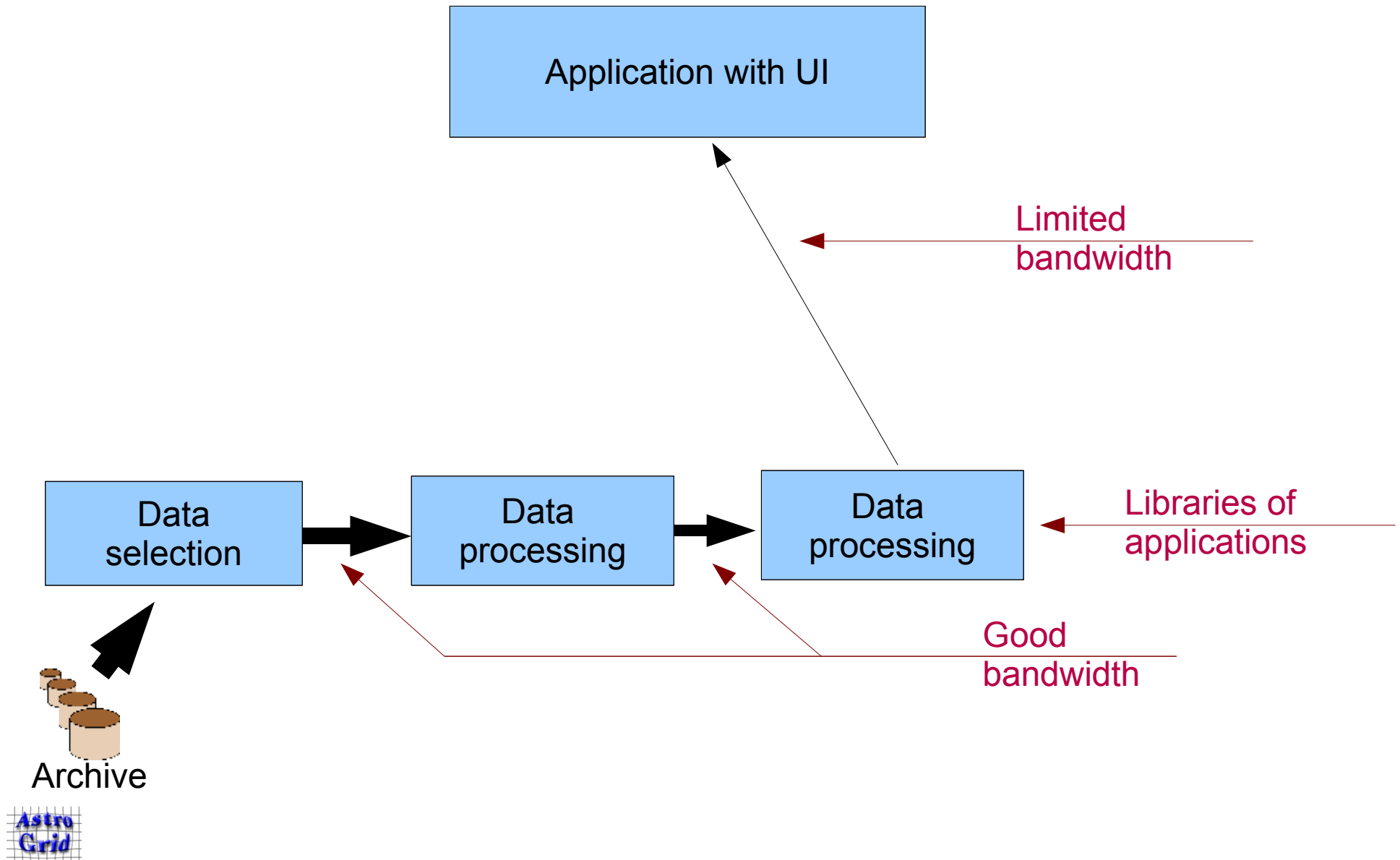


The Common Execution Architecture and Grid Computing

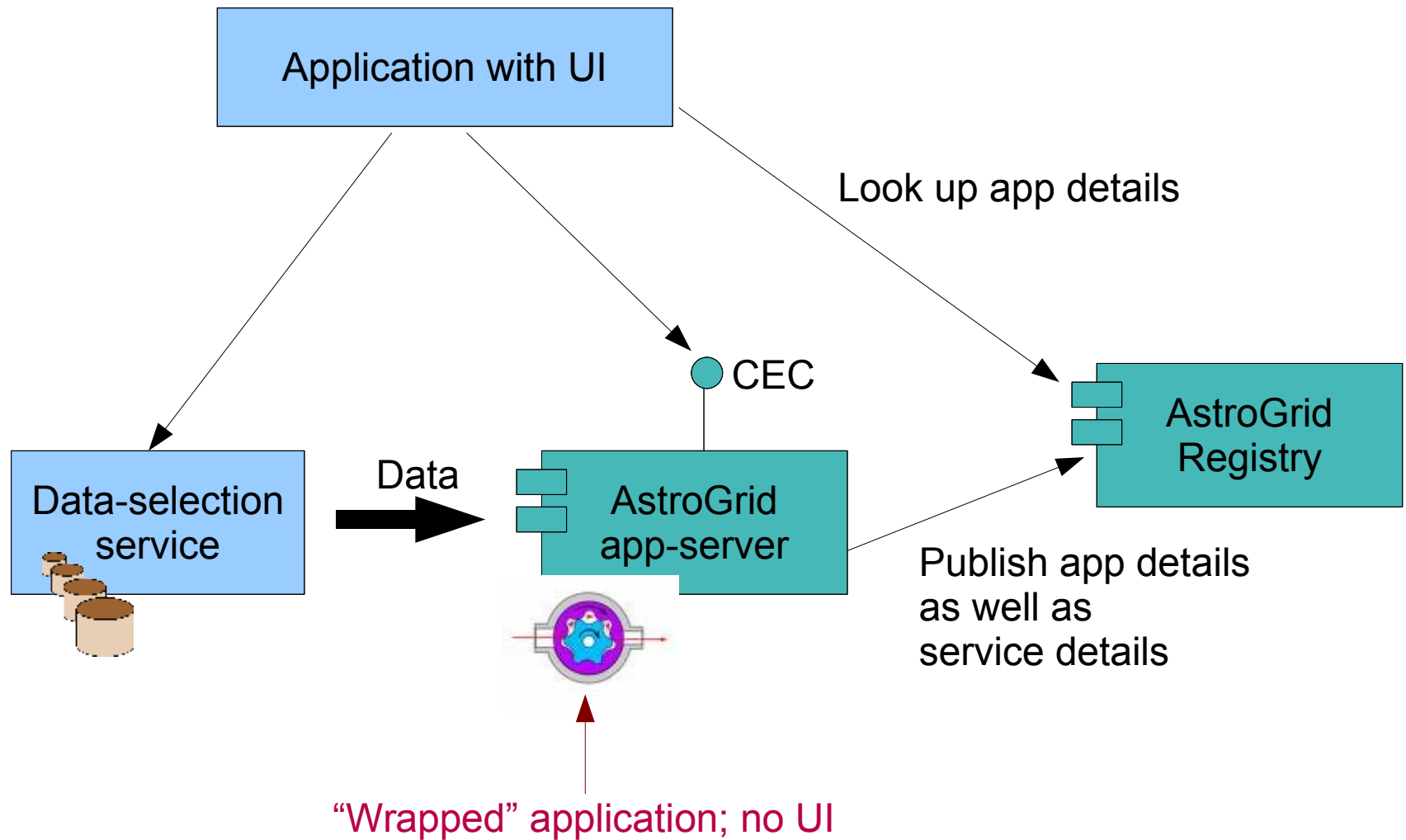
Guy Rixon

