



# CrossGrid Task 3.3

## Grid Monitoring

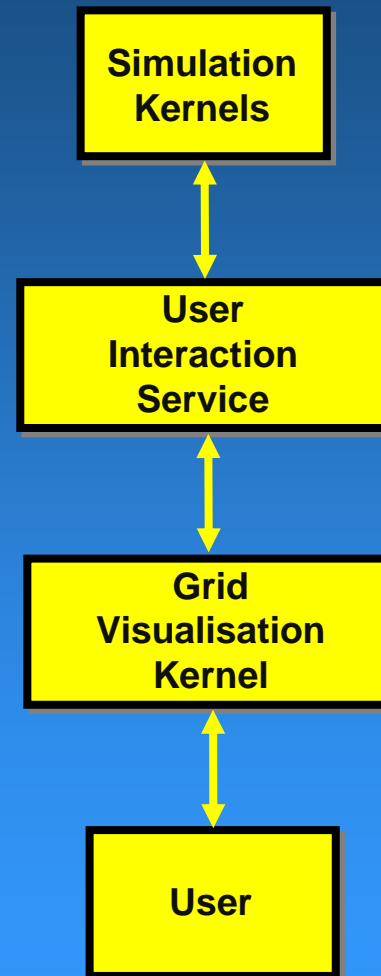
Trinity College Dublin (TCD)  
Brian Coghlan



# CrossGrid



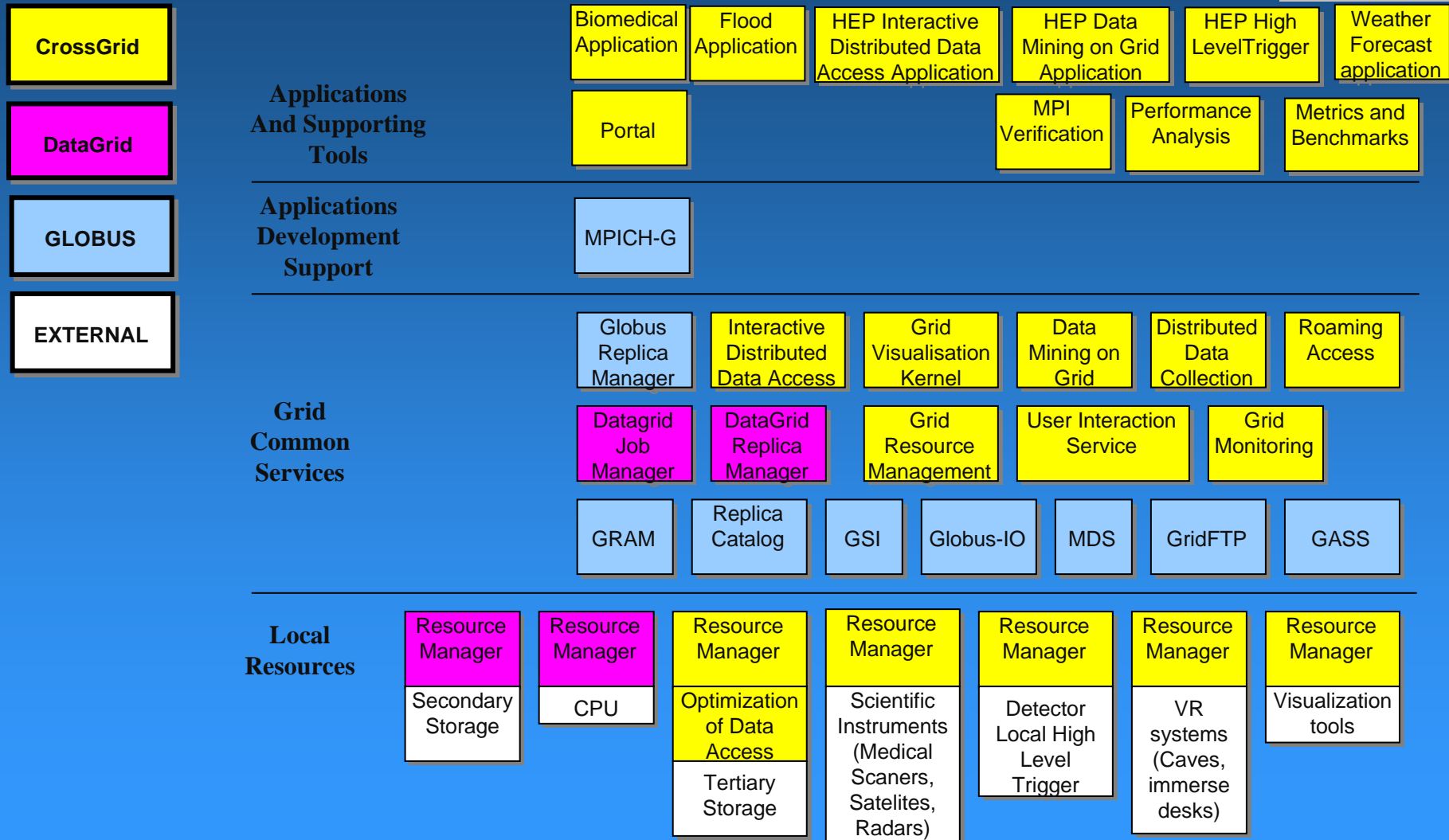
- Interactive Surgery
- Flood Management
- HEP Interactive Distributed Data Access
- HEP Data Mining on Grid
- HEP High LevelTrigger
- Weather Forecasting



