SRB and SRM Interoperation

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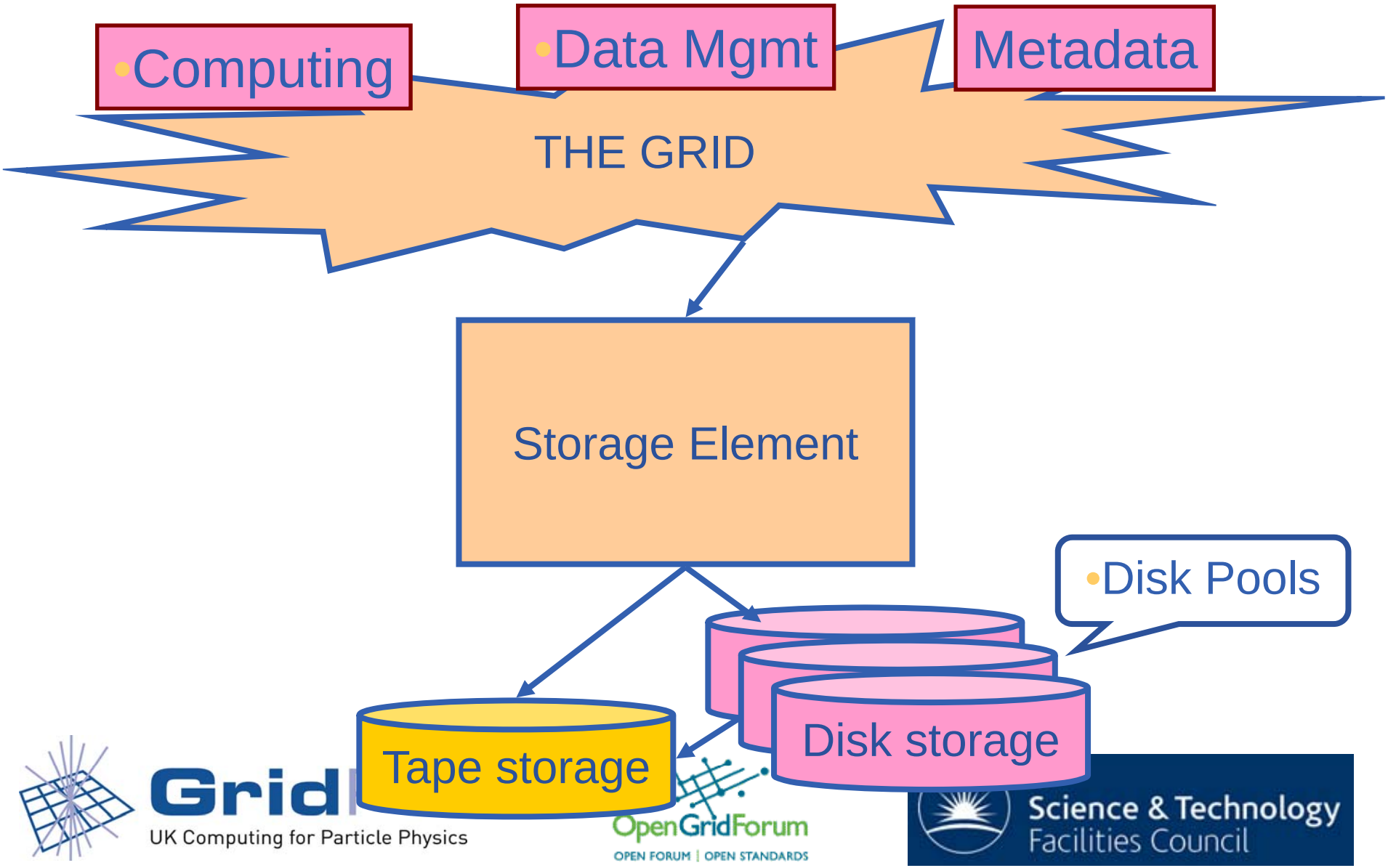
Background

