



Grid Service Monitoring Working Group

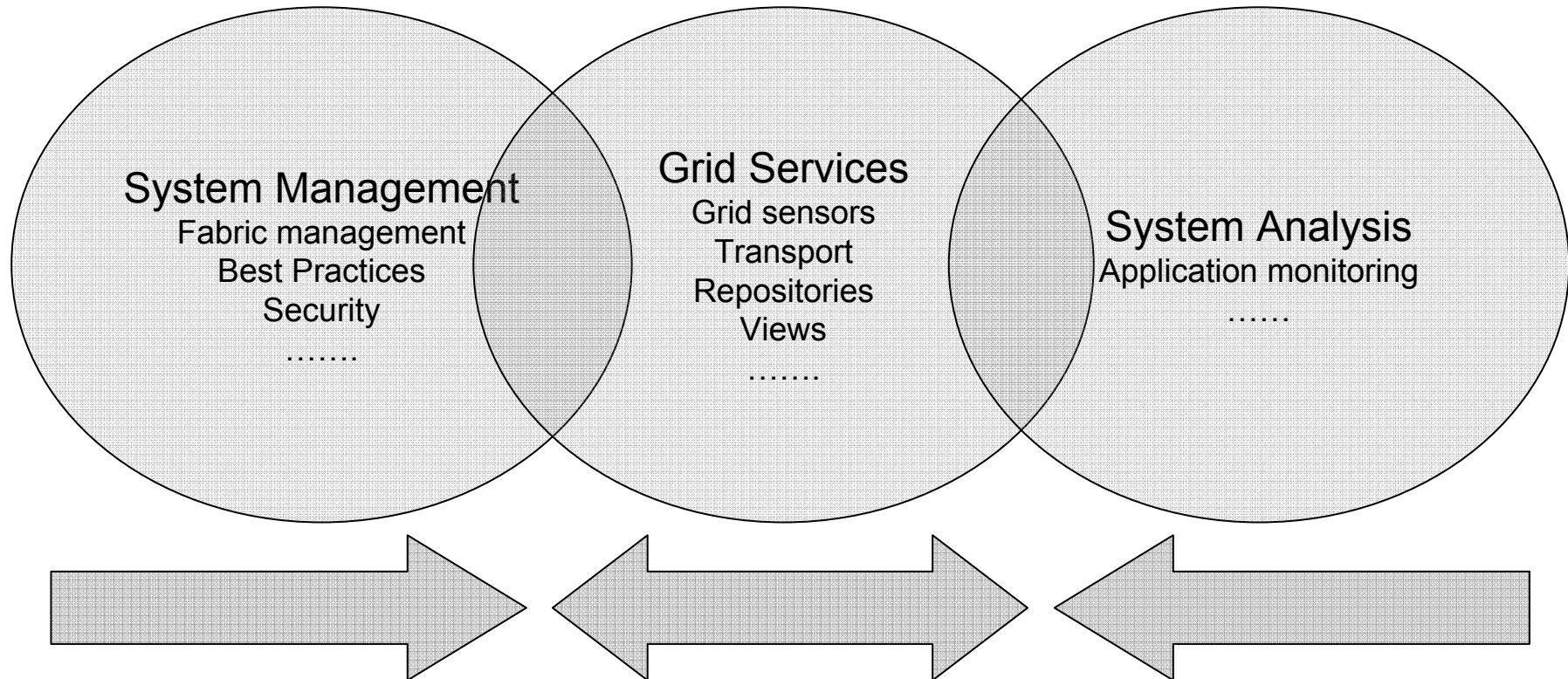
Monitoring WG BOF, January
2007

James Casey/Ian Neilson



WLCG Monitoring Working Groups

- 3 groups proposed by Ian Bird [LCG-MB, Oct 06](#).
 - *Goal to improve the reliability of the grid*





Grid Services Monitoring WG

- Mandate

- “....to help improve the reliability of the grid infrastructure....”
- “.... provide stakeholders with views of the infrastructure allowing them to understand the current and historical status of the service. ...”



