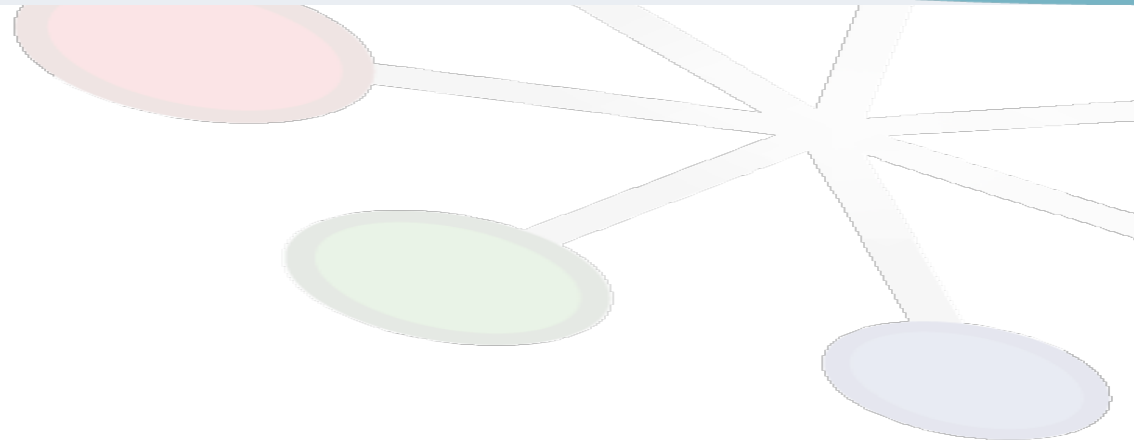
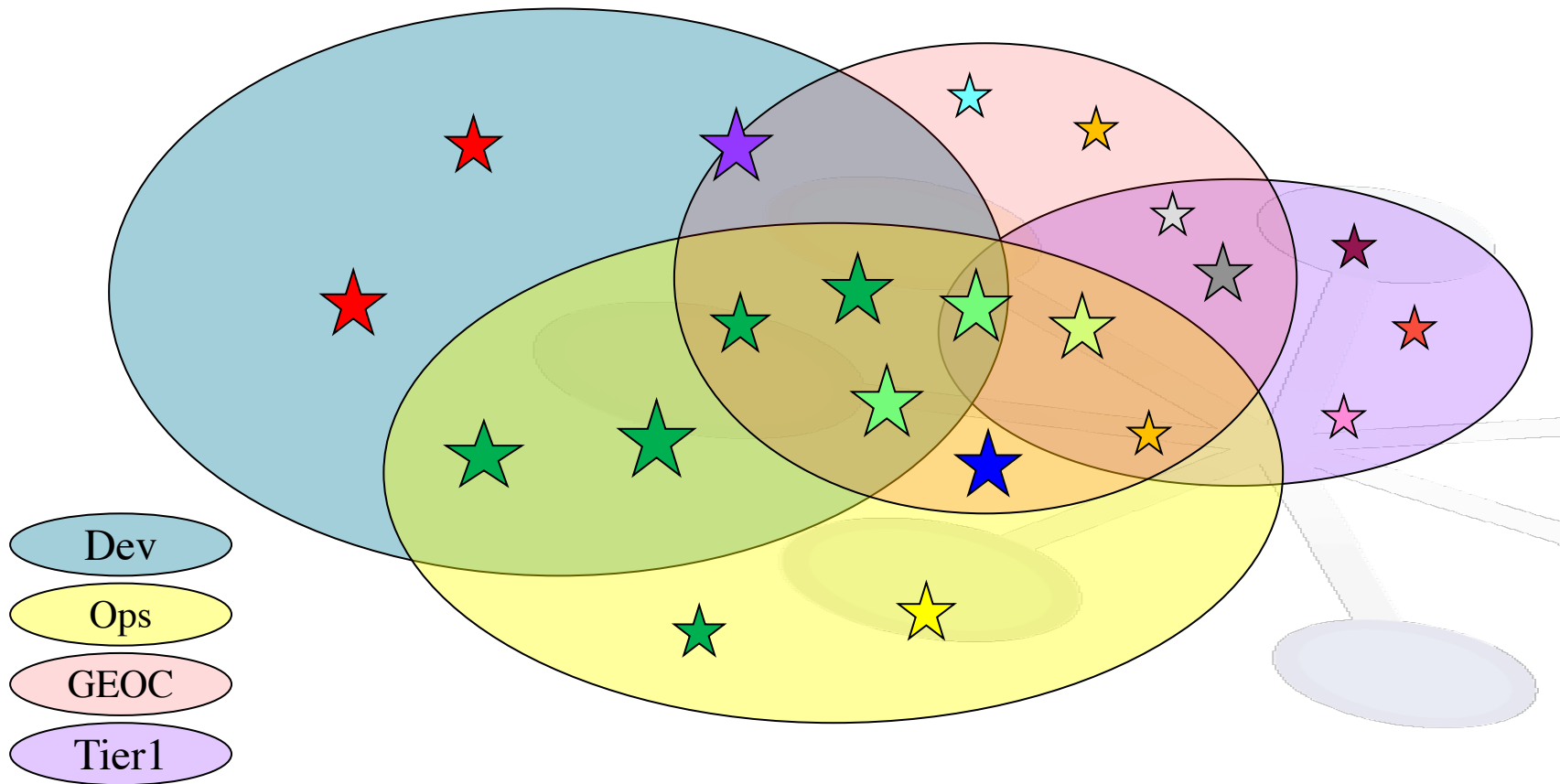


