



OPEN PETASCALE LIBRARIES



The Open-Source Community for Supercomputer Collaboration

Advancing the development
of numerical software for
the new generation of
highly parallel computers

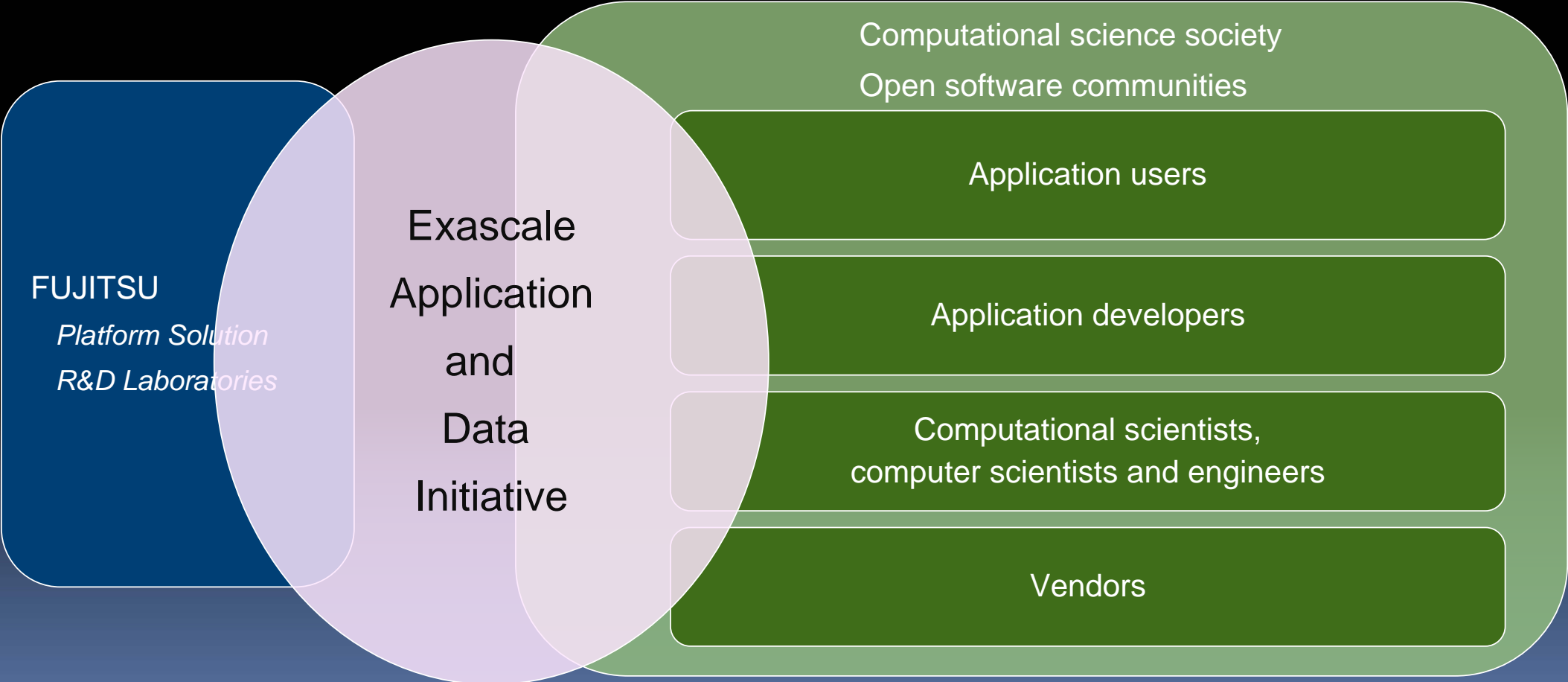


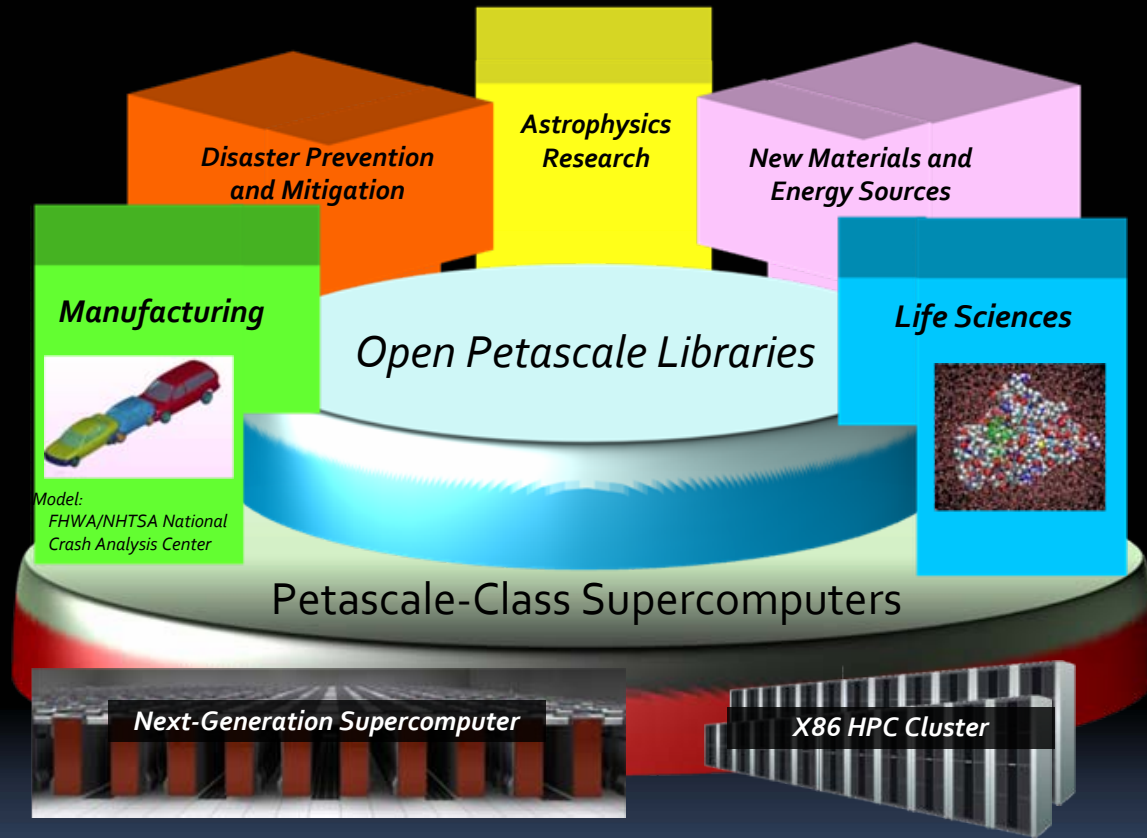


An open project...

- **Open information exchange**
- **Open collaboration**
- **Open-source software**

Part of Fujitsu's Exascale Application and Data Initiative





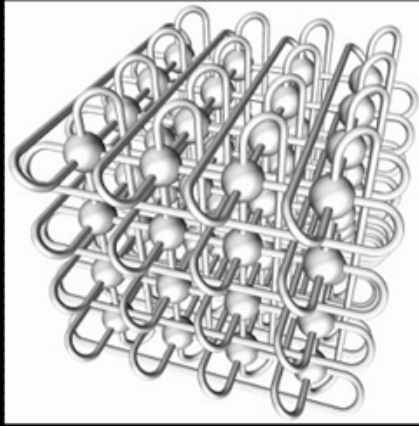
