Example of Epiqa configuration flow for:

PortalVision**: IAS2 & R- arm**

Beam Energy: **15 MV**

Dose Rate**: 300 MU/min**

Configuration Set-up: **MIX**,

Source Detector Distance **(SDD)= 105 cm**,

Source Surface Distance **(SSD)= SDD – dmax**

Data summary needed to configure:

PRIMARY PART:

- **Beam data (IC.dat)**

- **RTP plans of primary radiation configuration**

- **Acquired configuration PV images**

1) MU/Gy values for open fields (e.g. 30x30, 25x25, 20x20, 15x15, 12x12, 10x10, 5x5, 3x3) as measured with ion chamber and/or as derived by Eclipse calculation in water phantom, according to the Epiqa configuration set-up: SDD = 105cm, SSD = 102cm, dmax = 3cm.

   Save values into text file IC.dat according to the template (see manual for details).

2) Import RTP plans of primary radiation configuration (*RP_Epiqa_Conf_primary.dcm)* into your Eclipse, which are located in
<Epiqa Installation directory>\import\RT_plan\Epiqa_configuration\primary
(Select the file according to energy and dose rate intended to be calibrated, e.g. *RP_Epiqa_Conf_primary15X_6.dcm* for 15MV and dose rate 300MU/min).

   Schedule „Integrated Images" (in RT Chart / Scheduling) for all the fields and treatment approved it.

3) Please consider if you intend to use your PV images with CU absolute calibration (needed for Varian´s Portal Dosimetry) or without it (raw images, „US" rescale type): see manuals for details.

   To disable dosimetry calibration (rename the folder (path e.g. *C:\Program Files\Varian\Oncology\Treatment\AM\config\AM\do*) that holds two calibration files: *absolute.ini, do_cat.ini*).

4) Before acquiring the scheduled images, perform the Imager calibration (dark field and flood field calibration) for Integrated Mode at the selected energy/dose rate in the AM Maintenance: e.g. 15MV, set-up: SDD = 105cm (PV vrt = -5cm, lng = 0cm, lat = 0cm), dose rate = 300MU/min, 40x30 cm (XxY) field.

5) Irradiate your primary RT-plan, with the PV in the same position used for the Imager calibration.

6) From *RT chart/Import-Export* export according to Dicom Media File Export Filter configured as „patient ID + Object suffix" for filename :

   - primary PV images (all images in one folder)

   - acquired primary RT-plan (from your ARIA enviroment).

TRANSMISSION PART:

- **Beam data - MLC transmission**

- **RTP plans of transmitted radiation configuration**

- **Acquired configuration PV images**

7) MLC transmission value for 10x10 field in the Epiqa configuration set-up (to measure it, use set-up of MLC from plans of transmitted radiation configuration).

8) Import RTP plans of transmitted radiation configuration (*RP_Epiqa_Conf_Transm.dcm)* into your Eclipse, which are located in
<Epiqa Installation directory>\import\RT_plan\Epiqa_configuration\transmission (Select the file according to energy and dose rate intended to be calibrated, e.g. *RP_Epiqa_Conf_Transm_15X_6.dcm* for 15MV and dose rate=300MU/min).

9) Irradiate your transmission RT-plan, with the PV in the same position used for the Imager calibration and Epiqa configuration.

10) From *RT chart/Import-Export* export according to Dicom Media File Export Filter:

   - transmission PV images (all images in one folder)

   - acquired transmission RT-plan (from your ARIA enviroment).

Epiqa configuration steps:

1. Run the 'Epiqa_configuration.sav' (click *Start* → *Programs* → *EPIdos* → *Epiqa* → *Epiqa_configuration.sav* to start the configuration program) and choose the type of your portal vision calibration set-up – e.g. MIX.
2. Start the primary configuration and load:
   - the beam data (IC.dat)
   - your exported RTP plan of primary radiation configuration
   - the folder with acquired configuration PV images (primary radiation configuration).
3. Start the transmitted radiation configuration and load:
   - you exported RTP plan of transmitted radiation configuration
   - folder with acquired calibration PV images (transmitted radiation configuration)
   - add your MLC transmission value.
4. Optional: At the end is possible to introduce your own Flattening Filter correction (see manual for details).
5. Save parameter file. If you use CU calibrated images, the diagonal intensity profile is requested for saving parametre file (see manual for details). For raw images it is not neccessary.