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Building a Volume Electron Microscopy Community

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Life exists in 3 dimensions but until recently most electron microscopy methods have provided 2-dimensional data from which 3-dimensional information could be inferred. This is especially true for the resolution revolution in single particle cryo EM. However, in the last decades, a number of electron microscopy techniques have been developed that are able to "directly" acquire such 3D information. Collectively they are known as volume Electron Microscopy (vEM).

The developments in the vEM field have been called a silent revolution as the focus has largely been on the application of the wide variety of vEM technologies rather than the technique itself, you may even have come across a publication largely based on vEM without realising it.

Even though vEM techniques have now come of age and we have shrugged of the silent stigma, access (capacity) to the correct (capability) vEM technology for your biological question can be an issue. In order to address those issues we have established a growing and vibrant vEM community.

In the United Kingdom we started the initiative to gain leverage for funding of vEM infrastructure but it soon became clear that the items we were discussing are not limited to the UK and vEM researchers worldwide were experiencing the same issues. The initiative soon grew into a truly international community (https://www.volumeem.org) which established 6 working groups; Infrastructure, Community, Outreach, Data, Training, and Sample Preparation.

In my presentation I will discuss the activities of the vEM community and hope to convince you to become part of this vibrant community (if you are not already).