ECAL Trigger and DAQ hardware system is divided in two parts:
- On-detector: responsible for signal digitization and trigger primitives production
- Off-detector: finalization of trigger primitive calculation & readout of full granularity data

- Trigger tower (TT): group of 25 adjacent crystals, basic detector unit
- Off-detector electronics is made of 54 identical modules: FED's (Front End Driver)
- Every FED is made of Trigger concentrator card (TCC) + Clock & Control System (CCS) + Data concentrator card (DCC)

ECAL Trigger & DAQ System:
- Front end electronics is the first step of trigger & DAQ path
- TT – Front End (FE): Shapes, amplifies, digitizes signals from photodetectors & generates trigger primitives
- FE cards send trigger primitive information to the off-detector electronics

ECAL Monitoring Tools:
- ecalView: web application to monitor online status of ECAL and Preshower
- Acquires monitoring data from supervisor applications & elaborates it into useful information for ECAL shifters
- Backend: node.js modules
- Frontend: html files & javascript components

ECAL Online Software:
- Responsible for configuration, operation & monitoring of ECAL Trigger & DAQ system
- Hierarchical organization - Function Managers (FM) @ top level
- ECAL supervisor & electronic supervisors are the building blocks of the ECAL DAQ software

ECAL DAQ performance and automatic recovery procedures:
- In comparison to the luminosity delivered by CMS, ECAL DAQ and Preshower DAQ were responsible for 3% and 0.9%, respectively, of the lost luminosity in 2017. This improvement over 7% and 6% lost luminosity due to ECAL and Preshower DAQ in 2016 is a result of the different automatic recovery procedures, some of which are:
  - Integrity and link errors (noisy patterns in occupancy) in CCS for ECAL and Preshower
  - DCC errors when CMS clock is unstable (particularly for Preshower)
  - ECAL and Preshower stuck during Single Event Upset (SEU) in the front-end electronics
- For 2018: auto-recovery procedures being improved for ECAL DAQ to maintain excellent performance!