



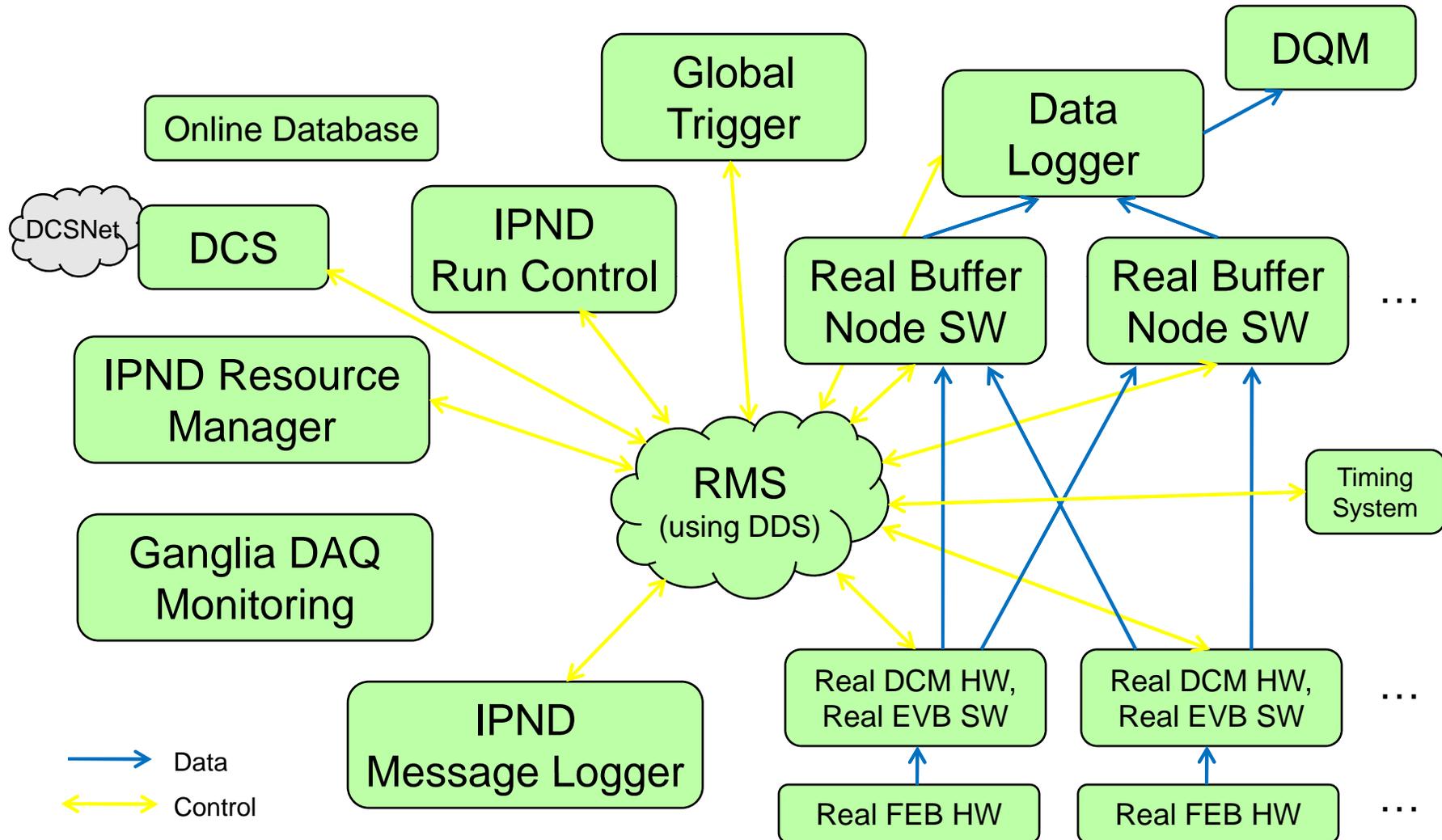
Introduction and Timeline



- NOvA had its CD/3B DOE review last month.
- Before the review, our (KB/LP) work was mainly in the area of helping with DAQ software requirements and specifications documents.
- Now we're starting to resurrect software and development & testing infrastructure.
- The DAQ SW team is a diverse group.
- A workshop on DAQ SW is scheduled for 19-Aug-2009.
 - The goal is to lay out the plan to get us to the IP/ND (integration prototype/near detector).
- IP/ND running starts next summer (2010).
 - For some DAQ SW subsystems, partial functionality can meet the needs of the IP/ND.
 - This will be an opportunity to test alternatives and gain operational experience.
- Far detector installation starts a year after that (2011).
 - DAQ should be ready to take data with first detector modules.
 - Not as much time between IP/ND and far detector installation as was once expected.

