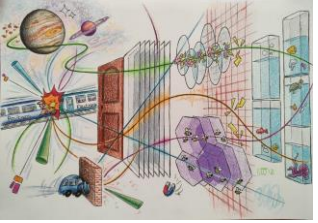
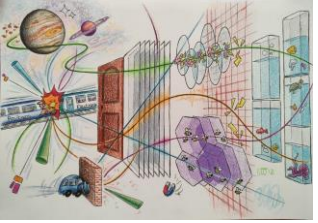


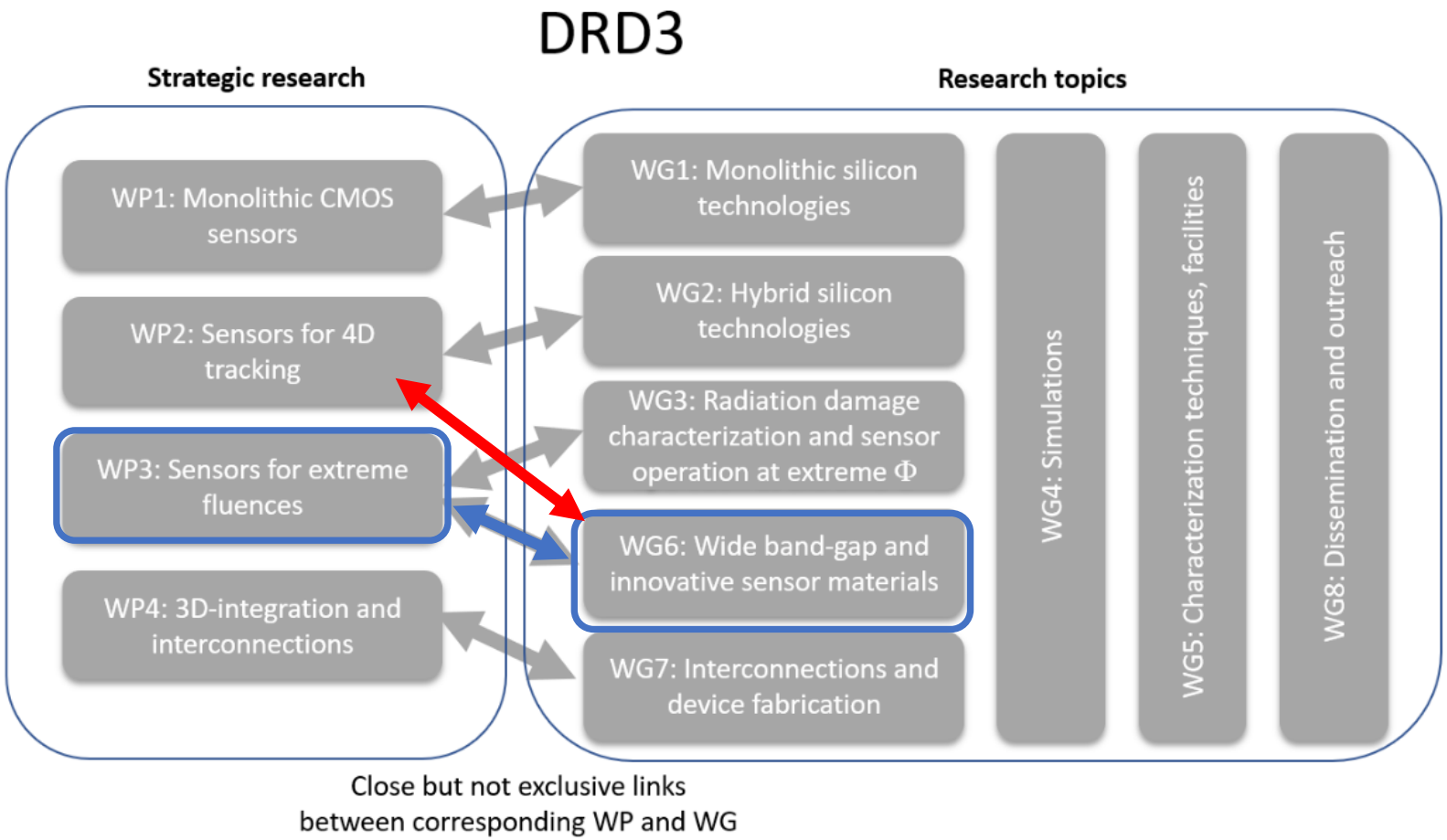
# WG6: Wide bandgap and innovative sensor materials

## Discussion

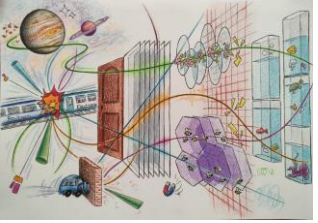
Alexander Oh & Xin Shi



# Relationship Between WPs and WGs




Close but not exclusive links
between corresponding WP and WG



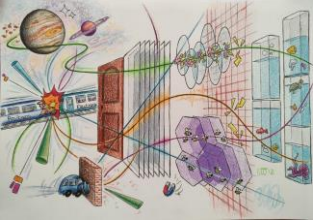
# Work Package Tasks

## Direct Connection

- 3.1 Extreme fluence: wide band-gap materials (SiC, GaN)
- 3.2 Extreme fluence: diamond-based detectors

## Intrinsic Connection

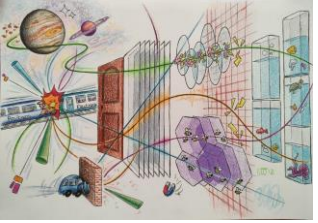
- 2.1 4D tracking: 3D sensors (3D diamond, 3D SiC etc)
- 2.2 4D tracking LGAD (SiC-LGAD)



# WG6: Research Goals

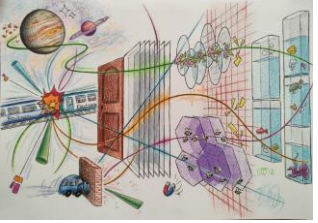
2024 – 2026

- RG 6.1: Development of small cell 3D diamond detectors
- RG 6.2: Fabrication of large area Diamond, SiC and GaN detectors, improve material quality and reduce defect levels
- RG 6.3: Improve tracking and timing capabilities of WBG materials
- RG 6.4: Apply graphene and/or other 2D materials in radiation detectors, understand signal formation



# Towards WPs

- Synergies between existing programs
  - E.g: Many SiC activities on-going
- Common tasks
  - TCAD model, Readout Board development
- Future regular meeting every month?
  - At least 2-3 meetings between the two DRD3 meetings
  - Exchange common items progress
  - make detailed technical discussion happen
  - Coordinate DRD3 agenda
- Will be announced with e-group: drd3-wg6-non-silicon@cern.ch



# Questions

Comments, Suggestions, Questions:

- drd3-wg6-conveners@cern.ch