# CrossGrid Architecture



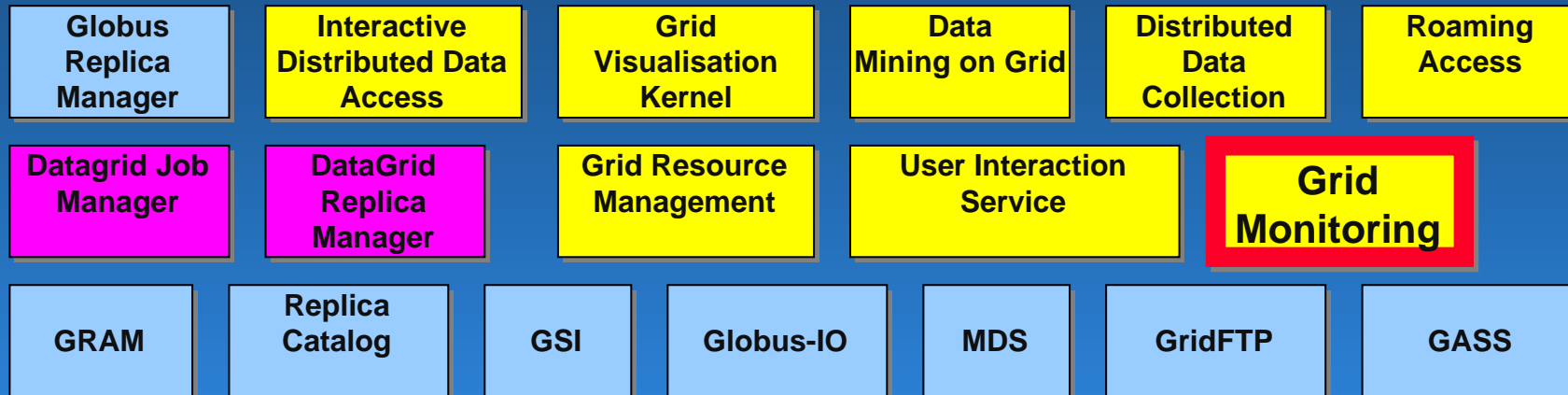
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# Grid Services