- **SRM is the “storage resource manager”**
  - A *protocol* for *controlling* storage systems
  - Metadata handled elsewhere

- **SRB is the “storage resource broker”**
  - An implementation of a “data grid” from SDSC
  - Some metadata capabilities (key/value)

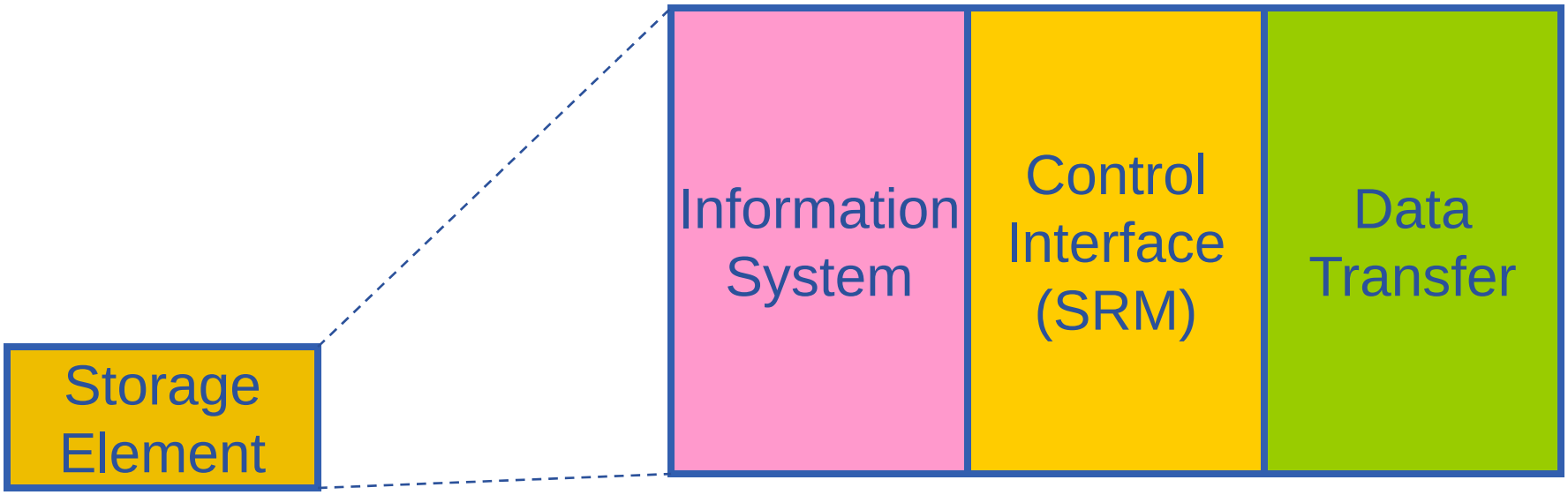
What is a “Storage Element”?



What is a Storage Element?

Used by EGEE, OSG,…

Six-seven different implementations



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Storage Element Implementations

- **dCache (**developed by **DESY+FNAL)**
- **DPM (**dev by **CERN)**
- **CASTOR (CERN+RAL)**
- **BestMan (LBNL)**
- **Jasmine (JLAB)**
- **StoRM (INFN)**