LHCb
DIRAC
ΓHCP
LHCb GRID SOLUTION

(LHCb)Dirac development and Operations personpower





- **DIRAC and LHCbDIRAC development**
 - **Coordination + release of DIRAC from Marseilles**
 - ☆ 0.5 FTE
 - **Mostly driven by the CERN (small) team**
 - ☆ 3-4 FTEs
 - **Substantial contributions from Warsaw, UK, Germany**
 - ☆ 2 FTEs
 - **Coordinated by BiLD-Dev biweekly meetings (Federico)**
 - ☆ Includes developers from other VOs (ILC, Belle2, CTA,...)
- **Operations + GEOC**
 - **Most developers also contribute to operations (3 meetings a week)**
 - **Coordinated by DevOps biweekly meetings (Chris)**
 - **Production managers: for real data, MC, WG productions**
 - ☆ 2 FTEs
 - **Infrastructure: management of VOBOXes, deployment etc...**
 - ☆ 0.5 FTEs

- Continuous development is unavoidable
 - Handle changes in middleware, new platforms, new external services, new requirements (LHCb but not only)
 - Important developments triggered by operational requests
 - ☆ New workflows
 - Not underestimate commissioning (one FTE required)
- After calls for person-power a few LHCb groups (2) have been responsive
 - Thanks a lot! Let's hope this is continuing effort!
- One major committed institute withdrew ~2 years ago
 - This left a major hole in the development team
- Currently CERN has no fellow, no technical student, working in the area
 - Committees to come... Can we expect some human resources?
 - Few interns, most welcome, but need long term commitment
 - In 18 months: -1 FTE 🙄

- **Grid operations**
 - **GEOC scheme works very well (please join!)**
 - ☆ **No shifter required as such (covered by GEOC)**
 - **Still some 2nd and 3rd line support required (provided mostly by developers)**
 - ☆ **Implies development of tools**
 - **One LHCb contact at each Tier1 is mandatory (currently OK)**
 - ☆ **Not full time, but very important for liaising with sites (usually the central team has no access to machines at site)**
 - **Infrastructure support (VOBoxes, releases, deployment) should be reinforced**
- **Production management**
 - **We are relying on too few experts here...**
 - **We need to get support from physics groups for WG productions**
- **I (personally) would expect more from reinforcement of human resources in already committed institutes**
 - **There is a high visibility in developing DIRAC, used by a very large number of communities**
 - **More efficient to have more than one developer**