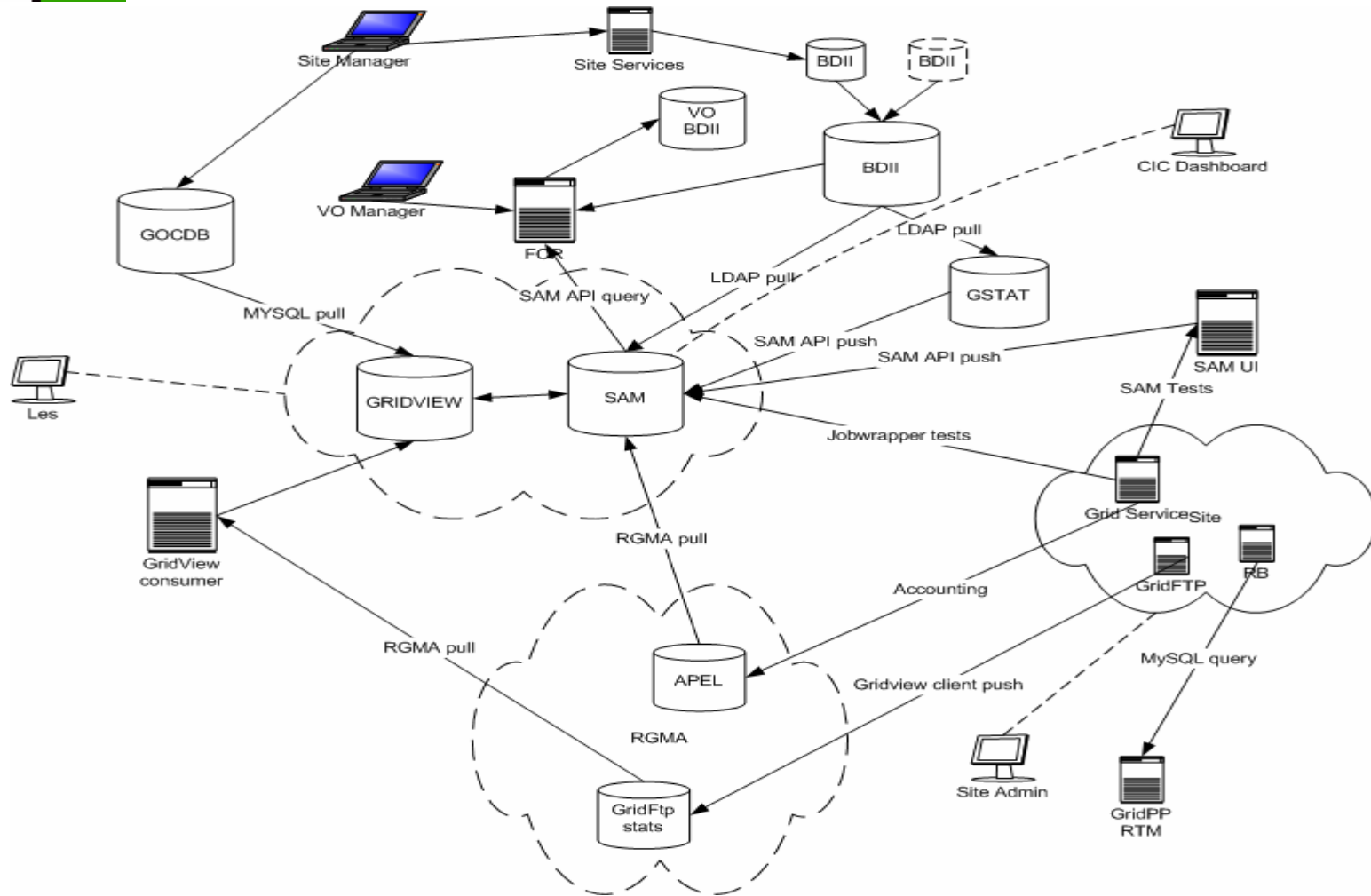
Grid Services Monitoring WG

- Mandate

- to develop more monitoring tools
 - *unless a specific need is identified*
- to replace existing fabric management systems



