

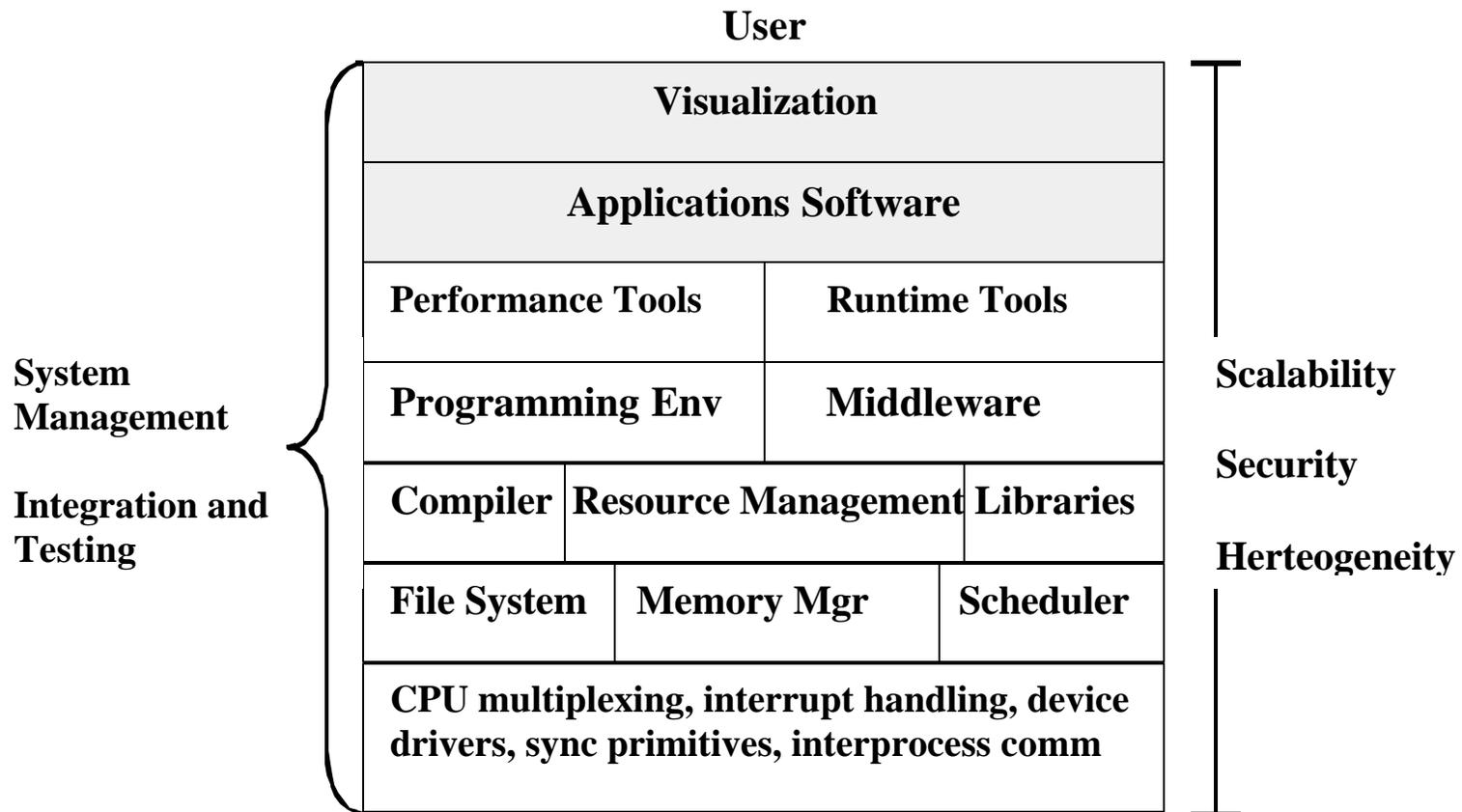
HPC Open Source Software

“Top 10 Reasons Why It Will Not Work”

José L. Muñoz
DOE-HQ

Just for the purpose of open discussion!!

HPC Software Layer Model



Adapted from: Distributed Operating System & Algorithms, Chow/Johnson

Open Source “Bad”

- ❖ [10] Must have detailed specifications from the various HW vendors
 - ◆ why would they cooperate? \$\$
- ❖ [9] Interfaces!!!! Standards!!!
 - ◆ Who is going to act as “definer” and “protector” of the interfaces?
- ❖ [8] Who is going to act as “the cop” (i.e. Torvalds)

Open Source “Bad”

- ❖ [7] We talk about “the open source license”... in reality there are several licenses
 - ◆ when conflicts arise... Lawyers
- ❖ [6] Who will fund such an effort?
 - ◆ how will it be MANAGED?
 - ◆ Will it break the open source model?

Open Source “Bad”

- ❖ [5] Must have access to resources
 - ◆ where are they going to come from?
 - MPP, Clusters, Clusters of SMPs, shared memory, UMA/NUMA, topologies, interconnects (yada, yada, yada)
 - remote access (BW issues), security, ...
- ❖ [4] Will not have “thousands of eyeballs” . . . 100s?
 - ◆ security and robustness implications

Open Source “Bad”

- ❖ [3] Do you really want the Federal government directing Open Source Software efforts?

Open Source "Bad"

- ❖ [2] Presumably we will take this Open Source approach because the commercial sector is not will or not able to meet our needs
 - ◆ why do we think we'd be successful?

1: Open Source "Bad"

- ❖ Ask yourself this question: Would you want to fly in an airplane whose complete flight system was developed using Open Source by the lowest bidder?
 - ◆ Whom do you sue when things go wrong? (assuming you're a survivor)