Presentation to RadioNet workshop
Oxford, December 2006

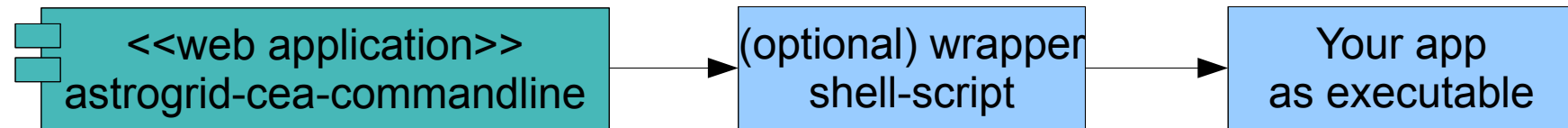
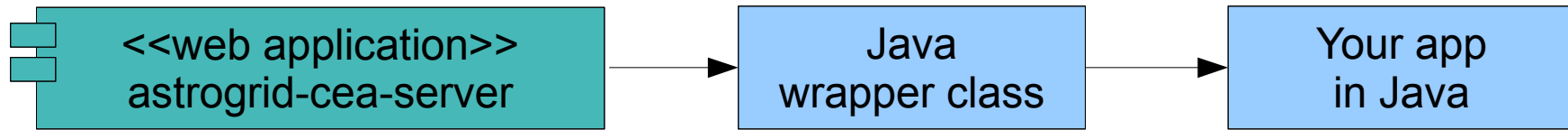
Pattern: in-grid processing



