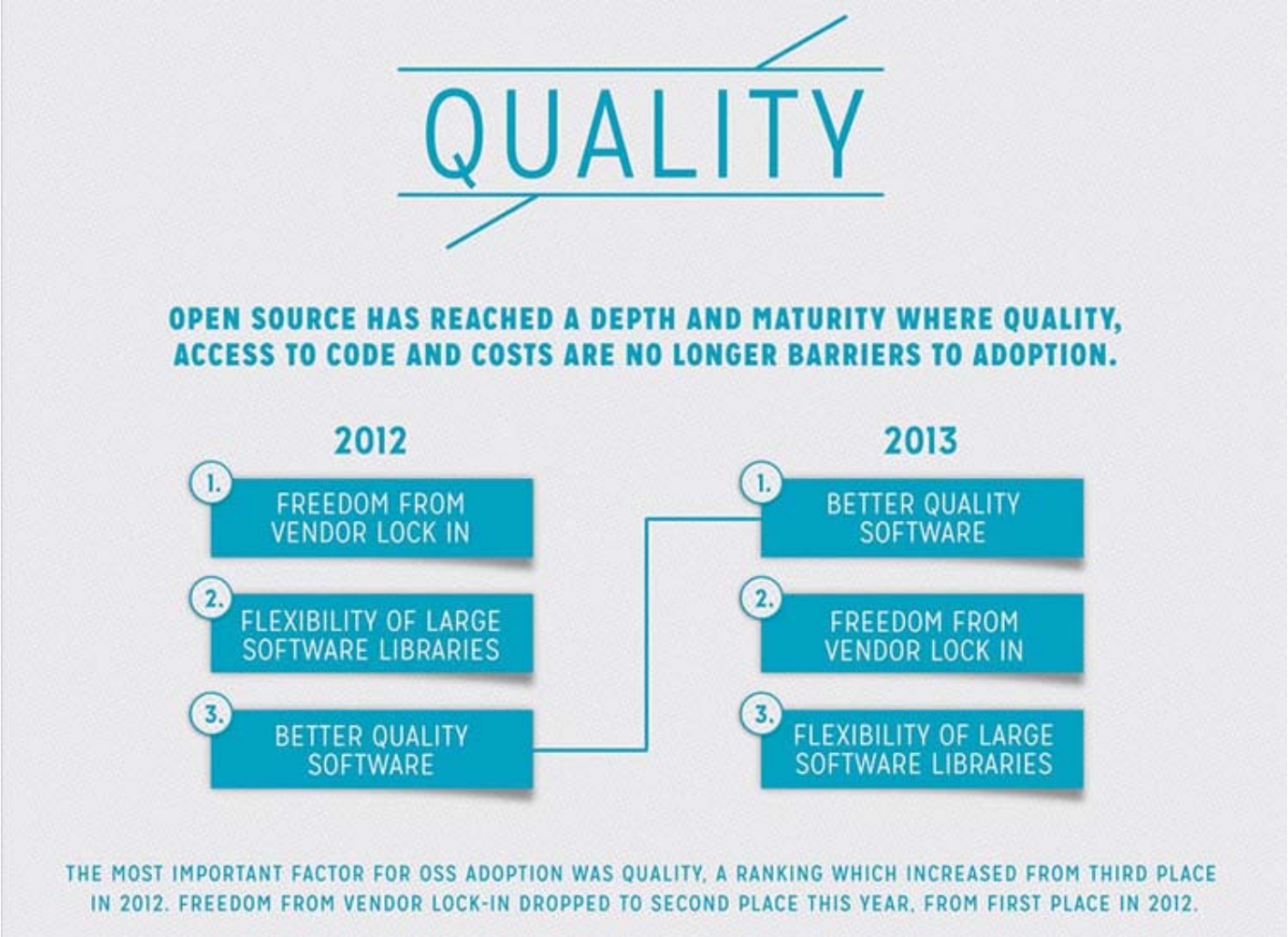
Phasor Data Observations

- Change control / configuration processes
- Data Quality / Conditioning
- Speed of historical data extracts
- Loading of internal networks
- Exchange of configuration data
- Integration of phasor data with internal systems
- Exchange of analytic / visualization information

Building an Open Source Community

Value of OSS



Source: Black Duck Software. *The 2013 Future of Open Source Software Survey Results*