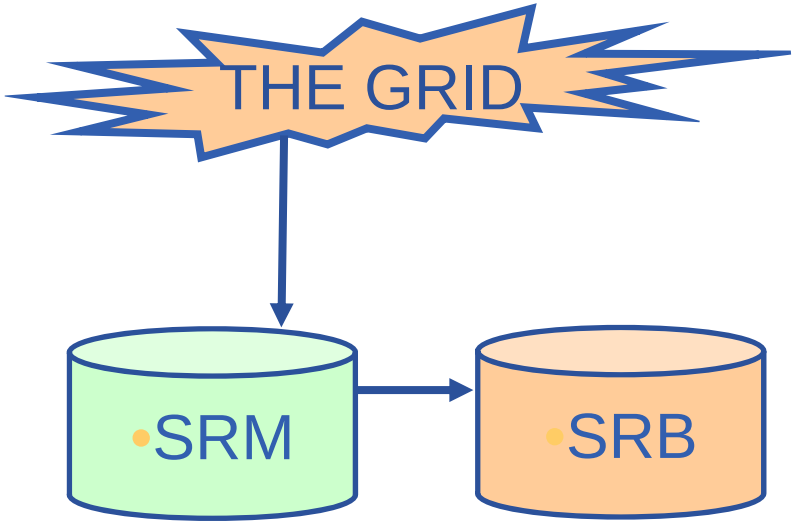
  - Some Open Source

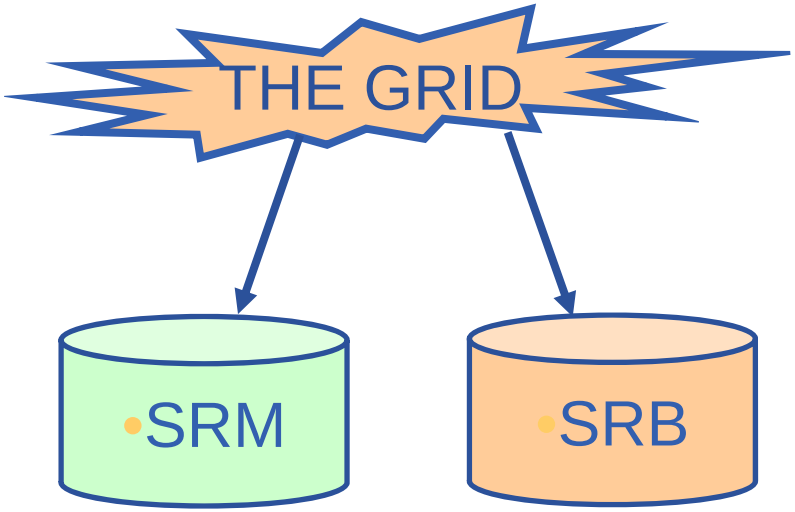
What is SRB?

- **Storage resource broker from SDSC**
- **An implementation of a “data grid”**
- **Used by TeraGrid, UK Nat’l Grid Service**
  - Traditionally non-HEP users
- **Also interfaces to mass storage systems**

What is interoperation?

- **Ability to *transfer* data between SRM and SRB**
- **Access data from Grid**
- **Make SRB appear as SE**





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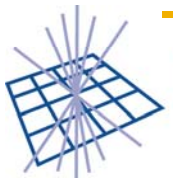
Goals

- **Demonstrate interoperation**
- **Using gLite**
- **No development!**
  - For the development version
  - See Fu-Ming Tsai's talk later in this session
- **Grid Interoperability Now**
  - OGF GIN-DATA



