

# CMOS R&D: exploiting synergies

- CPS R&D in its better dynamics than ever
- ILC requirements achievable
  - ✓ Pitch  $\sim 18 \times 18 \mu\text{m}$  ( $\sigma_{\text{sp}} \sim 3 \mu\text{m}$ ) & r.o.time  $\sim 1\text{-}4 \mu\text{s}$  ?
    - Doable with smaller feature sizes
- CBM  $\sim$  final sensor 2022
- Joined effort inside EU AIDA++ program
  - ✓ CMOS work packages expected:
    - Time resolution & radiation hardness
    - High granularity and low mass devices
  - ✓ Beam telescopes WP
    - EUDET upgrades towards improved time resolution
  - ⇒ 65 nm technology exploration
  - ⇒ Final proposal Q1 2020
- CREMLIN+ (EU-Ru program, funding approved)
  - ✓ WP7.1: Development of fast CMOS pixel sensors
    - IPHC-Strasbourg, FAIR, JINR, Frankfurt univ, BINP, DESY, CERN, KINR
  - ✓ Goal ⇒ CBM-MVD station demonstrator
- ALICE beyond LS3/4 Proposal
  - ✓ Stitching & large surface
  - ✓ Very low mass detectors