GRID PROTECTION ALLIANCE

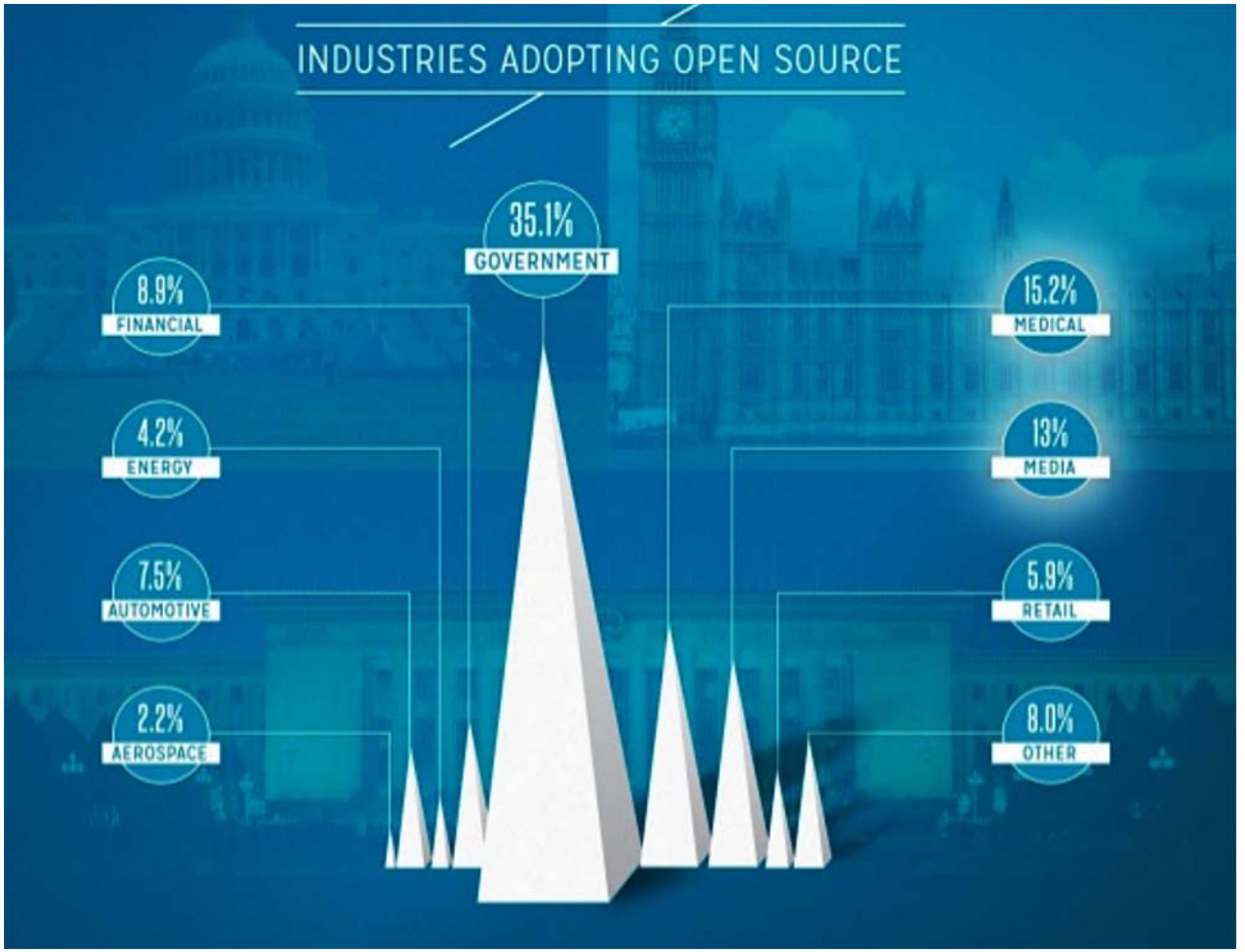
Energy On the Low-Side of Use

8.9% Financial

4.2% Energy

7.5% Automotive

2.2% Aerospace



15.2% Medical

13% Media

5.9% Retail

8.0% Other

Source: Black Duck Software. *The 2013 Future of Open Source Software Survey Results*