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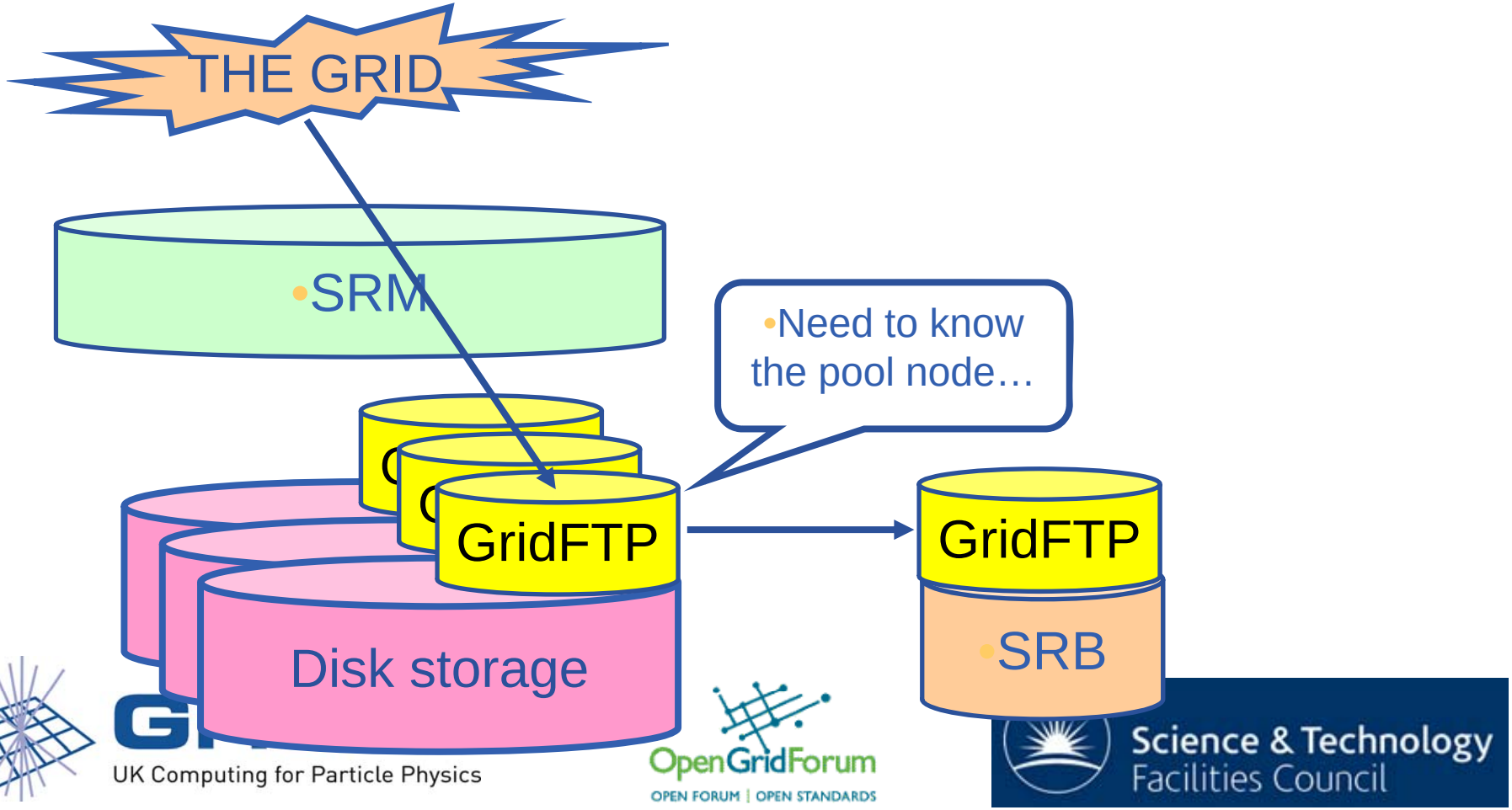
- **Use GridFTP interface to SRB (ANL)**