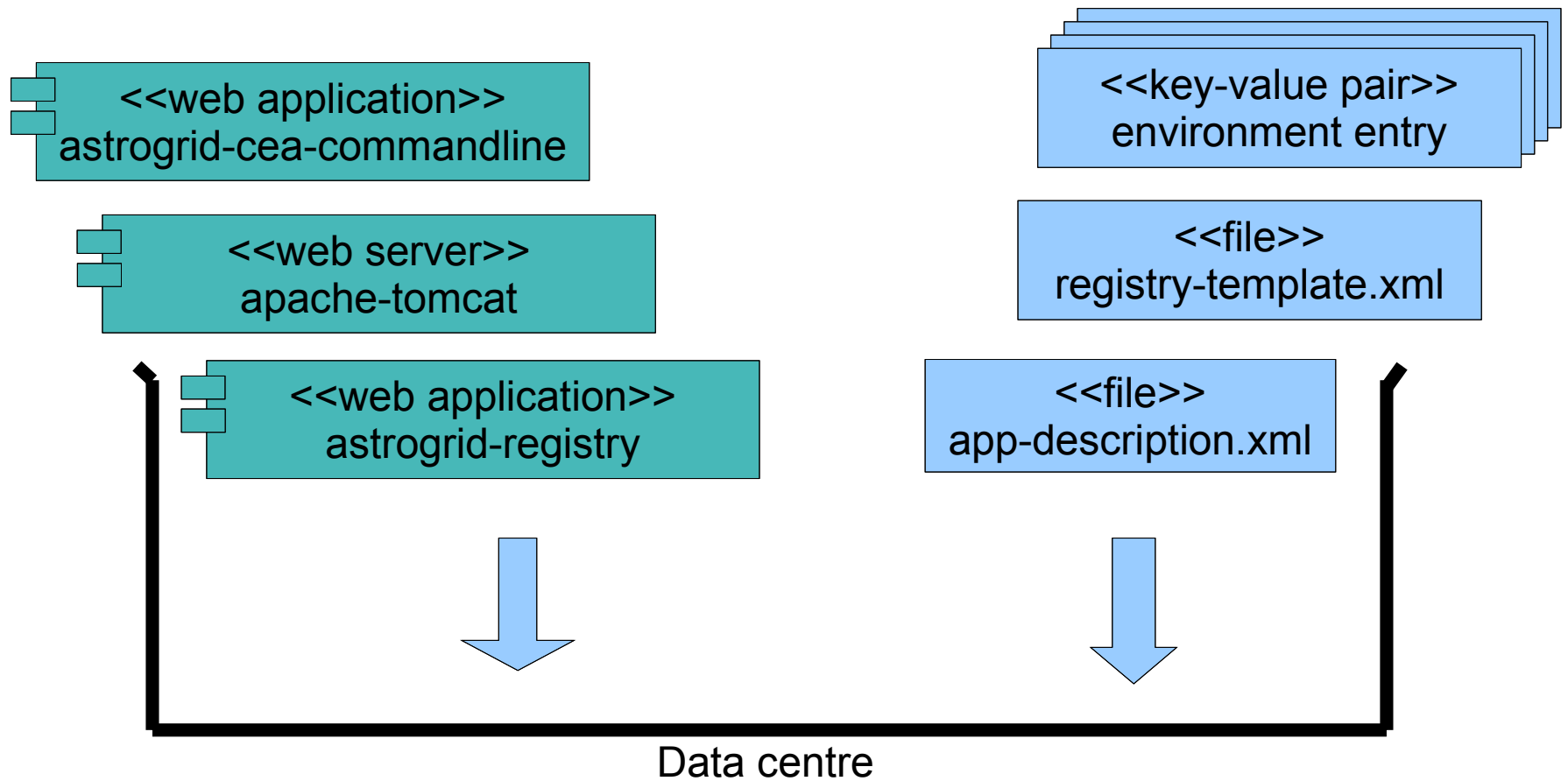
Implementation: CEA app servers