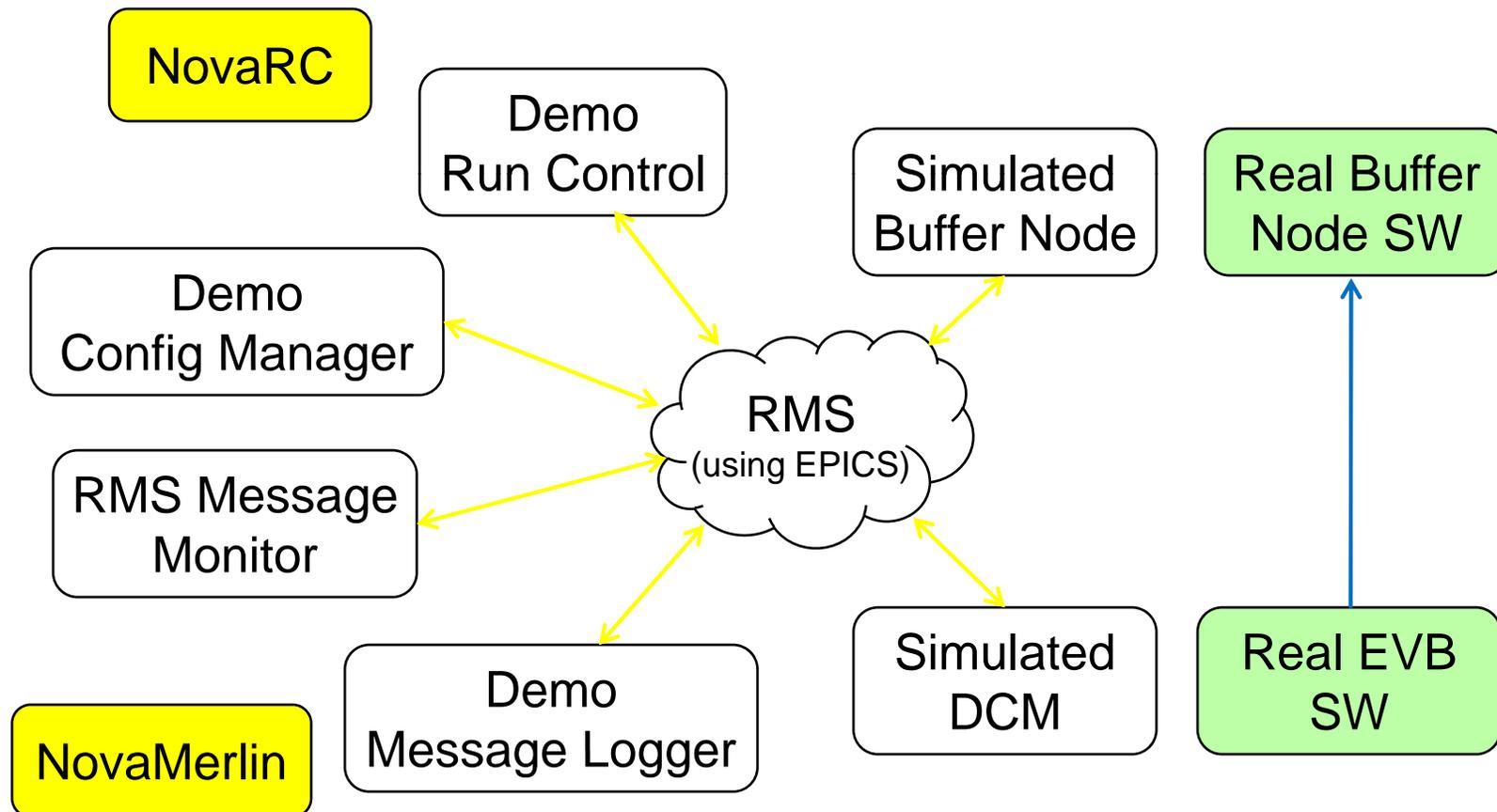


Elements Needed for the IP/ND DAQ





What Exists Now?