Providing a software platform to accelerate applications running on massively parallel multicore supercomputers

A global collaboration...



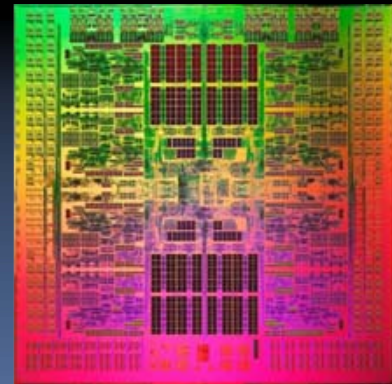
...contributing to the computational science community

Employing a hybrid programming model



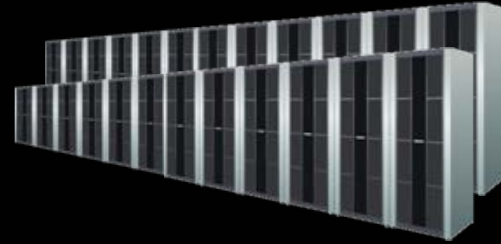
Message passing between nodes

Thread parallelism within a node

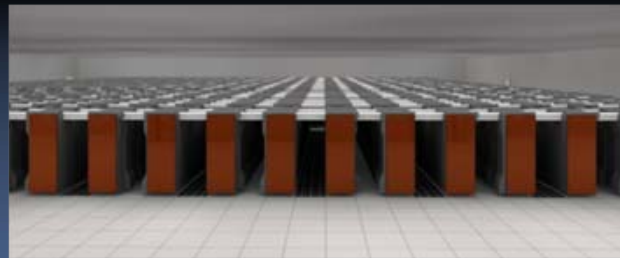


Generic software

For platforms ranging from
x86 clusters...



...to the Next-Generation
“K computer”



Evolving to tackle post-petascale issues...