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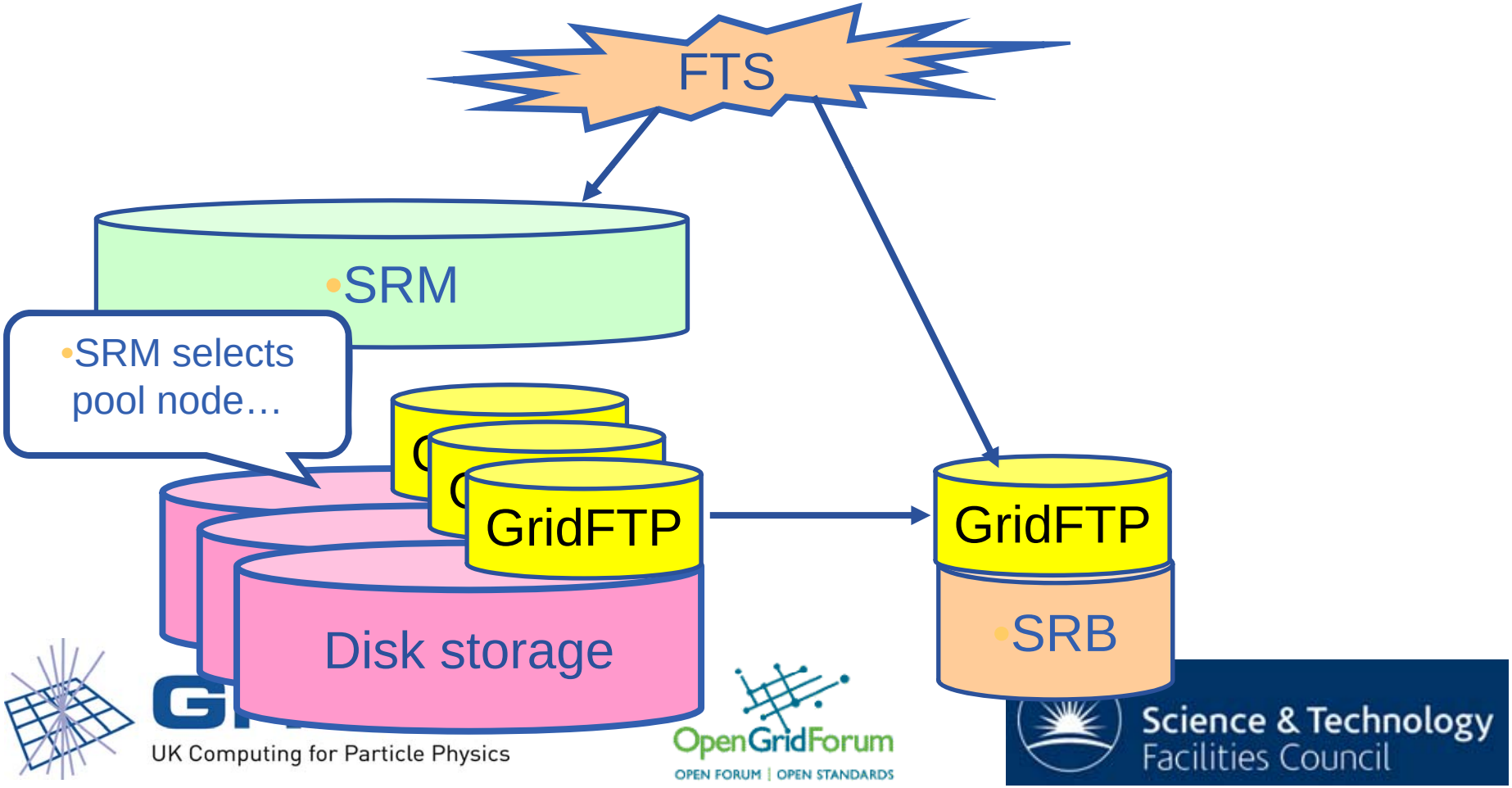