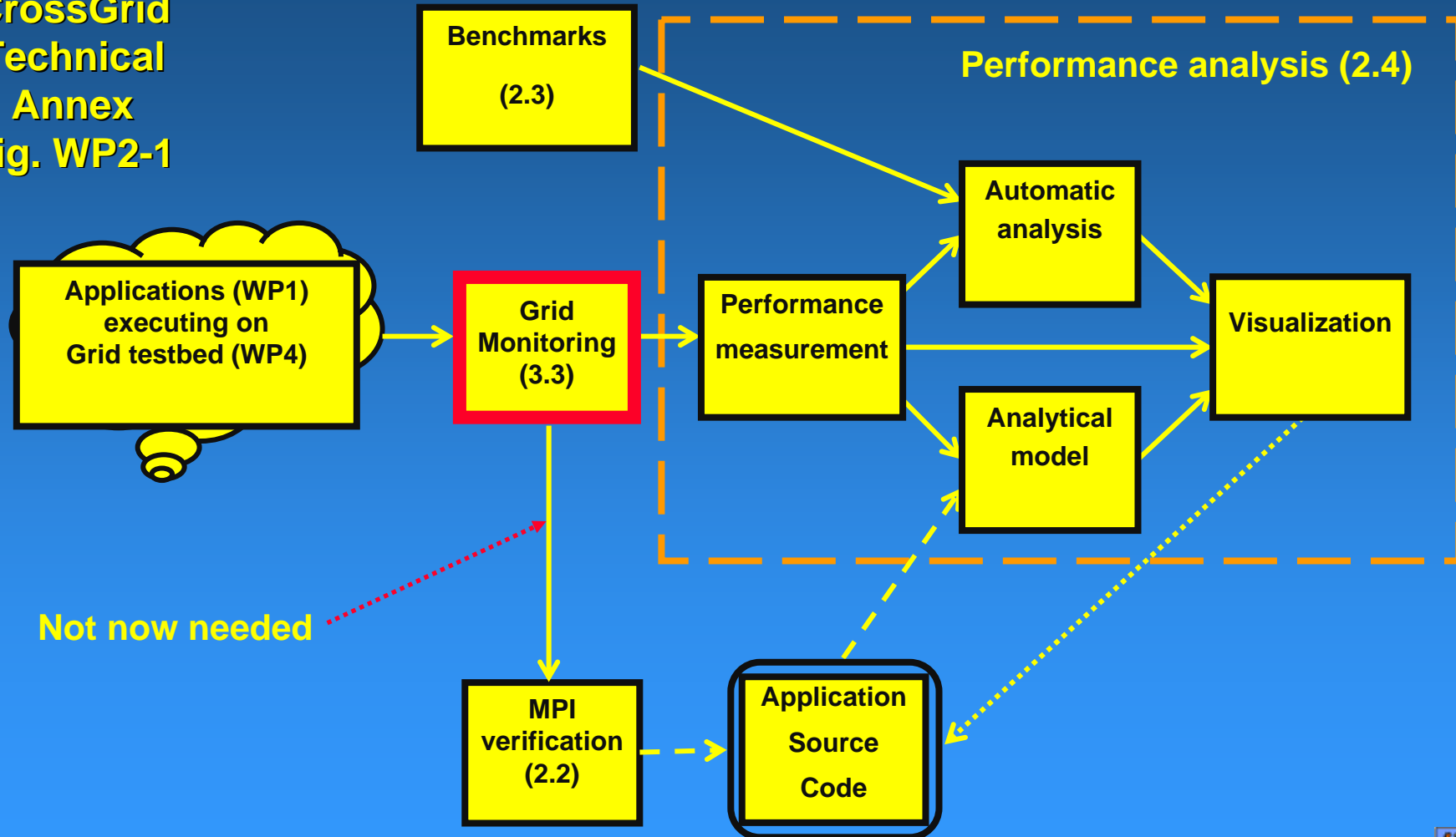


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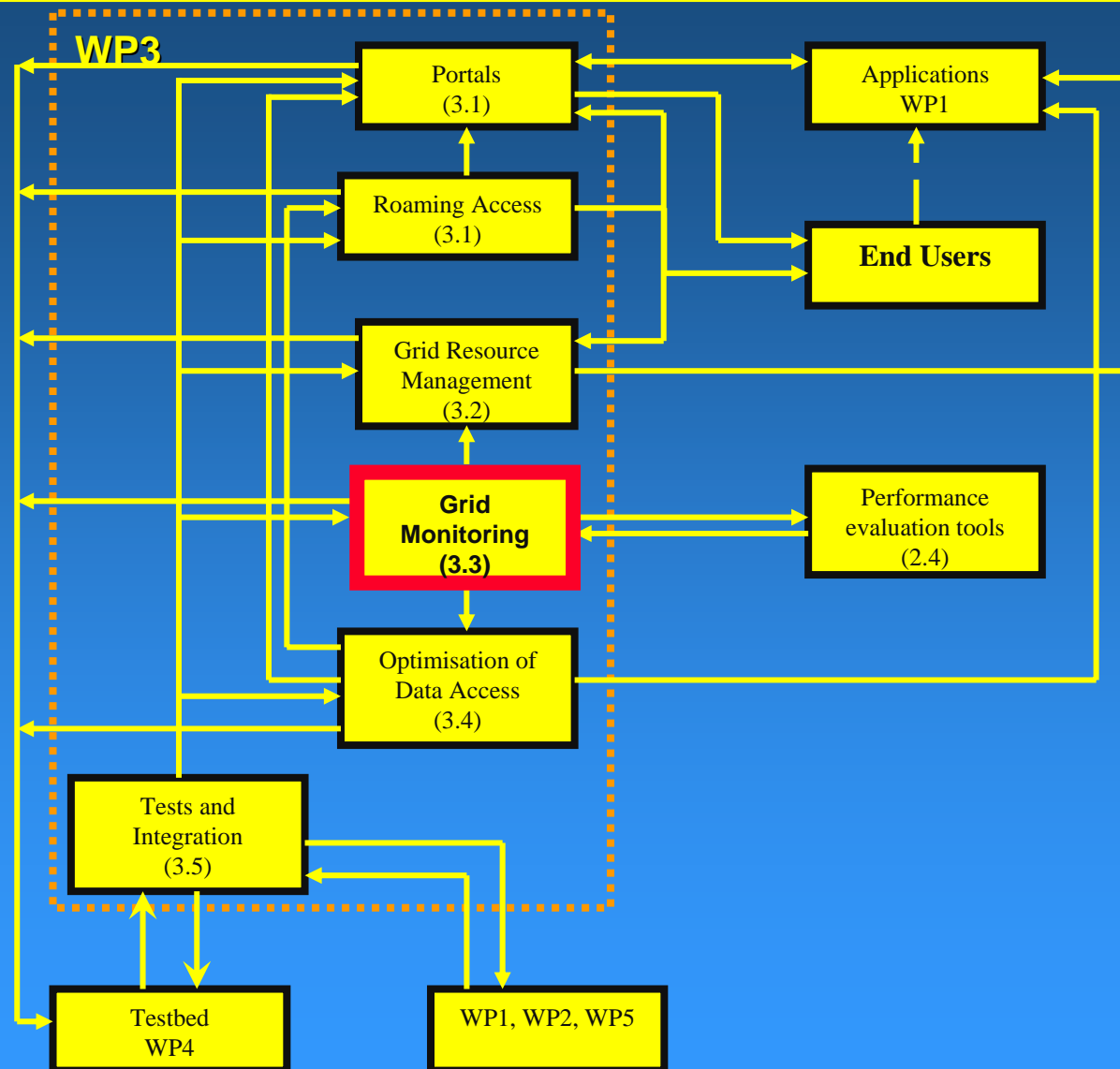
# CrossGrid WP2 Info Flows