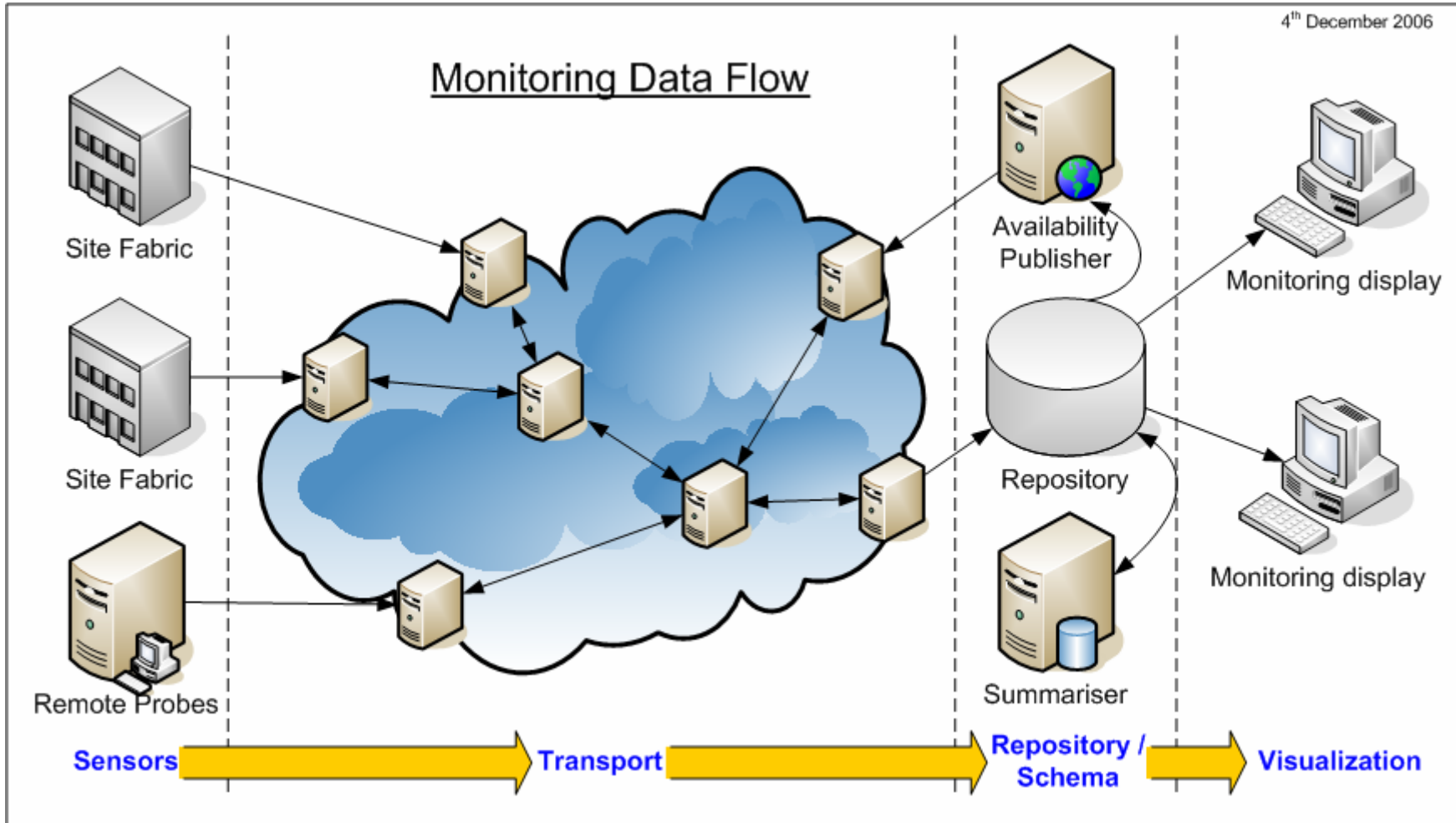
Current State



Monitoring BOF, 23rd
Jan 2007



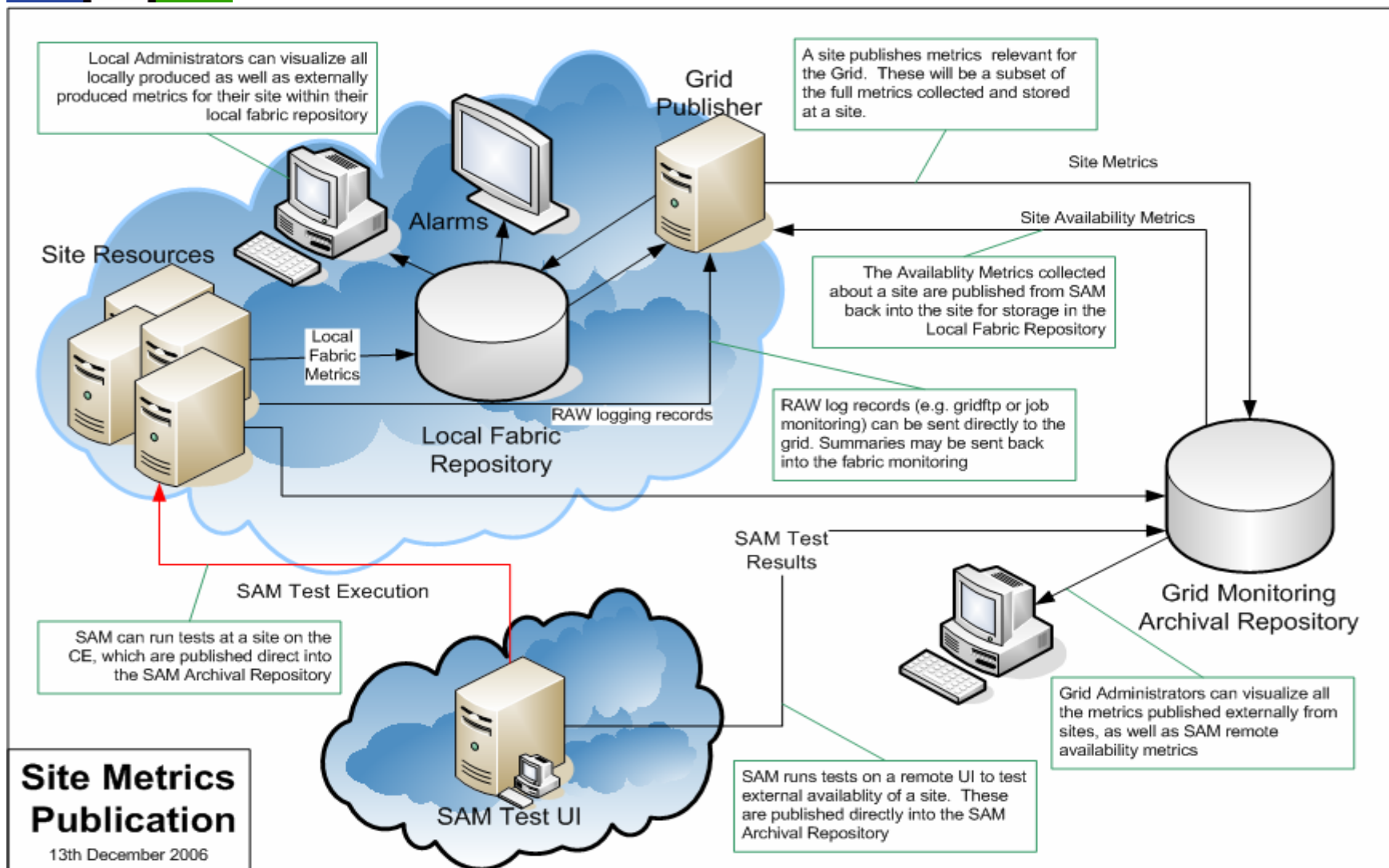
Monitoring Data Flow



Monitoring BOF, 23rd
Jan 2007



Site Metrics Publication





Immediate Tasks

- “What do you have and what is needed?”
 - questionnaire to site administrators (Dec 06)
- Per-service sensor definition
 - Plain english
 - Sensor ‘architecture’
- Characterise monitoring data traffic
 - → transport requirements
- Repository schema
 - Understand relationship between multiple DB’s
 - Include security requirements
- Describe stakeholder “views”
 - Site, Service, VO, Management



WG Structure

- 2 coordinators
- “core” team of ~10 across domains
- 4 domain sub-groups
 - Sensors
 - Transport
 - Repository
 - Views



Timeline

- Now (Dec 06)
 - Background research
 - Establish core group
- Feb 07
 - Establish sub-groups
 - Agree interfaces and workplan
- April/May 07
 - Prototype instrumented services to local FM
 - Remote metrics to local FM
- end-Summer 07
 - Demonstrated improvement in reliability of grid



Grid Services Monitoring WG Site Survey

Results to 17 Jan 2007



Questionnaire

- 1) What local fabric monitoring system do you use?:
 - a) GridICE/Lemon
 - b) Nagios
 - c) Other (please specify)
 - d) None.
- 2) Which Grid level sensors do you use?:
 - a) which services are monitored
 - b) what values/metrics are measured
- 3) Who provided the sensors?
- 4) Is your fabric monitoring part of any regional/off-site monitoring framework?
 - a) who are you linked with
 - b) generally, how is this implemented