Algorithms that are

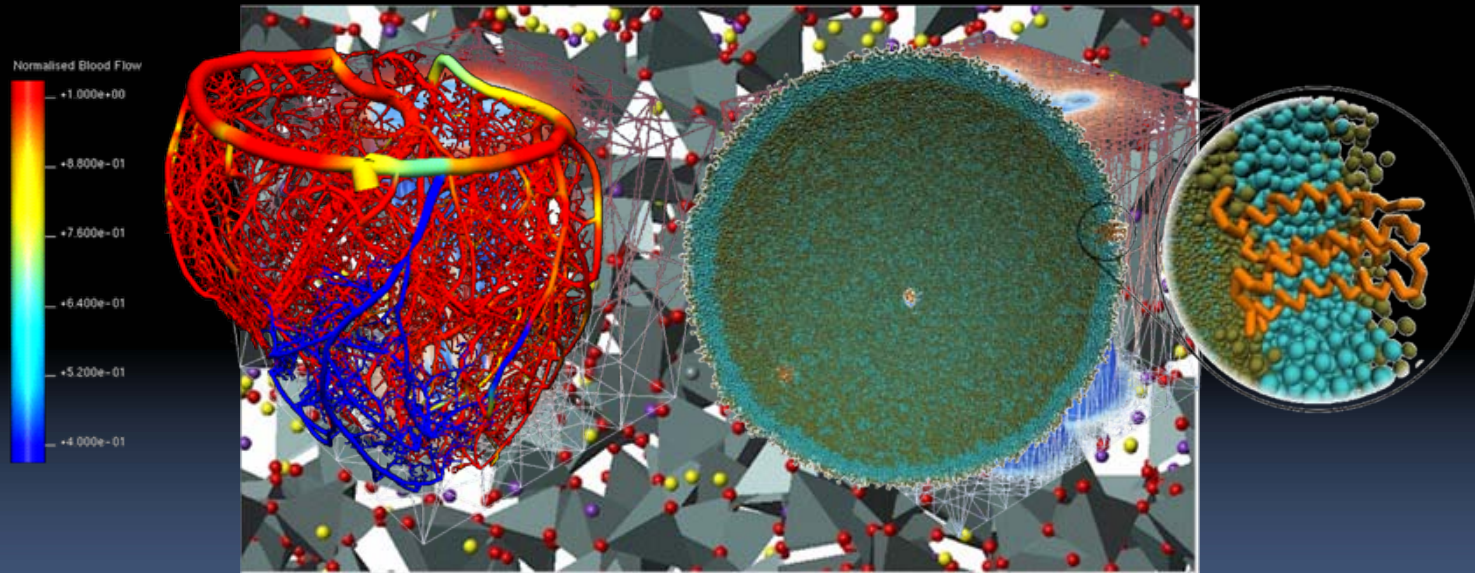
- Energy efficient
- Fault tolerant
- Highly scalable

...contributing to international software development efforts



Contributing to many application areas

New materials
Life sciences



Application driven...

- Emerging methods for dense linear algebra
- Adaptive meshing
- Iterative sparse solvers
- Fast Fourier transforms
- Scalable random number generators
- Automatic code generation and auto-tuning

Dr Kimihiko Hirao

Director of the RIKEN Advanced Institute for
Computational Science:



“Science in the 21st century needs to contribute to the sustainability of human society and produce technologies that support individuals. Supercomputing today is an invaluable foundation for advancing science and technology, and the scientific and technological achievements and knowledge gained through supercomputing will benefit humanity on many fronts. International collaboration is also increasingly important. This project follows this direction, and we aim to participate actively and produce meaningful results.”

Professor Jack Dongarra
The University of Tennessee:

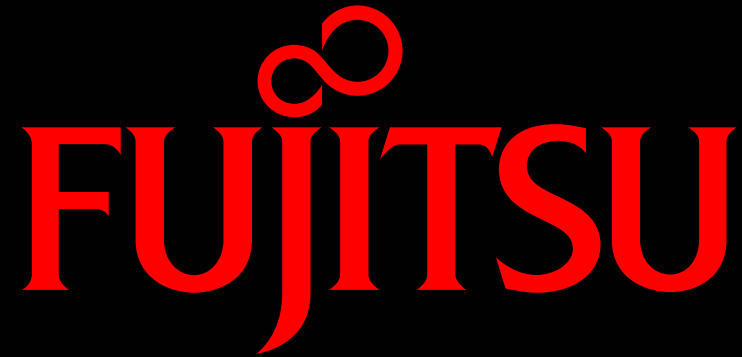


“The OPL project is an important step in the right direction. Open software initiatives like this succeed at developing high-quality, standardised software and building new partnerships. Fujitsu’s initiatives should be recognised as a significant advancement in the development process of petascale software and, more importantly, in collaborative communities to facilitate this development.”

For more information...

www.openpetascale.org



The Fujitsu logo is centered in the upper half of the image. It features a red infinity symbol positioned above the letter 'J' in the word 'FUJITSU'. The word 'FUJITSU' is rendered in a bold, red, serif typeface. The background is a dark blue gradient that transitions from black at the top to a medium blue at the bottom.

shaping tomorrow with you