CrossGrid  
Technical  
Annex  
Fig. WP2-1

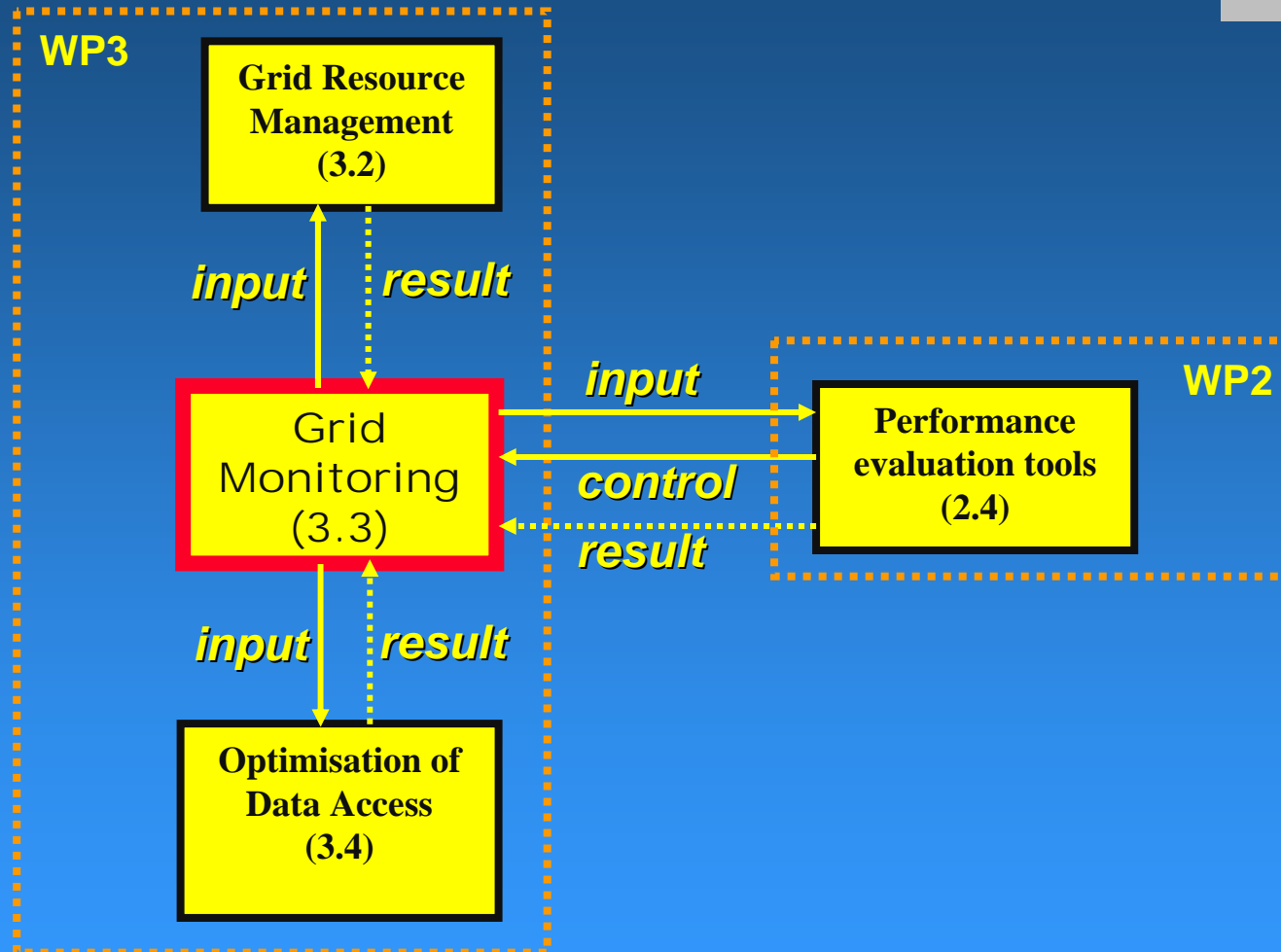


# CrossGrid WP3 Info Flows

CrossGrid  
Technical  
Annex  
Fig. WP3-1



# CrossGrid Task 3.3: External Info Flows



# CrossGrid Task 3.3: Subtasks

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## Task 3.3.1 (CYFRONET)

### Invasive Monitoring:

‘Autonomous monitoring system for on-line and automatic performance analysis ‘

## Task 3.3.2 (TCD)

### Non-invasive Monitoring:

‘SQL-query-based tool support and interfaces to Grid application programming environment’

## Task 3.3.3 (ICM)

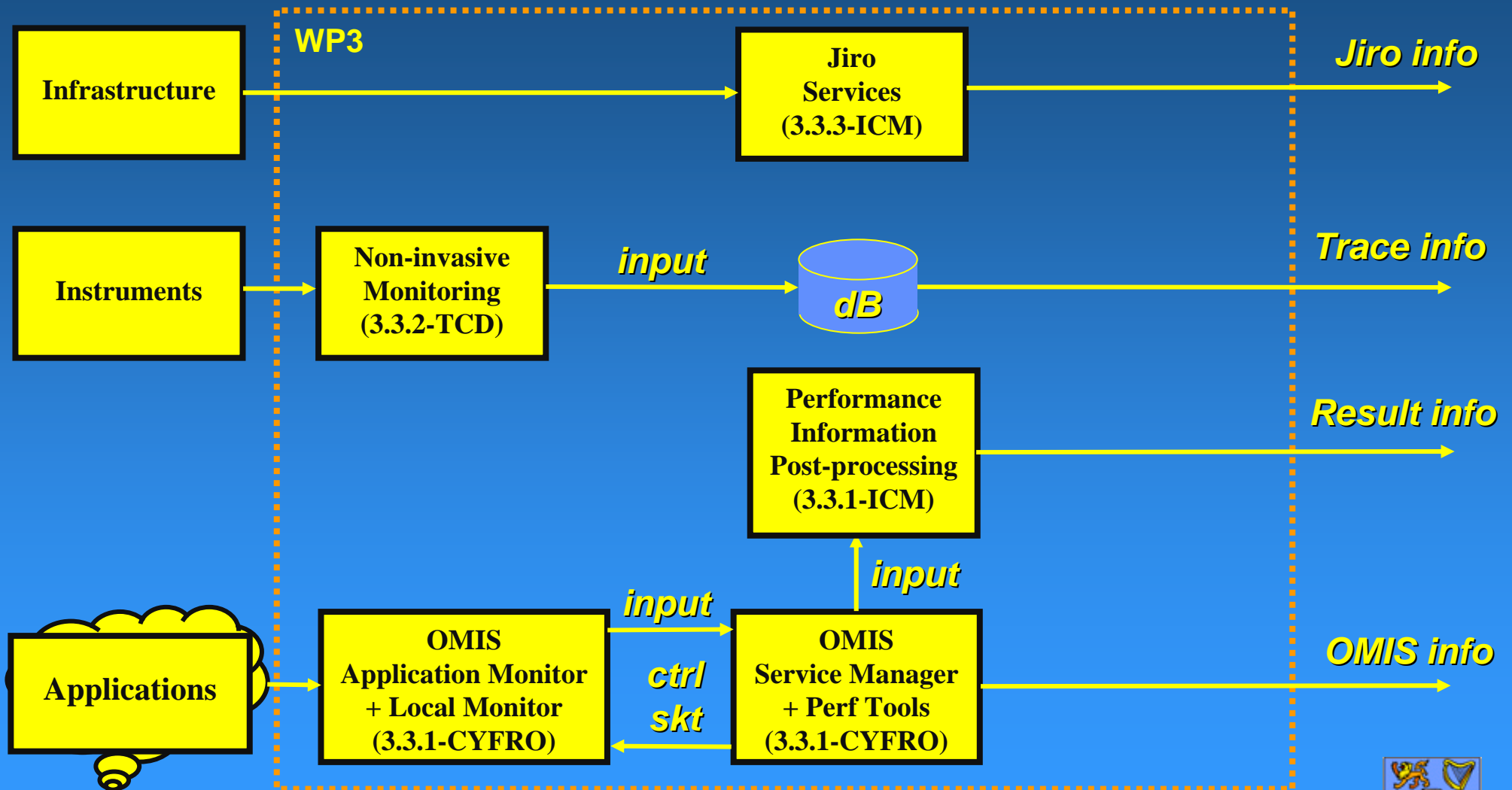
### Jiro:

‘Jiro-based services for Grid infrastructure monitoring’