- 5) When you learn that something is wrong with the services at your site, what is the most frequent way you are informed?
 - a) looking in the local fabric or Grid monitoring system
 - b) getting a trouble ticket
 - c) getting a mail/telephone call from VOs/users
 - d) other (please specify)..
- 6) Briefly describe what you see as your top 3 monitoring priorities to help improve your service reliability/availability



Summary of Returns 1

- 34 responses analysed up to 17 Jan 2007
 - Not so easy to summarise sometimes so numbers don't always add up!
- Local monitoring frameworks in use
 - Sites using multiple frameworks
 - a) Nagios: 22
 - b) GridICE/Lemon: 10
 - c) Other: =majority as (a or b) + Ganglia: 13
 - d) None : 3
- Grid Services Monitored
 - 12 sites monitoring some Grid services
 - Most commonly CE+SE
 - Non-Grid default Nagios sensors in use
 - Sensors provided by *AP, CE, IT ROCS*



Summary of Returns 2

- How problems get reported
 - Most common from local monitoring : 21
 - Support Ticket : 10
 - Looking at SAM/GSTAT : 4
 - Direct from User/VO : 3
- Sites reported being in regional infrastructures : 10
 - Not clear from the reports how these are implemented.
 - Regions (= as for sensors provided) *AP, CE, IT ROCS*



Priorities

- Priorities
 - Quite difficult to summarise but keywords are....
 - single view - common interface - global view
 - unified tools - repository
 - more/deeper diagnostics
 - more flexible – alarm levels
 - improved/reliable/redundant SAM
 - hardware/network monitoring
 - Also non-monitoring replies
 - Working/debugged middleware
 - Reliable hardware
 - Experience/knowledge transfer