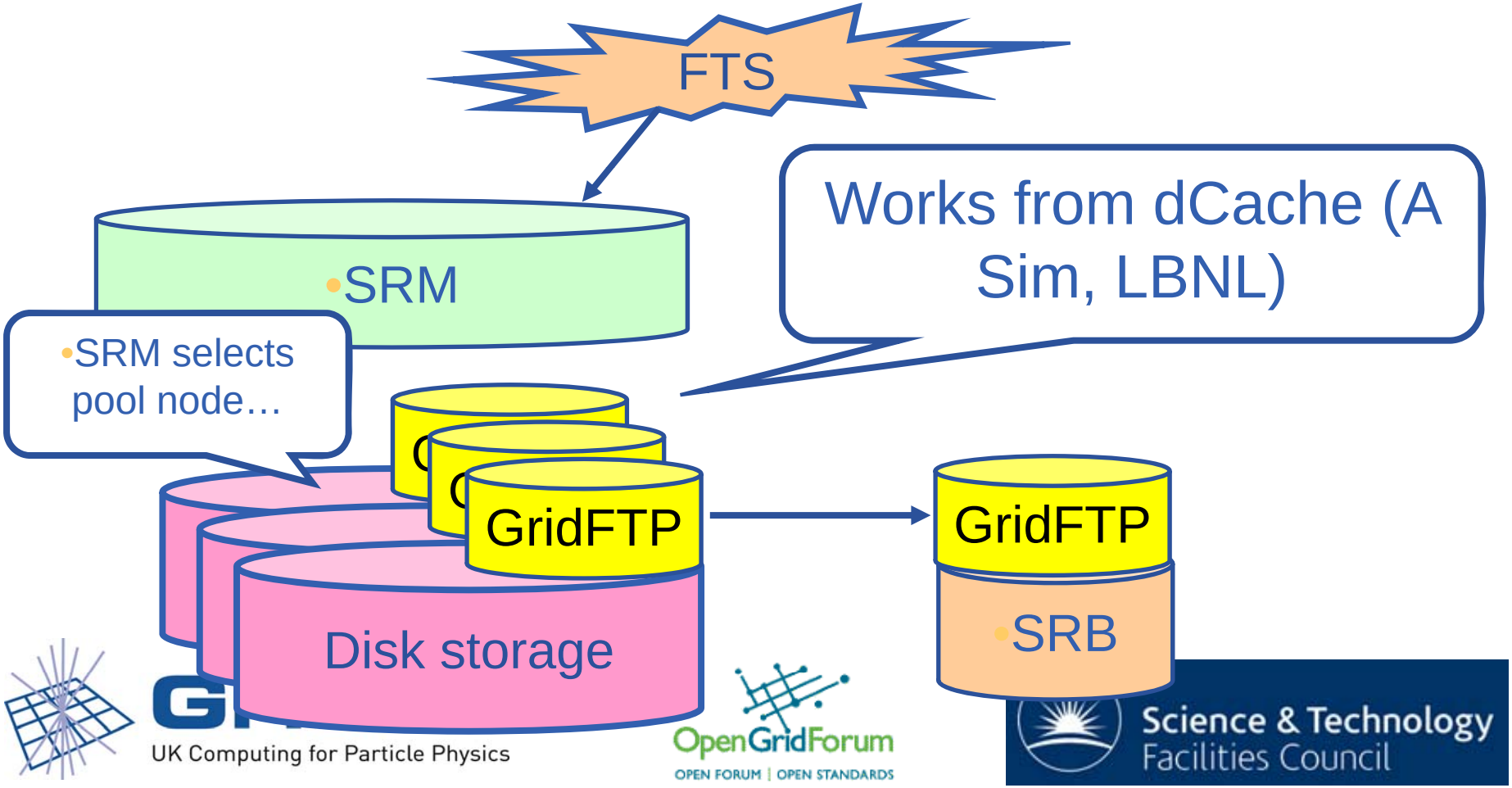
The Solution