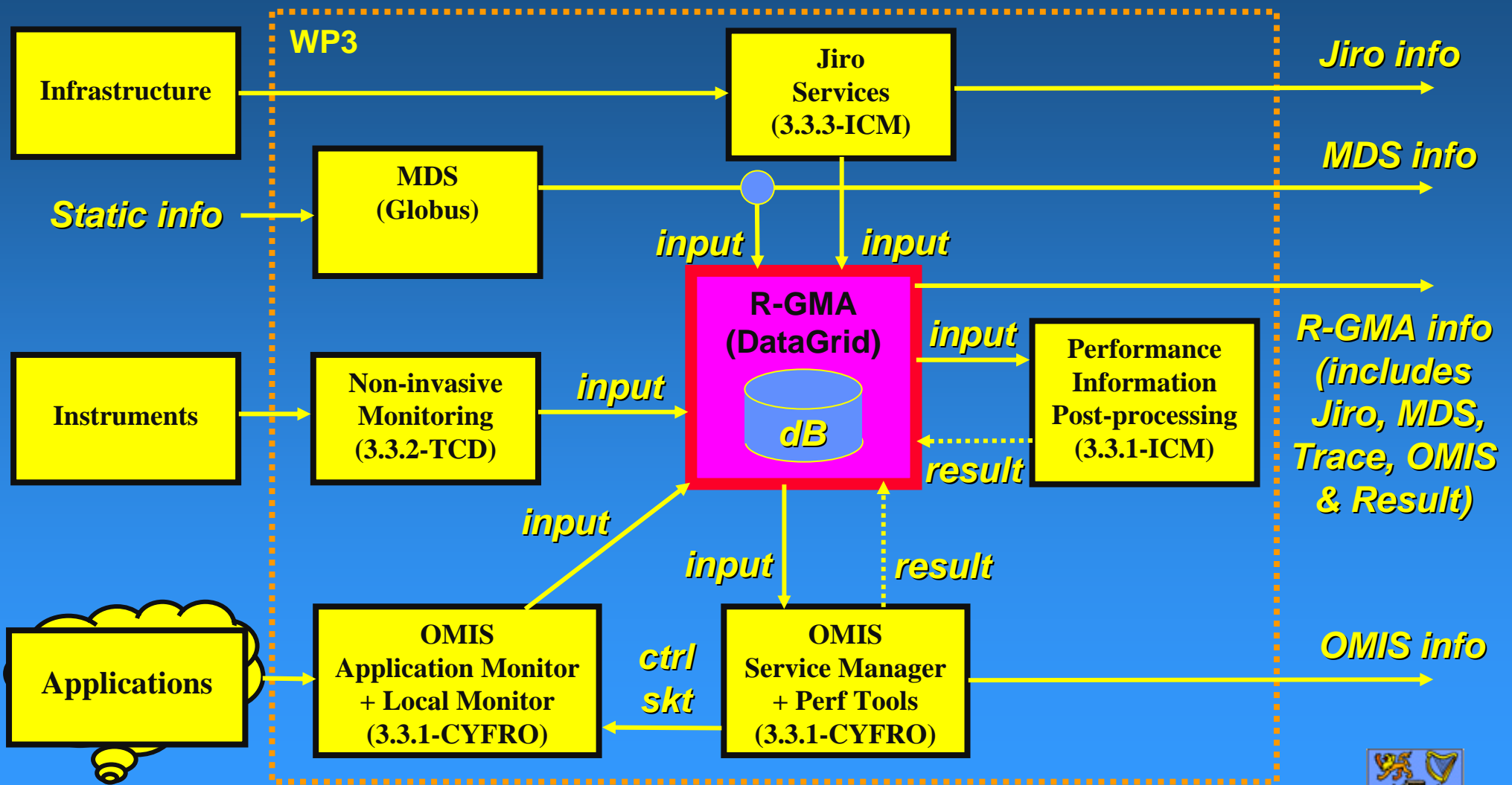
# CrossGrid Task 3.3: Internal Info Flows