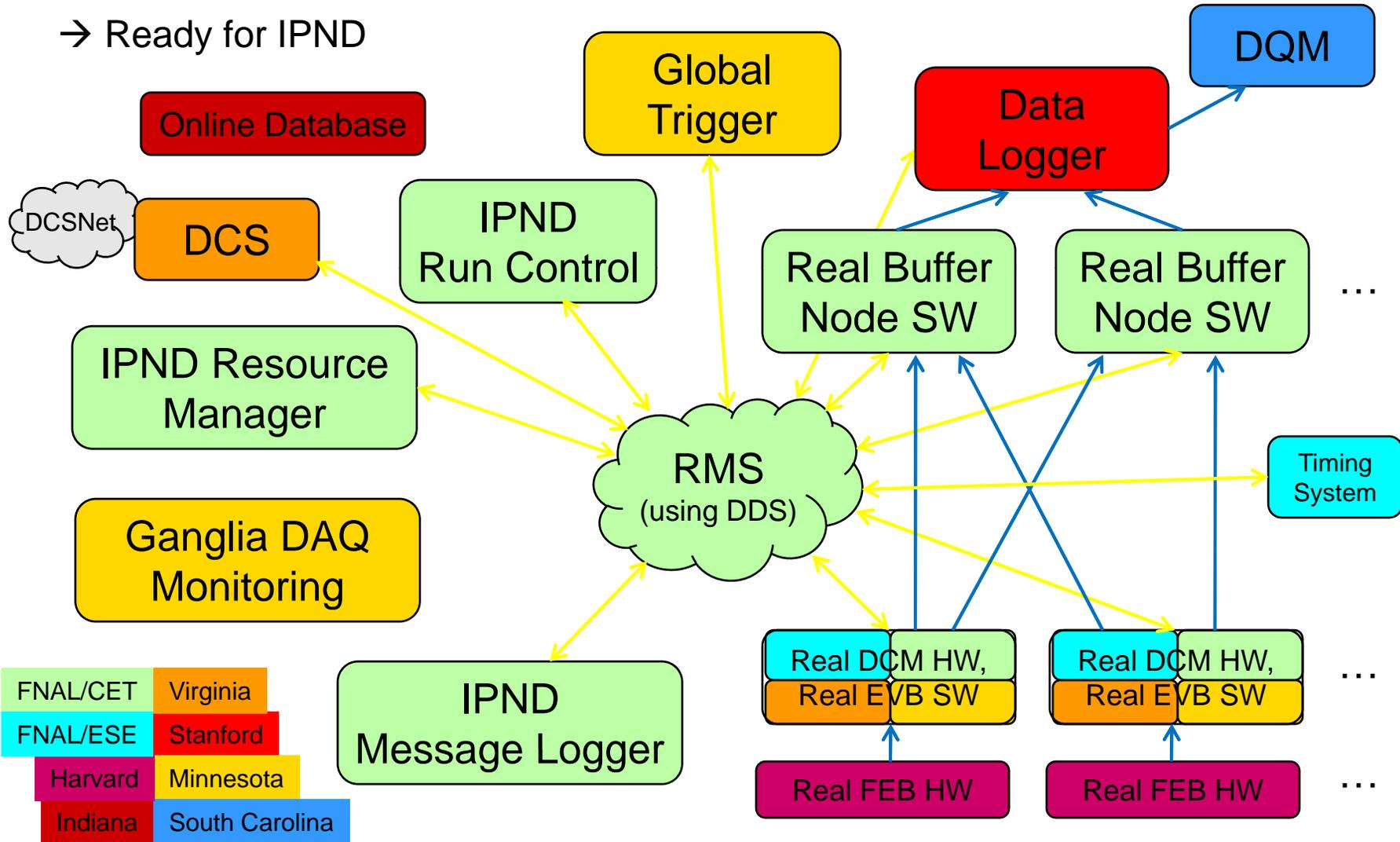




Institutional Responsibilities



→ Ready for IPND





Messaging with RMS



- RMS = Responsive Messaging System
 - Used for control and status messages, not data
 - Currently Java and C++ APIs
 - Currently uses EPICS as the underlying messaging provider
 - Uses publish/subscribe model (truthfully, many messages will be sent point-to-point, but pub/sub lets us seamlessly watch what is happening)
- Addressing is done with message “destinations”
- A destinations typically contains 4 fields:
 - Target (e.g. dcm005, allBufferNodes, runControl, etc.)
 - Channel (e.g. control, status, configuration, etc.)
 - Partition number
 - Message type (e.g notification, request, reply)
- For EPICS, each destination maps to a process variable name:
 - `<target>/<partitionNumber>/<channel>/<mailboxType>`
- For DDS, probably one topic for everything, destination fields map to key fields. Maybe different DDS domains for different RMS partitions, and different DDS partitions for different RMS channels. Also will need message “id” as a key field to ensure uniqueness.