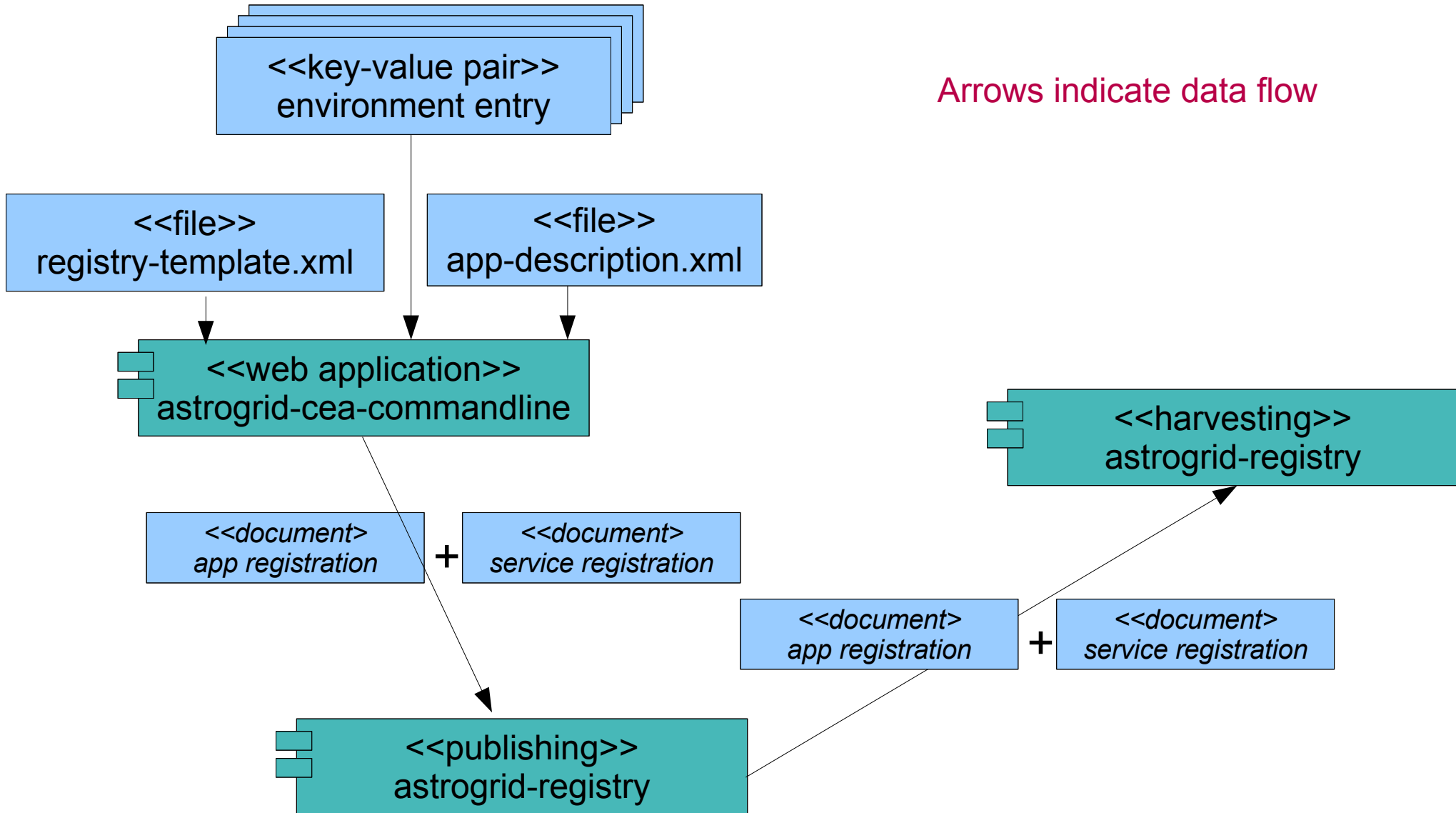
Three ways to wrap an app