# CrossGrid Task 3.3: Can it use R-GMA ?



crossgrid



# CrossGrid Task 3.3.1: Invasive Monitoring



## Task 3.3.1 (CYFRONET, Krakow, Poland)

### Invasive Monitoring:

‘Autonomous monitoring system for on-line and automatic performance analysis ‘

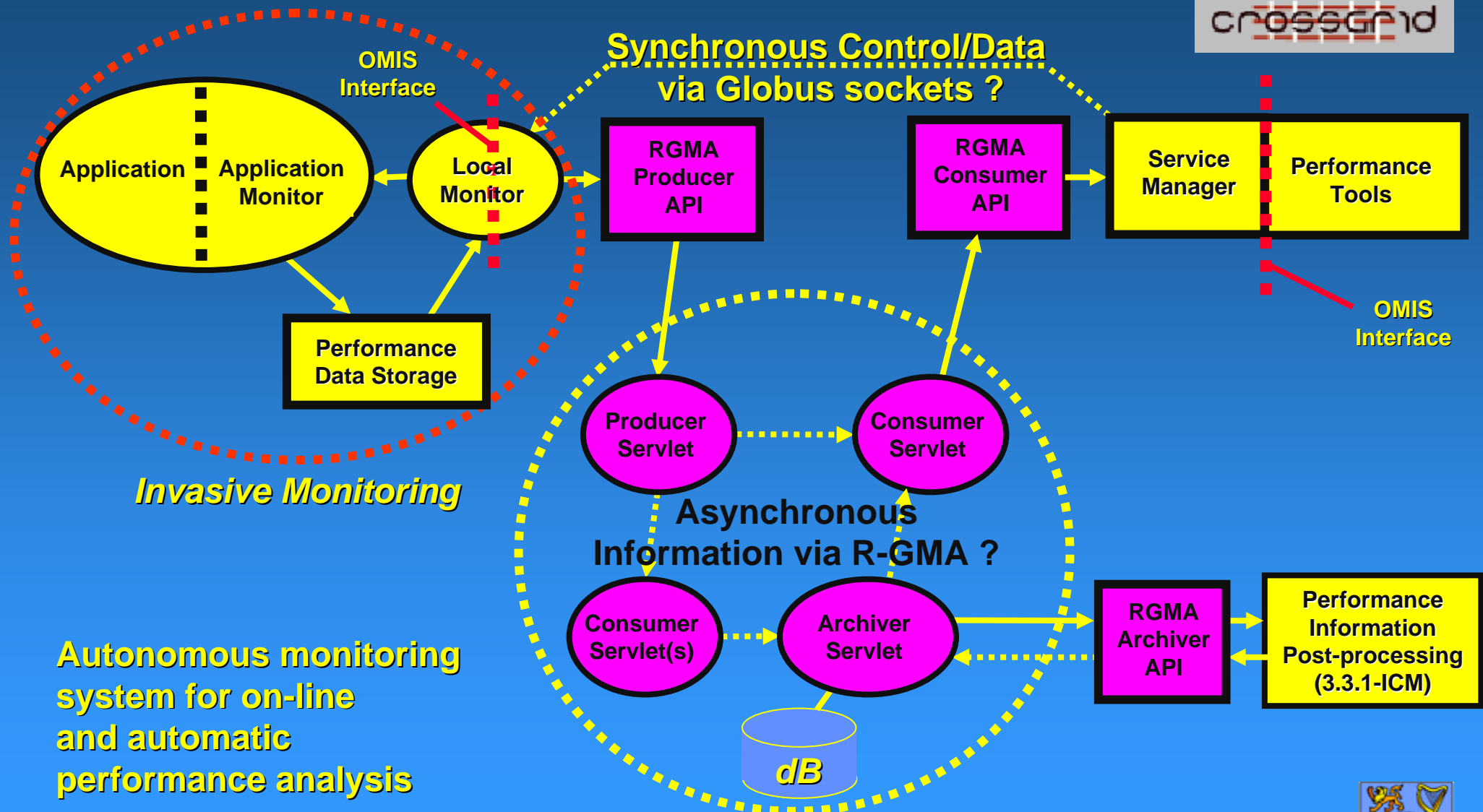
Derived from APART research

<http://www.fz-juelich.de/apart/>

For performance analysis of parallel programs



# CrossGrid Task 3.3.1: Invasive Monitoring



Autonomous monitoring system for on-line and automatic performance analysis



# CrossGrid Task 3.3.2: Non-invasive Monitoring

## Task 3.3.2 (Trinity College Dublin, Ireland)

### Non-invasive Monitoring:

‘SQL-query-based tool support and interfaces to Grid application programming environment’



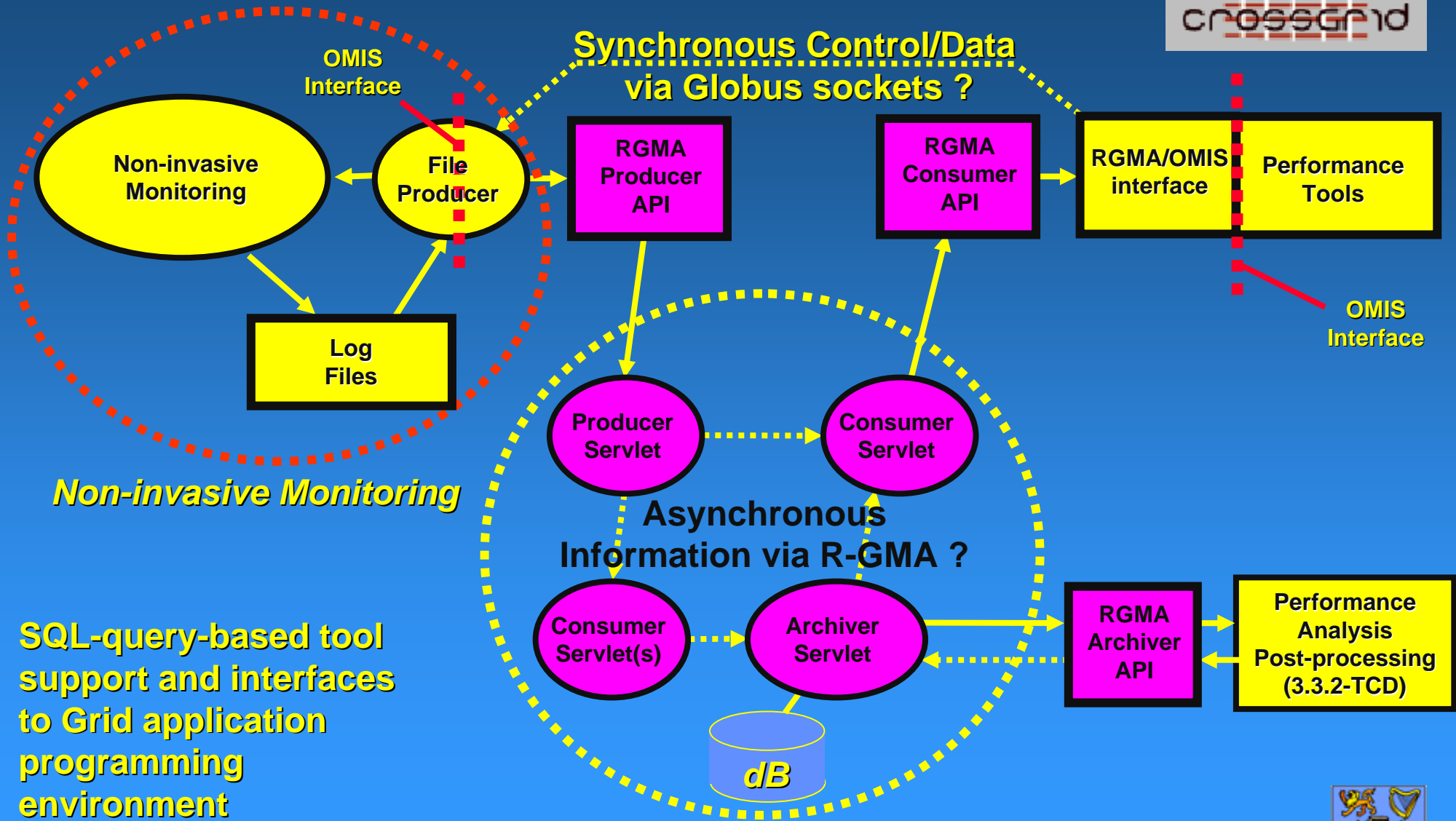
High-Speed Data Capture

Relational Trace Database

Bulk Database Import

# CrossGrid Task 3.3.2: Non-invasive Monitoring

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SQL-query-based tool support and interfaces to Grid application programming environment



# CrossGrid Task 3.3.3: Jiro Monitoring



## Task 3.3.3 (ICM, University of Warsaw)

### Jiro:

‘Jiro-based services for Grid infrastructure monitoring’

