Supplemental movie legends

Supplemental video 1 | Movie showing multiple views of the tomographic volume shown in Figure 1C-E. The disposition of the cellulose ribbon relative to the cell and its very close contact with the bacterial envelope is demonstrated.

Supplemental video 2 | Movie showing multiple views of the tomographic volume shown in Figure 5A-C. The close association between the cortical belt and the cellulose ribbon are shown. The second part of the animation shows the tomographic volume shown in Figure 2 and Figure 5D-F. The multilayered structure of the cortical belt is visible.

Supplemental video 3 | Movie of the FIB-milling of a lamella through the *G. hansenii* biofilms shown in Figure 6 and the 3D organization of the cells and the cellulose within the biofilm shown in Figure 6. The second part of the animation shows the tomographic volume shown in Figure 7A-D. Numerous cytoplasmic vesicles and the cortical belt underneath a cellulose ribbon are visible.

Supplemental video 4 | Movie showing multiple views of the tomographic volume shown in Figure 8B-C. The cellulose fibers are seen around the cell. No cortical belt is visible. A polar flattening is visible at the top of the cell with a "thickening" of the OM and a large periplasmic density underneath. The putative UPP (amorphous aggregate) is seen on the side of the polar flattening.

Because the supplemental videos were oversized and further compressing resulted in loss of quality, they were uploaded on FigShare. Please download the videos by using the following link: https://figshare.com/s/74891ac625fe8125c60c