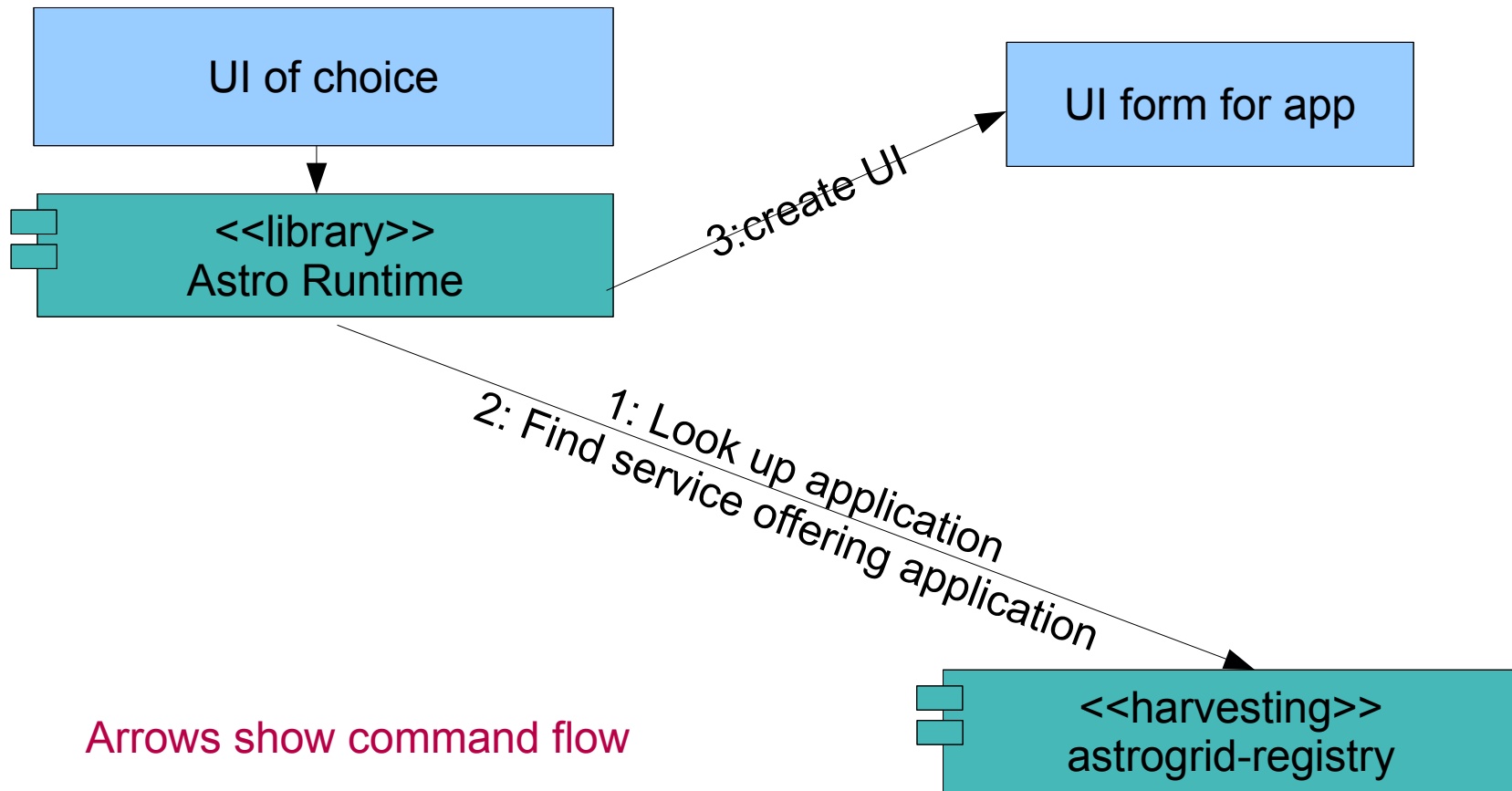
Wrapping a CL application (1)