New technology

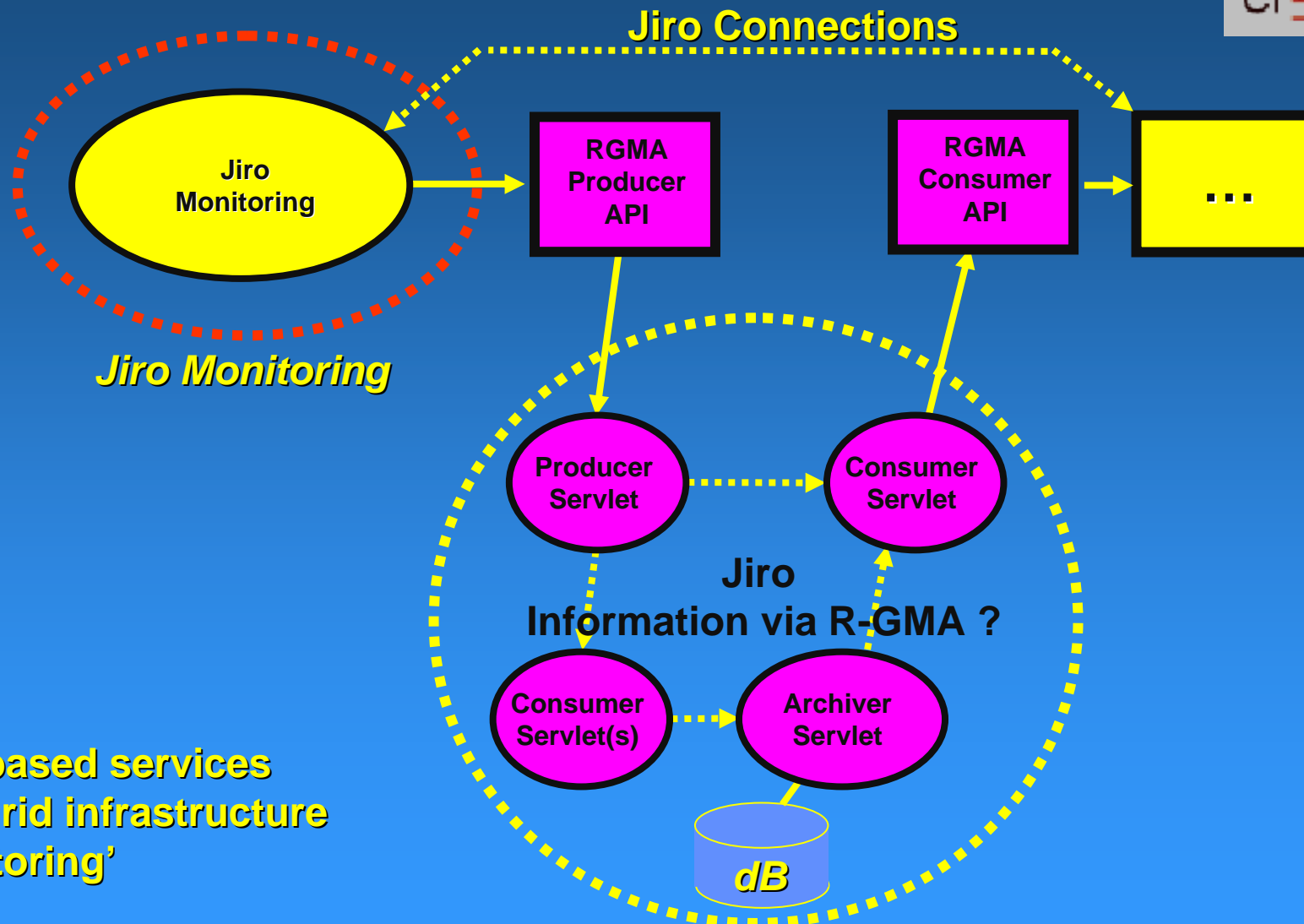
<http://www.jiro.com/>

For distributed resource management

Part of ‘Federated Management Architecture’



# CrossGrid Task 3.3.3: Jiro Monitoring



Jiro-based services  
for Grid infrastructure  
monitoring'





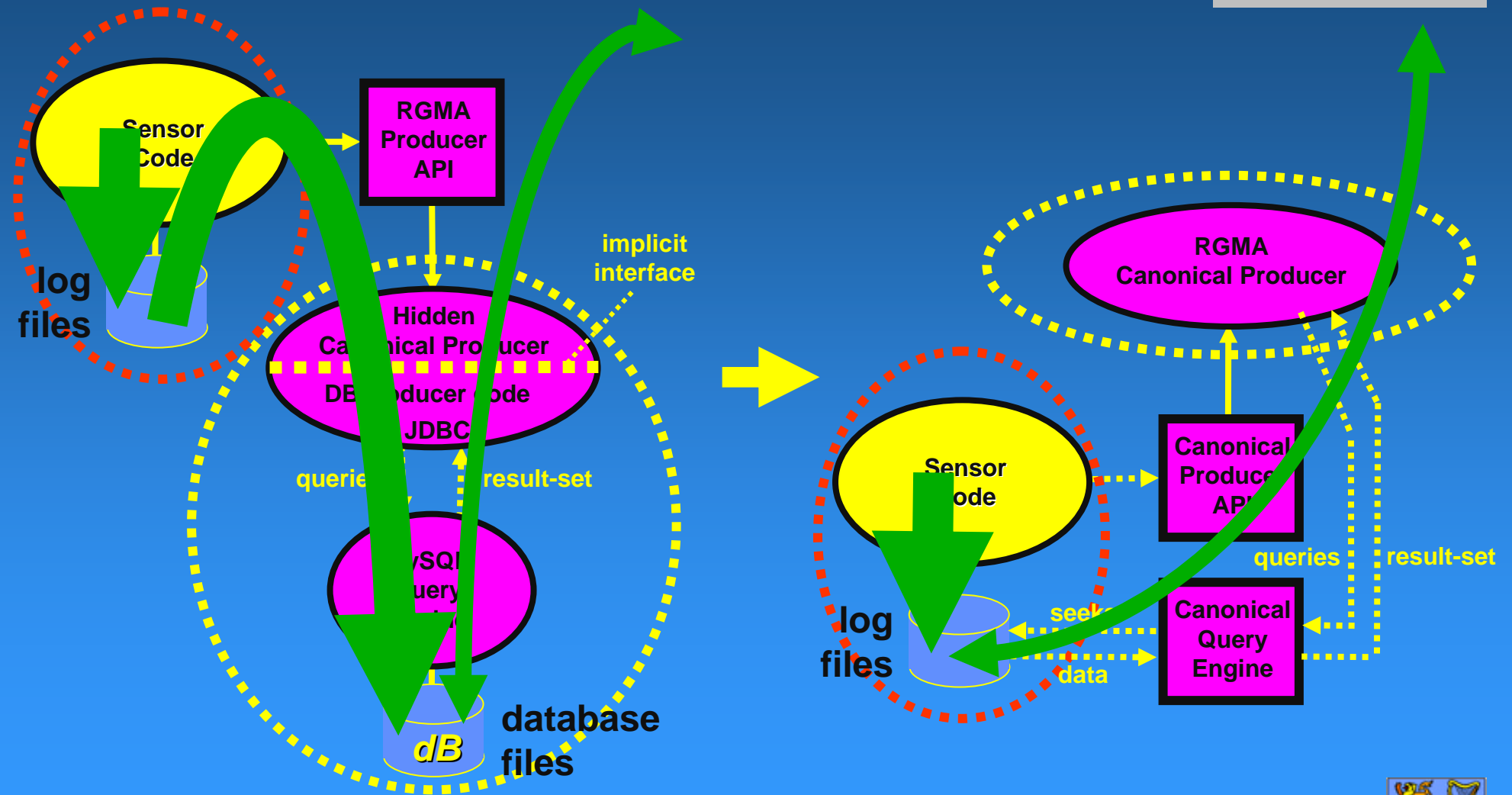
# Problems with R-GMA:

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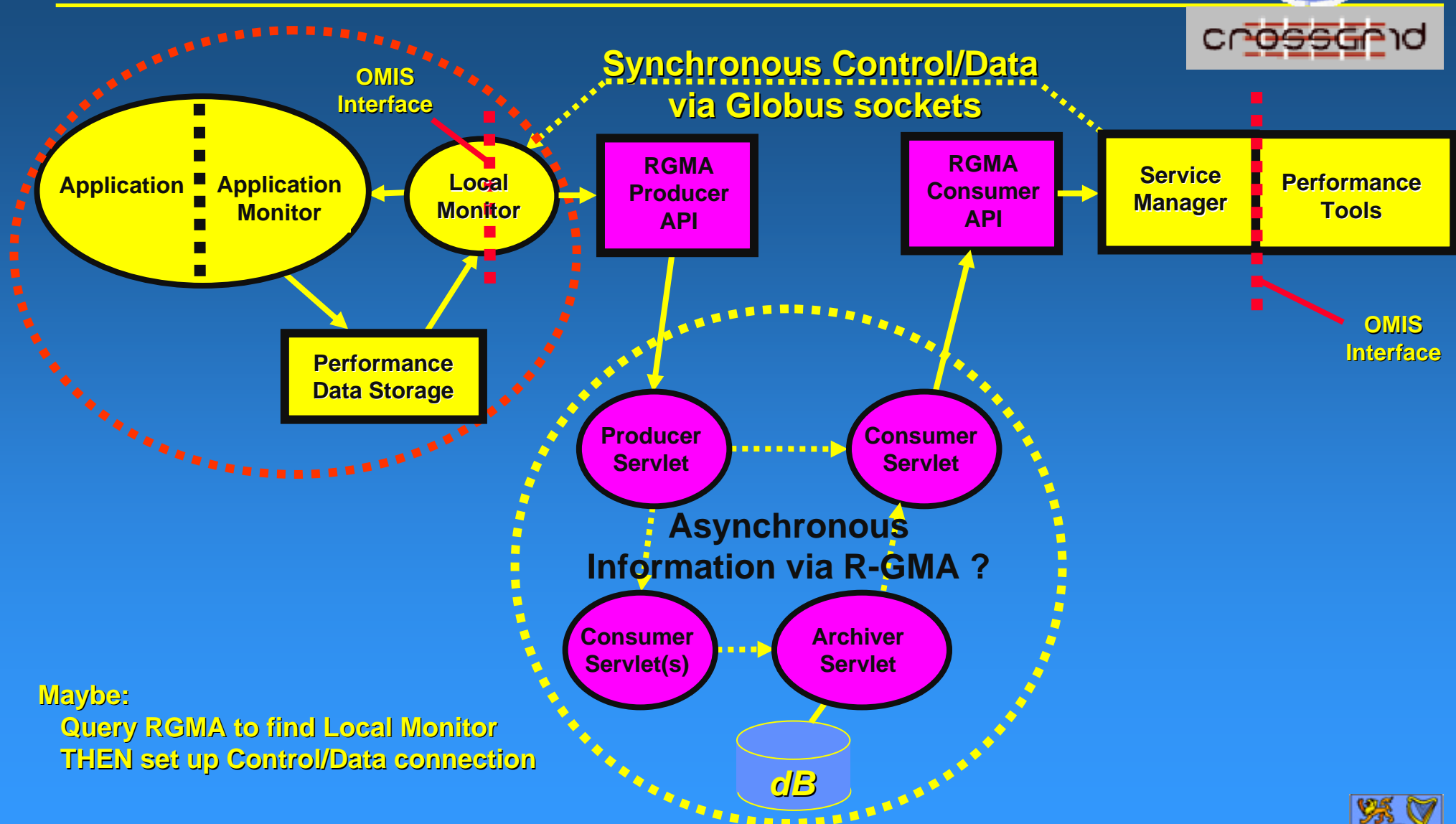
- 1. Sensor data MUST be pushed to Producer servlet**  
e.g. for debugging, queries may focus on small section of logfiles, yet complete multi-GB logfiles must be move to Producer servlet
- 2. Each query MUST instantiate new objects & connections**  
e.g. when debugging, have constant interaction with same producer, yet each query requires fresh instantiation of Consumer servlet + http connections



# Problem 1:



# Problem 2:



Maybe:  
 Query RGMA to find Local Monitor  
 THEN set up Control/Data connection



# CrossGrid Task 3.3

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**THE END**