GRID PROTECTION ALLIANCE

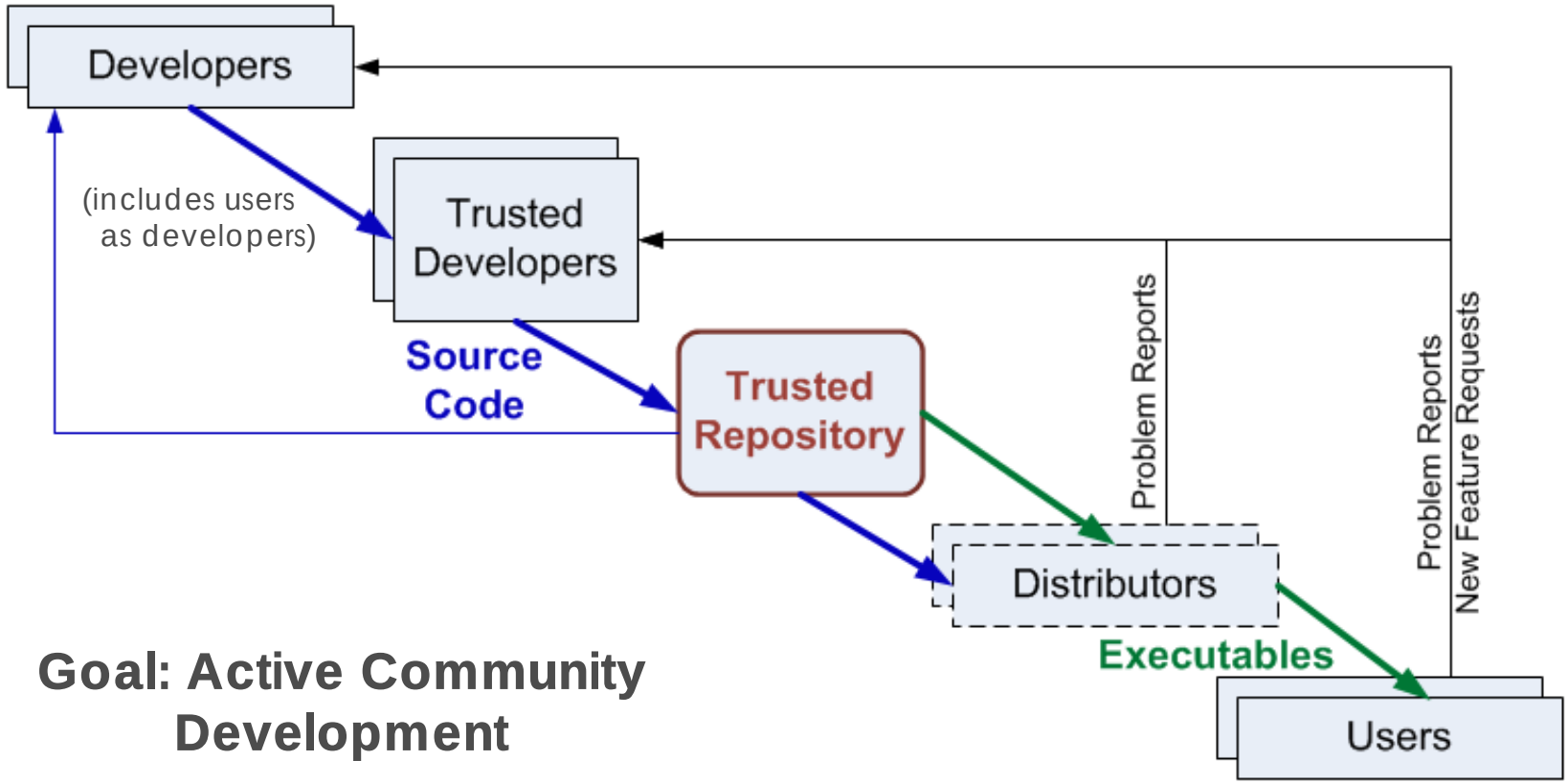
Is the OSS debate closed?

- 30% of participating corporations “make it easy” for employees to participate in OSS projects
- 50% see OSS as a means to retain competitive advantage
- 68% see OSS as a way to lower cost and improve efficiency
- 72% of those selecting OSS say that “many eyes” makes OSS more secure

Source: Black Duck Software. *The 2014 Future of Open Source Software Survey Results*

