

High Performance Computing at SGI

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Top Customer Challenges

1. Power

“I have a power limit of 4.5 Megawatts”

2. Data

“Data has become too large to move”

3. Architectures

“What should my next machine be: CPU, GPU, PHI?”

Scale Out – SGI ICE XA

- 288 cpus per Rack
- Warm Water Cooling
- CPU, GPU, PHI blades
- Power Management



NASA Pleiades



Total Pangea



NCAR Cheyenne



Scale Up - SGI UV

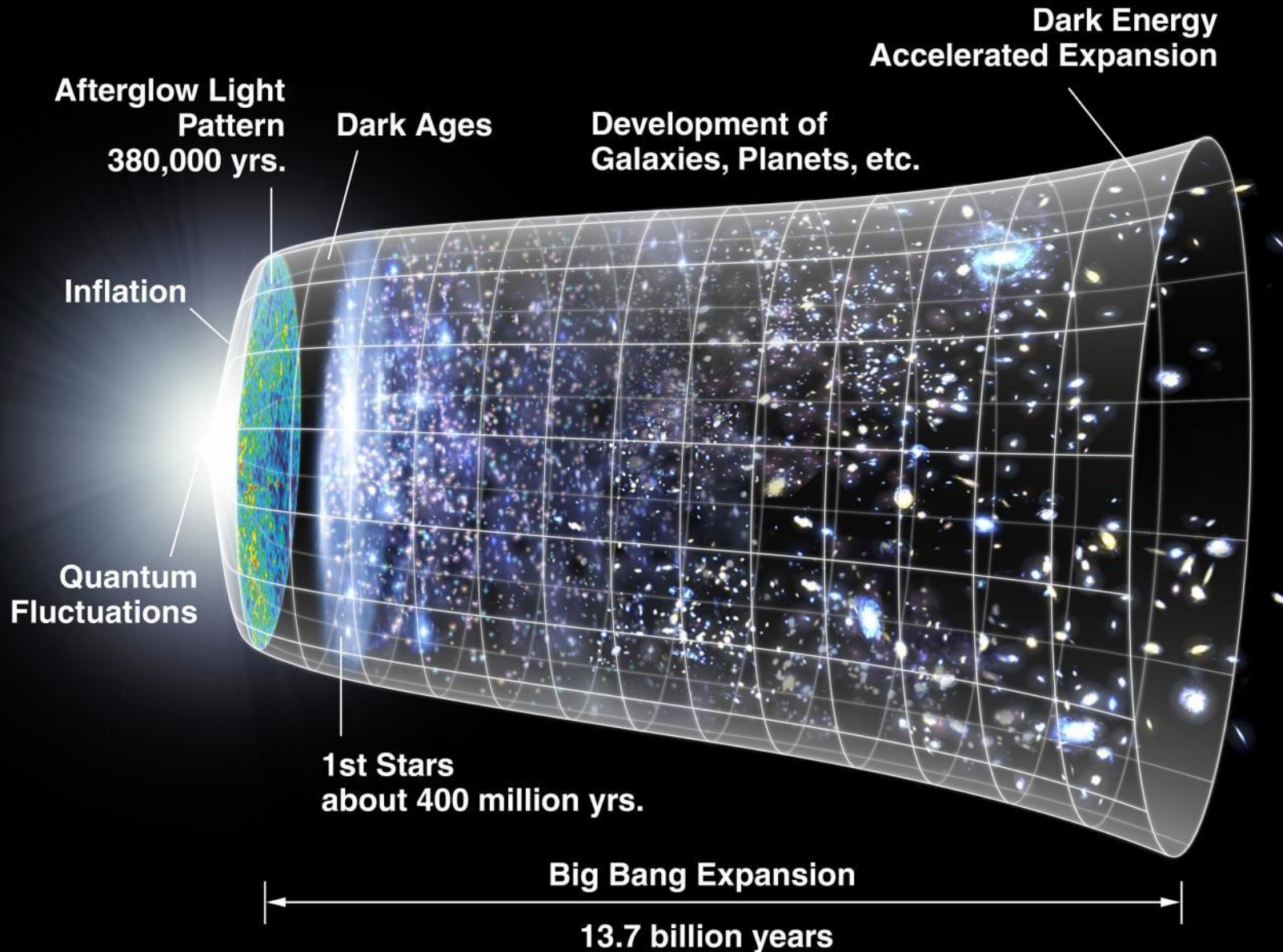
- Single System
- Up to 64TB of shared memory
- Up to 256 CPUs
- Compute- and data-intensive workloads



