

# LHCb Run 3 Computing Model

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# Throughput reduction via slimming/skimming

- Partitioning of the bandwidth to tape and disk

Bandwidth	Turbo Stream		Full Stream		TurCal Stream	
To Tape	2.5 GB/s	68 % evts	5.9 GB/s	26 % evts	1.6 GB/s	6 % evts
To Disk	2.5 GB/s	68 % evts	0.8 GB/s	21 % evts	0.2 GB/s	5 % evts

- Stripping applied to Full and Turcal streams
  - Aim to reduce event sizes to 16 % of "RAW" and 80 % retention
    - Logical bandwidth to disk vs tape in 10 GB/s scenario reduced to 35 % for all streams
  - Plan to allow two processing passes
    - Prompt processing during data taking
    - End of year processing with final event sizes (incremental or full re-processing)
      - Staging bandwidth to get this data onto disk (especially in 2022) may be problematic ...

Event Rate  
(events / s)

10 GB/s

Bandwidth  
(GB / s)

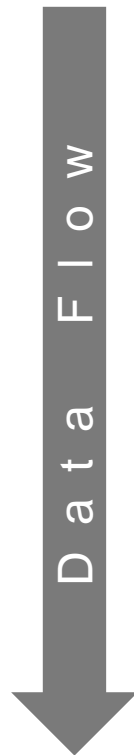
High Level Trigger



Tape Storage



Disk Storage



High Level Trigger

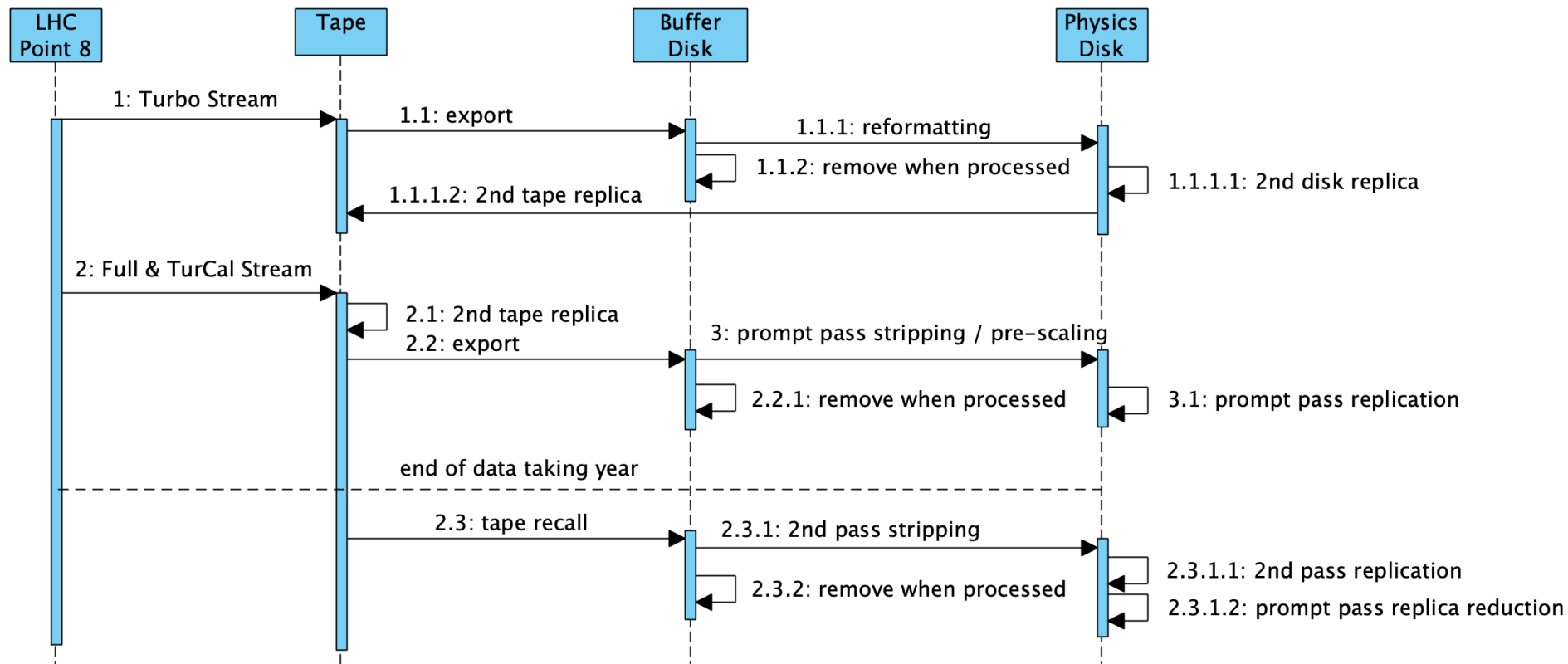


Tape Storage



Disk Storage

# Data Processing Workflow per Data Taking Year



# Tape Reading Throughput for Reprocessing