GRID PROTECTION ALLIANCE

OSS Development Model



Goal: Active Community Development

From David A. Wheeler Presentation, 11/4/2009

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Value of Community

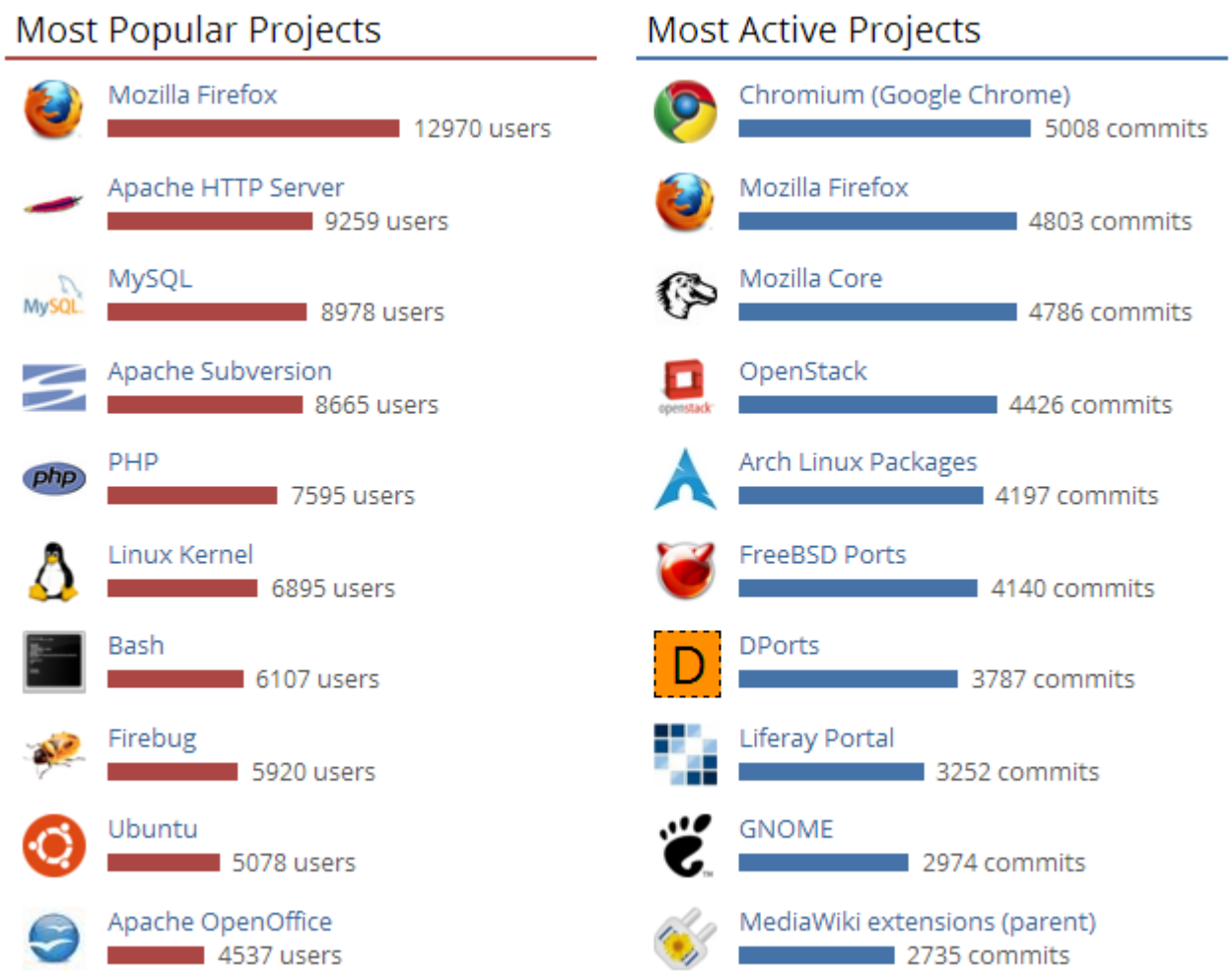
To OSS owner

- Improved Quality -- Larger test base
- Lower Cost – Shared cost of debugging / extension
- Improved Security – More eyes
- Corporate promotion

To Participant

- Lower cost
  - Develop high-quality solutions quickly
  - Shape overall project direction
  - Obtain support for implementation of extensions
- Professional Growth -- Improved inventory of techniques and skills