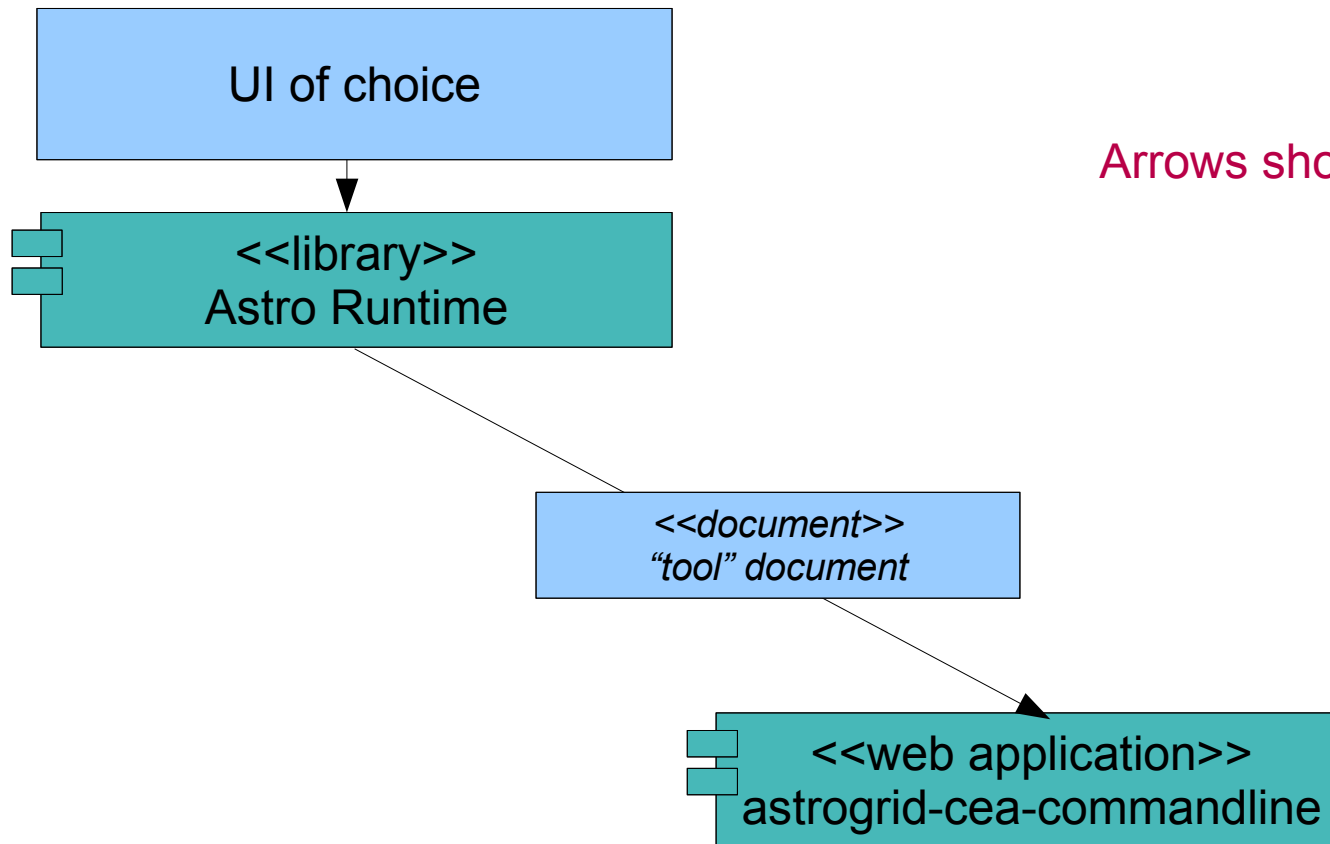
Wrapping a CL application (2)



Running a CL application (1)