- **Pretend SRB is a “Classic SE”**
- **Classic SE still supported by gLite FTS**



The Solution

- **Pretend SRB is a "Classic SE"**
- **3rd Party Copying (srmCopy) to GridFTP**

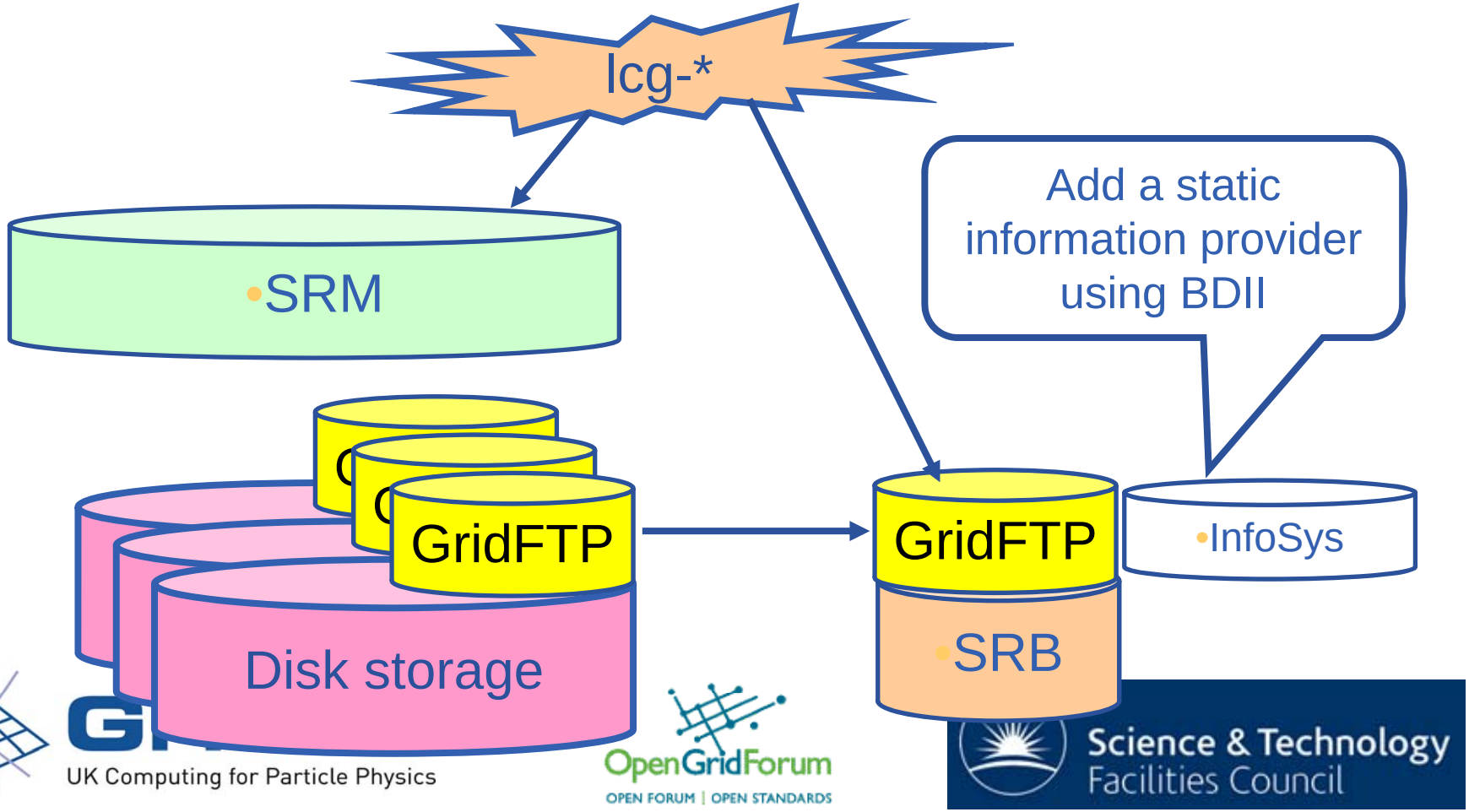


Using FTS

- **FTS does not depend on the information system**
- **lcg-utils do depend on the infosys**
  - Or *did*, when this work was done
- **GFAL depends on infosys**
  - How to get GFAL/lcg-utils supported?

The Solution

- **Pretend SRB is a “Classic SE”**
- **Classic SE still supported by gLite FTS**



Conclusion

- SRB appears to gLite as a Classic SE
- Data transfer and access from gLite
- No development required
- Works as long as Classic SEs are supported
- Works today! GIN! GIN! GIN!
- Did I mention no development required?