Ohloh Tracks ~650K OSS Projects



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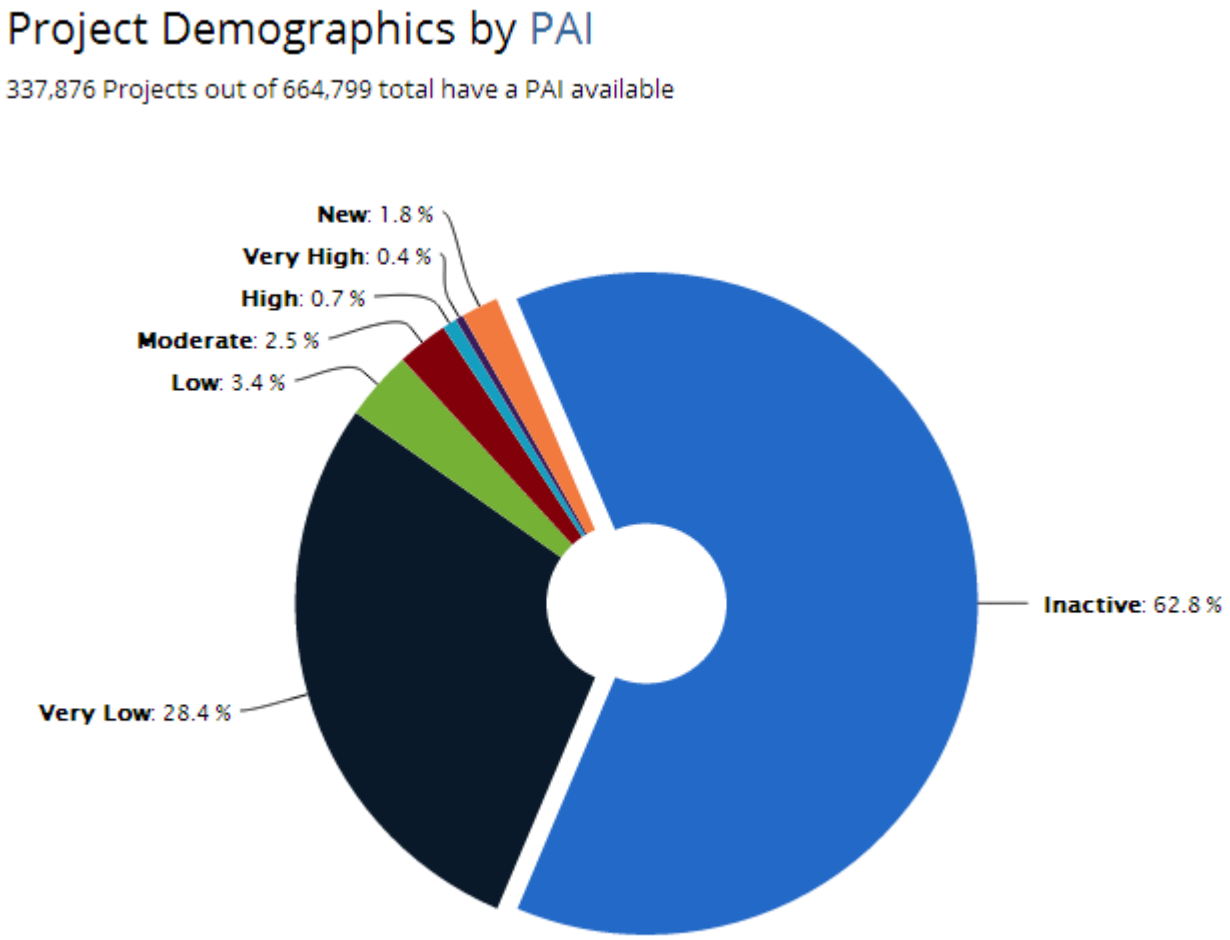
OSS Project Activity – 3.6% > Low



Source: Ohloh by Black Duck Software, July 2014

Grid Open Source Software Alliance

- **Focus**: Electric energy industry open source software
- **Business structure**: Not-for-profit corporation
- **Approach**: Public-private collaboration
- **Initial scope:** Defined with input from EPRI, NERC, NRECA, University of Illinois, DOE, PJM and a variety of electric energy stakeholders
- **Key stakeholders:** Utilities, electric entities, government agencies, universities, suppliers and international participants

GOSSA Value Add

- Guidelines
  Develop and maintain Grid OSS development and quality requirements
- Community Interaction
  Provide a forum for the grid community to collaborate, to identify the need for, and to develop and improve Grid OSS
- Grid OSS Inventory Awareness
  Maintenance of a virtual, one-stop shop for Grid OSS with regular updates provided to the GOSSA community
- Technology Transfer
  Support the distribution, utilization and integration of Grid OSS
- Technical Support Network Development
  Provide support to Grid OSS developers and users

EPRI is currently funding GOSSA to conduct a survey of the electric industry to determine level of OSS acceptance and barriers to industry community participation.

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