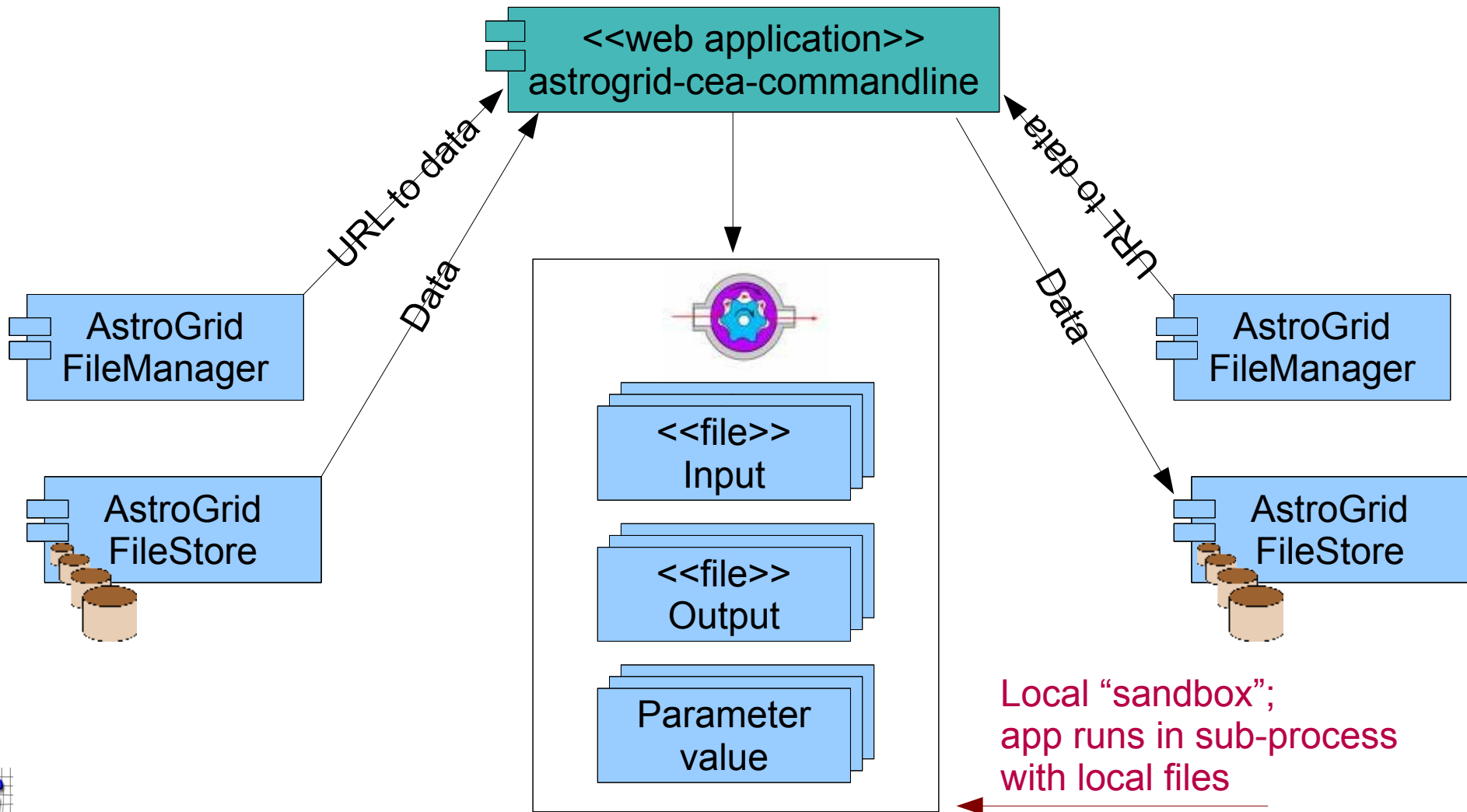
Running a CL app (2)



Arrows show command flow

Running a CL app (3)

