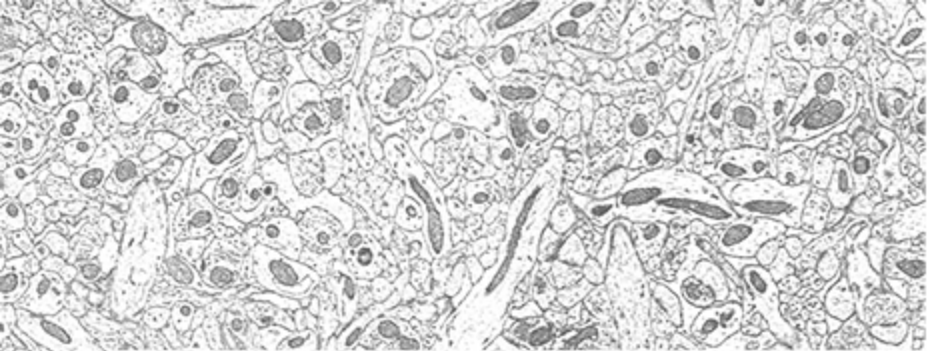


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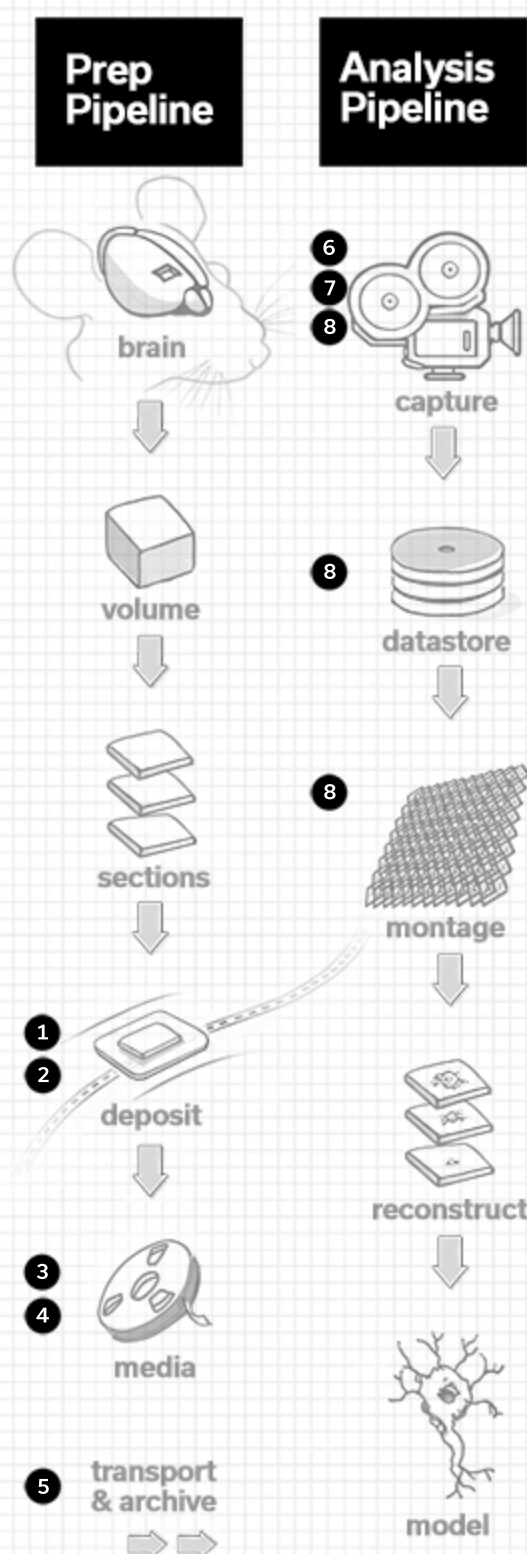
An  
ultra-high  
throughput  
automated  
EM imaging  
pipeline

**BLADE™**



mouse brain slice captured and montaged by the VOXA BLADE imaging pipeline.

The Voxa Blade™ ultra-high-throughput imaging pipeline is customizable to provide complete industrial automation and scaling, transforming nanoscale electron-optical imaging from a field that produces exquisite but limited quantities of data to a rapid and effective process for charting the full nanoscale detail of our world, in much the same way that improved satellites enabled us to effortlessly map the full macro surface of our world.



### 1 Voxa Strider™

The Strider reel-to-reel fluid sample staining system can be equipped with up to six computer-controlled stations, enabling scripted sample staining protocols onto thin membranes, and expansion to other novel robotic treatments.



### 2 Voxa Glow™

Glow is a dedicated tool able to evaporate a thin electron transparent and conductive coating onto continuous conveyer substrates. Coatings are protective and reduce beam-induced charging at the sample.



### 3 Voxa GridStage Sprite™ (<5,000 sample datasets)

Sprite is a cartridge-based stage that accepts removable grid array carriers (sample sticks) containing up to 16 grid samples or up to 10 samples placed onto cut tape substrates, able to deliver samples for programs acquiring dozens to thousands of samples in a single investigation within a timespan of weeks.



### 4 Voxa GridStage Reel™ (>5,000 sample datasets)

Reel is a reel-to-reel-based in-column sample conveyer system designed to handle reel-archived tissue, enabling sample indexing with an ID reader. It allows discrete access as quickly as 2.5 seconds between samples and enables acquisition of petascale datasets comprising tens of thousands of samples.



### 5 Voxa Pod™

Pod is a novel conditioning system that is configured to pump down a cassette containing a reel of samples for long term archiving or transport. It is advantageous to perform an initial pump down in a dedicated apparatus and subsequently store the loaded reel in a clean vacuum environment, saving necessary pumpdown time before imaging.



### 6 Voxa GridStage™

GridStage is compatible with a variety of sample carriers, including both Voxa Sprite™ and Voxa Reel™, enabling applications that demand reduced sample handling, large volumes with high spatial information density, and consistency from sample preparation through to analysis. Once the sample is delivered into the microscope, GridStage systems raster scan the samples, covering large areas with total range exceeding 1.5 mm x 2 mm per sample. GridStage can operate 24/7 and increase acquisition throughput over traditional workflows by 4 to 6 orders of magnitude.

### 7 Voxa Cricket™

The Cricket beam supertiler expands detector field of view by rapidly acquiring additional area around each stage position in a matrix, substantially improving throughput by eliminating stage movements by an order of magnitude. Cricket supertiles are created during acquisition, and reduce computational load by providing larger tiles to montagers.

### 8 Voxa Blade™ Software

Blade software controls the image capture pipeline and automatically stitches Cricket subtiles into supertiles, providing large full-resolution whole-sample montage images.

# BLADE