

# Review on Functional Requirements for LHC Transverse Instability Diagnostics (1)

## LHC Run 1 experience:

start to see **impact of instabilities** on LHC performance !

control of instabilities calls for more understanding of the underlying Physics

→ instrumentation vital

→ Q/Q' diagnostics vital

equipment groups concerned: BI, RF (ADT), CO

need agreement on planned upgrades and new features for Run 2

“bunch-by-bunch everything” is not a specification that we can base a design on in the equipment groups

resources are limited → need to set priorities

# Review on Functional Requirements for LHC Transverse Instability Diagnostics (2)

## Scope and Aims of the Review:

- collect user requirements
- present capabilities of existing systems and options for upgrades
- ensure technology and infrastructure in place to optimally use available instruments (triggers, logging, software)
  
- identify missing technologies and systems that need further development
- prioritize requests (feasibility, resources, impact)
- identify requests that cannot be fulfilled for the start-up after LS1
- recommend allocation of resources to management

# Review on Functional Requirements for LHC Transverse Instability Diagnostics (3)

## *user input:*

**OP:** What could be useful after LS1 – an OP perspective (J. Wenninger)

**ABP:** What is needed after LS1 – an ABP perspective (B. Salvant, T. Pieloni)

## discussion and coffee

**RF (ADT):** What can be delivered (D. Valuch)

**BI:** What can be delivered (R. Steinhagen)

**CO:** event synchronisation, logging infra-structure, data storage,  
post-processing and visualisation (J.-C. Bau, J. Serrano, C. Roderick)

## discussion and lunch

Summary (G. Arduini)

discussion and initial recommendation, follow-up plan