Arrows indicate data flow

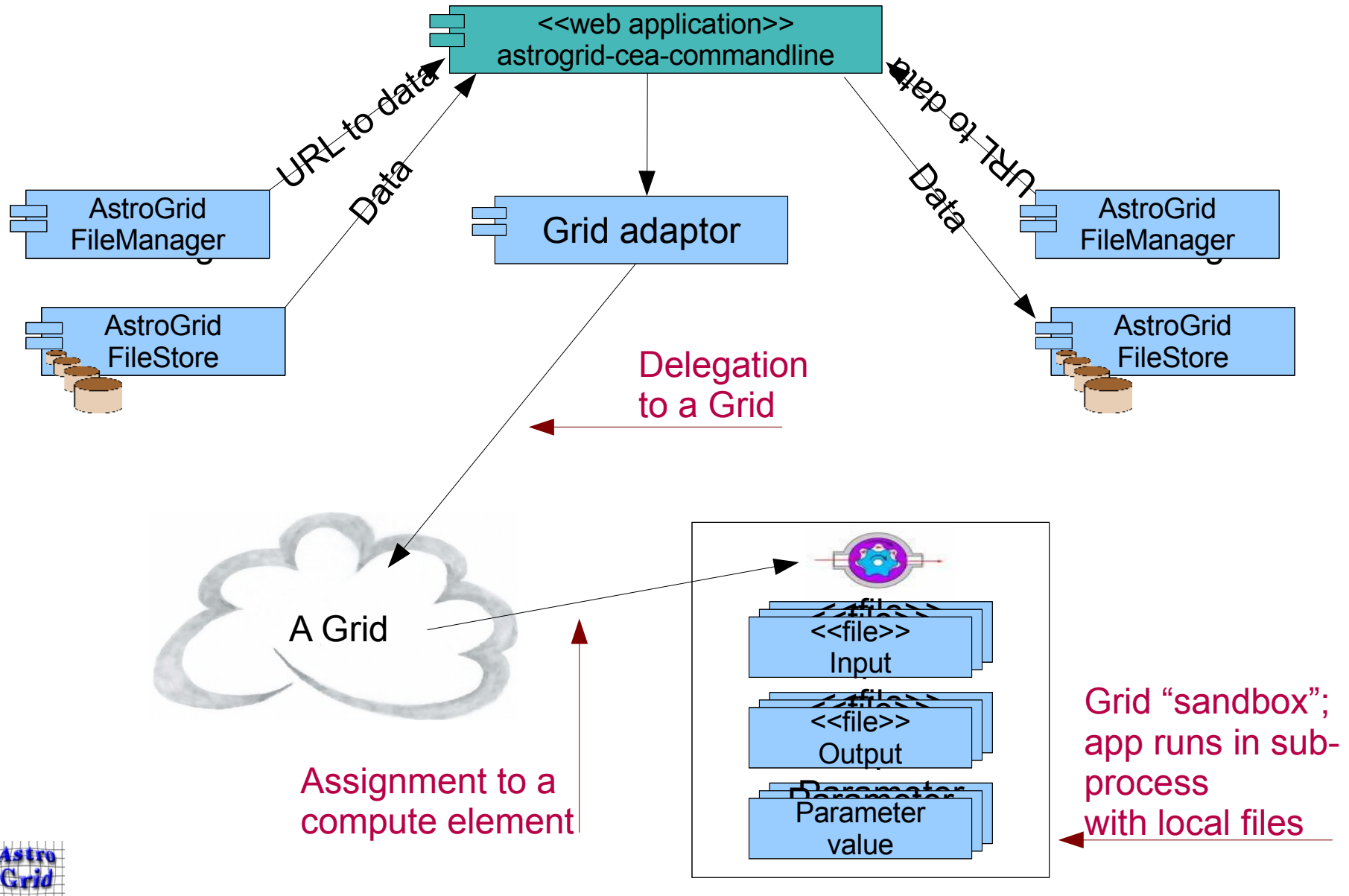


Dude, where's my Grid?

Hmm...too much local execution.
Can we put it on the Grid?



CEA scaled up to a Grid (future)



Workshop exercises

- Objective: use ParseITounge within wrapped application within CEA app-server
- Intermediate step: wrap a simpler, example application
- Do one of two starter exercises before doing the ParseITounge exercise

Example 1: trivial Python app

- Simple one-page app
 - Calculates observed angular diameter at cosmological distances
- Learning exercise – same technique as wrapping bigger Python programmes
- <http://www2.astrogrid.org/workshops/oxford-science-radionet-workshop/examples/angularDiameter/>

Example 2: tcopy from STILTS

- Wraps one function from Starlink's STILTS package: copying a table with format conversion
- Real app; potentially useful. (But STILTS is already wrapped and available.)
- <http://www2.astrogrid.org/workshops/oxford-science-radionet-workshop/examples/stilts/>

app-description.xml

```
<<file>>  
app-description.xml
```

- XML file, using schema
<http://www.astrogrid.org/schema/CEAImplementation/v1>
- Declares aspects of app to app-server:
 - Formal name (identifies app in registry)
 - Parameters, including for each
 - Name
 - Description
 - Data-type
 - Presentation on app's command line
 - Grouping of parameters into interfaces
- Example: **Full application-description**