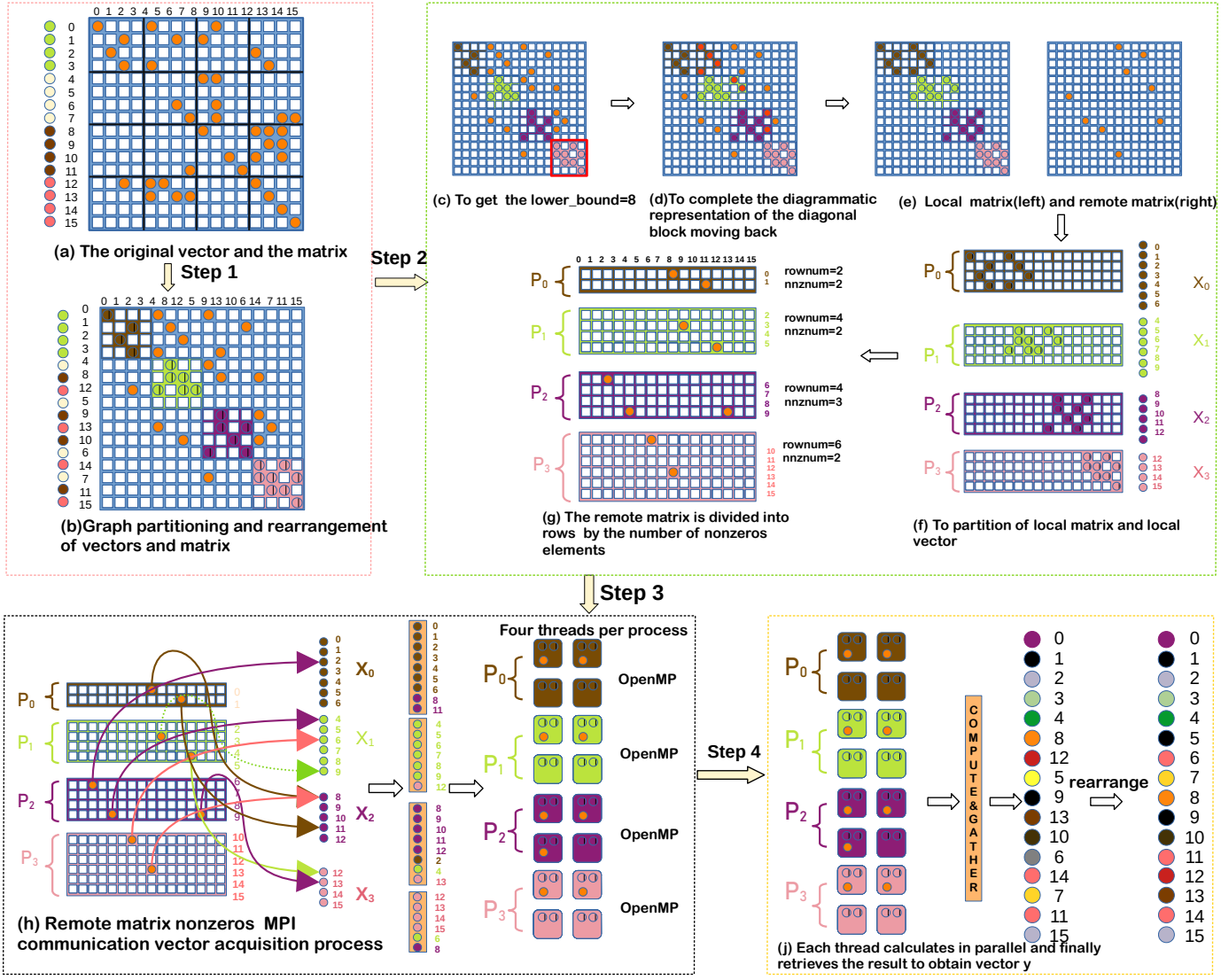
(a) The original vector and the matrix
Step 1
(b)Graph partitioning and rearrangement of vectors and matrix
Step 2
(c) To get the lower_bound=8
(d)To complete the diagrammatic representation of the diagonal block moving back
(e) Local matrix(left) and remote matrix(right)
(f) To partition of local matrix and local vector
(g) The remote matrix is divided into rows by the number of nonzeros elements
rownum=2 nnznum=2
rownum=4 nnznum=2
rownum=4 nnznum=3
rownum=6 nnznum=2
Step 3
(h) Remote matrix nonzeros MPI communication vector acquisition process
Four threads per process
OpenMP
Step 4
COMPUTE&GATHER
rearrange
(j) Each thread calculates in parallel and finally retrieves the result to obtain vector y