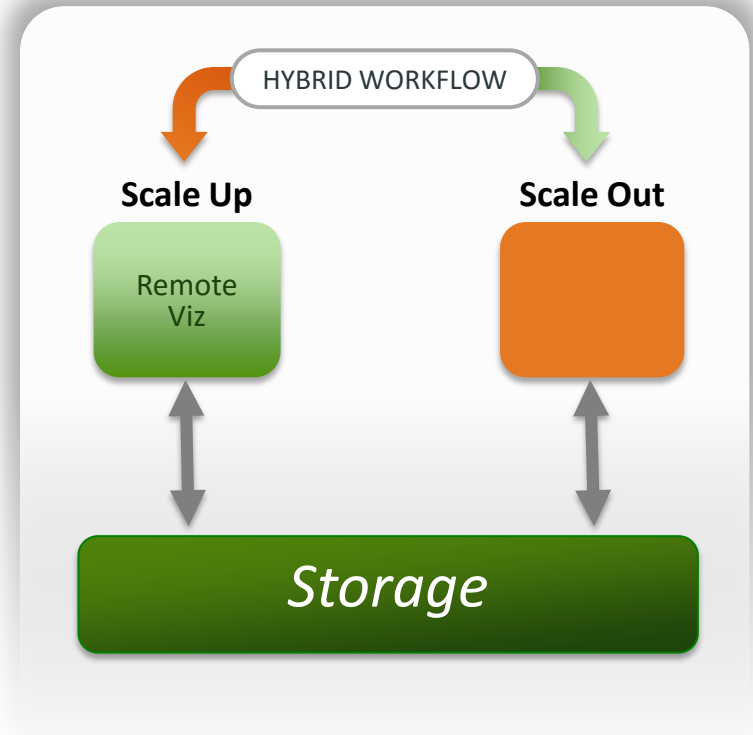
COSMOS Supercomputer



Understanding the Universe



Manufacturing Workflow

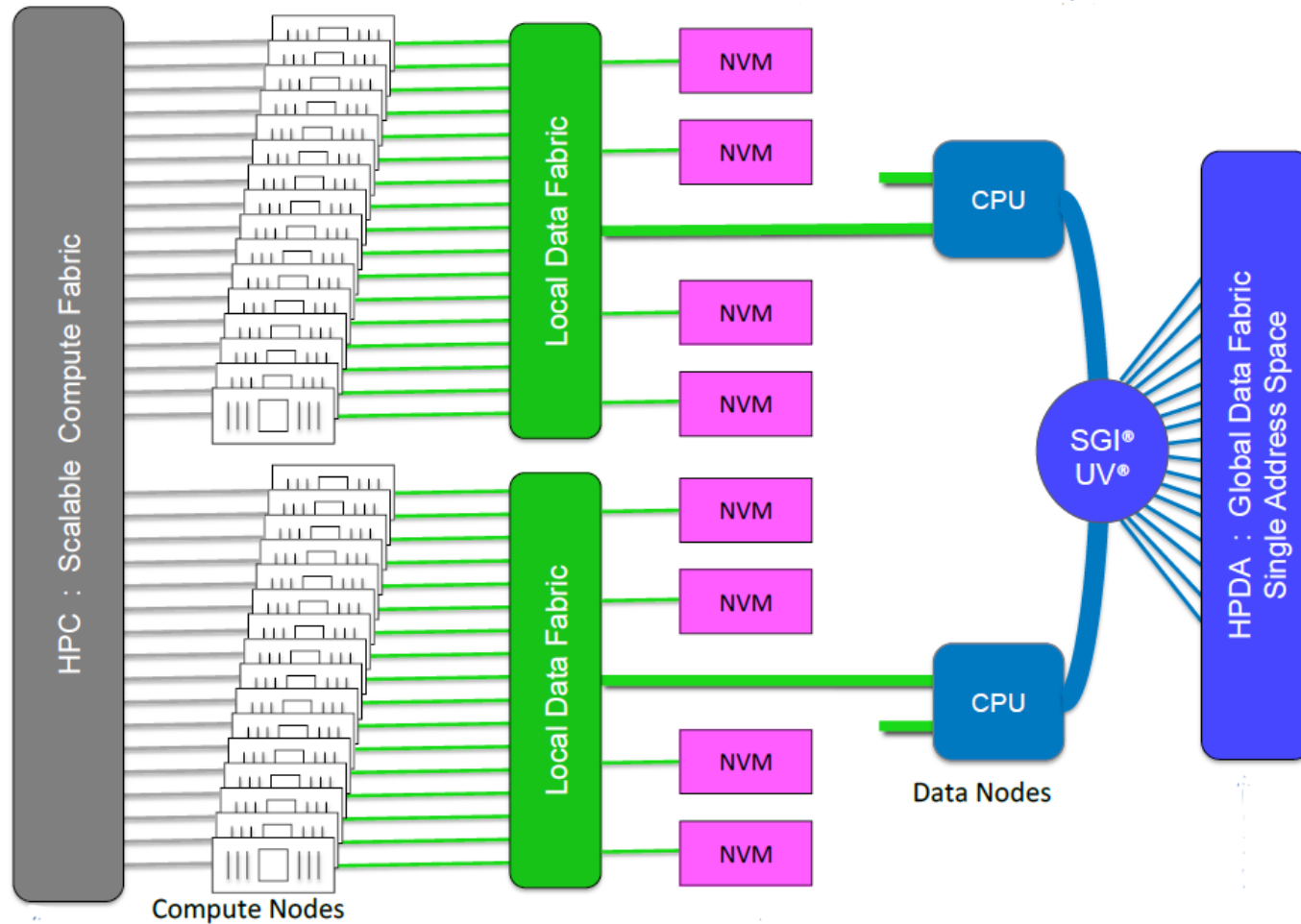


The Future



- Increased focus on workflow performance
- Increasing use of accelerators
- Storage closer to processing
- Scaleout and Scaleup coming together

ZeroCopy Architecture (ZCA)



THIS

is supercomputing.

THIS

is the box it comes in.



From sequencing the wheat genome to visualizing subterranean geology. From outer space to radar space. Supercomputing is how researchers and innovators solve the really big problems. We are SGI.

sgi.

Thank You

Merci

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