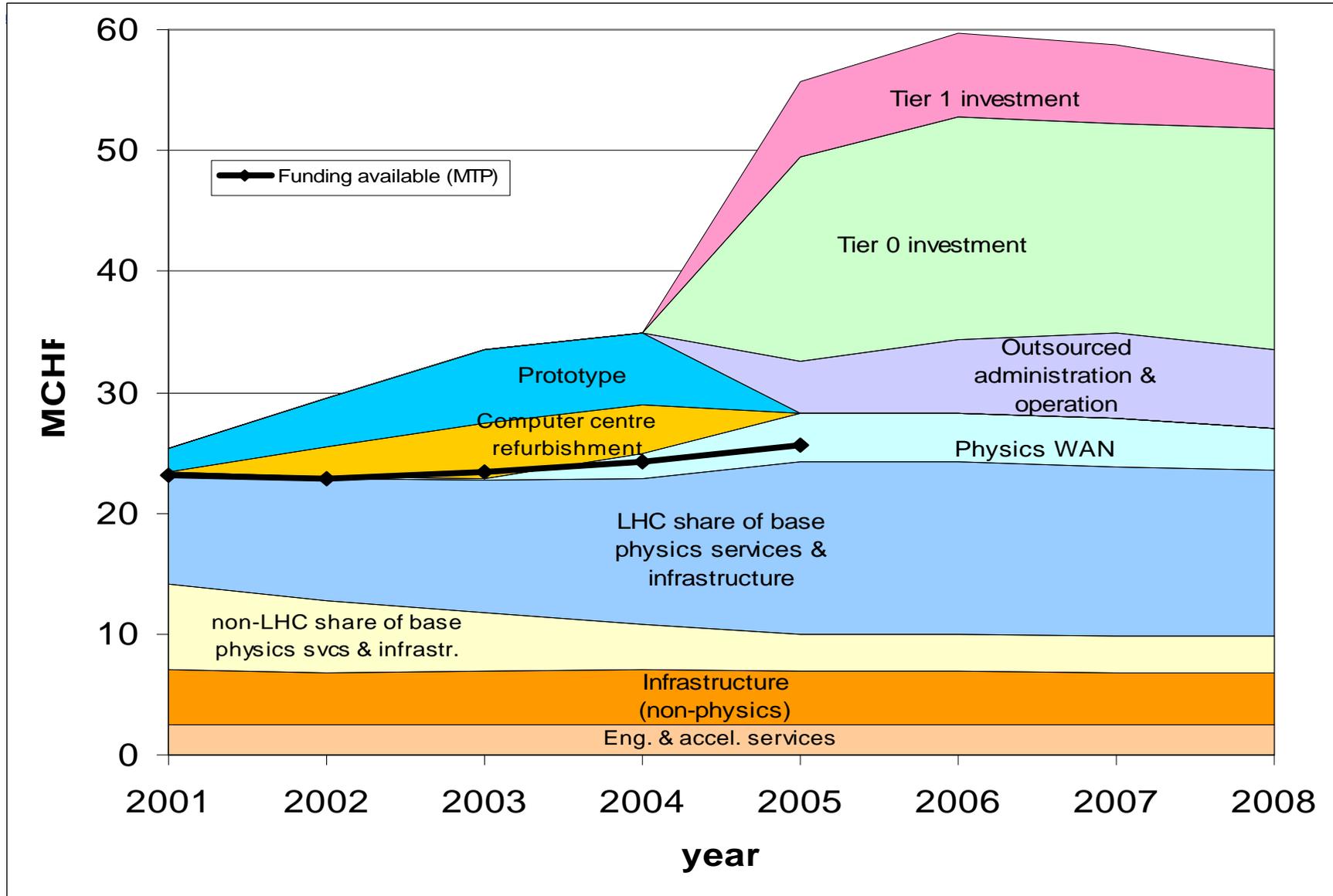
# LHC Computing Model



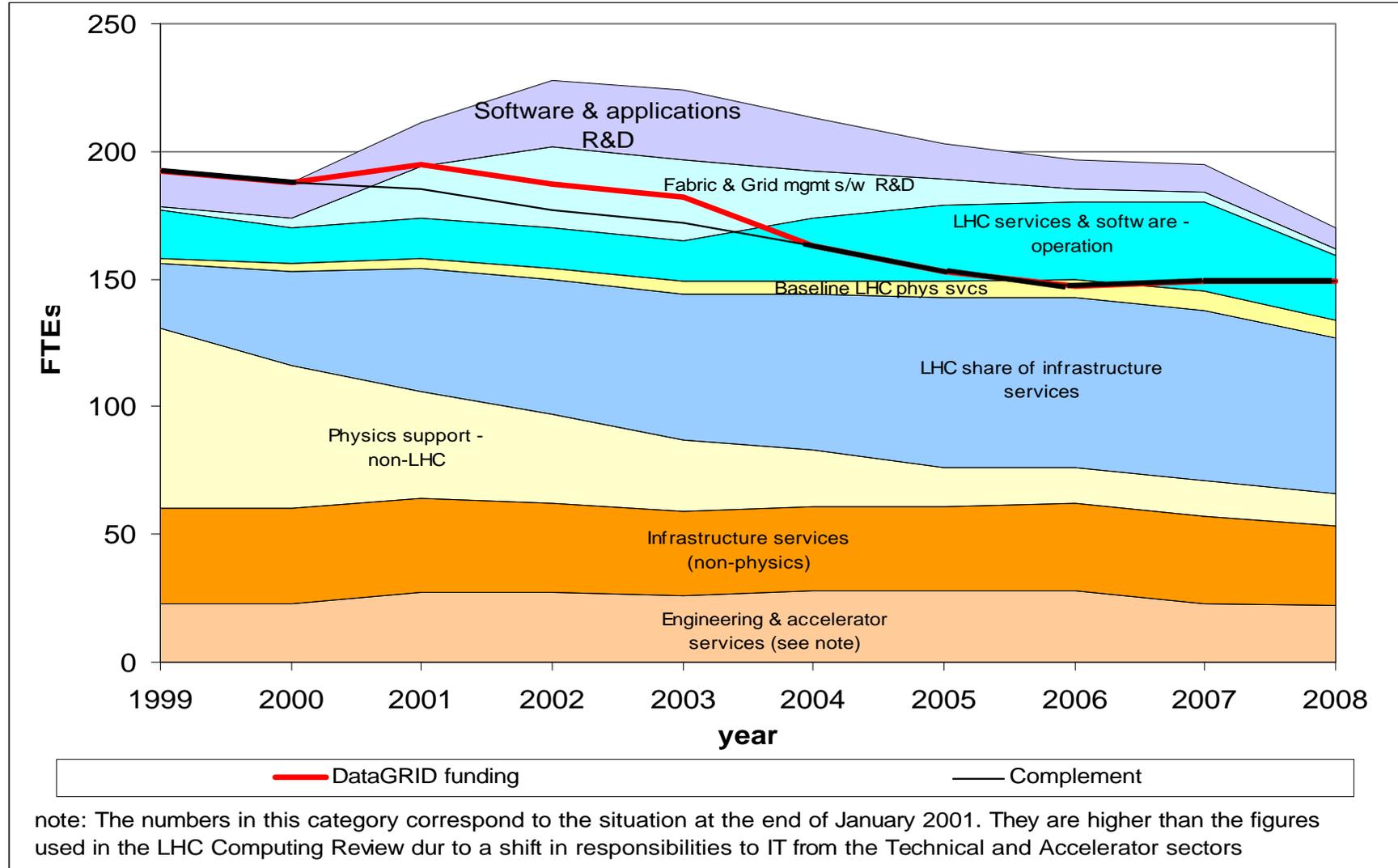
## CERN Prototype Capacity

<i>year</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>
<b><u>processor farm</u></b>				
no. of 2-cpu systems installed	200	400	800	1,200
estimated total capacity (SI95)	13,000	33,000	85,000	158,600
<b><u>disk storage</u></b>				
no. of disks installed	200	400	800	1,600
estimated total capacity (TB)	16	44	120	320
<b><u>tape drives</u></b>				
total capacity (achievable MB/sec)	200	350	500	800
<b><u>automated media</u></b>				
total capacity (TB)	30	120	350	600

# IT Division - LTP Planning - Materials



# IT Division – LTP Planning – Human Resources





# *The DataGRID Project*



# Latest News:

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- CERN Council approves LHC Computing Grid Project  
[Press Release LHC Computing Grid](#)
  
- CERN announces: CERN openlab for DataGrid applications  
[openlab press release](#)  
  
[OpenLab homepage](#)



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# Thank you !

... and have a good workshop.

