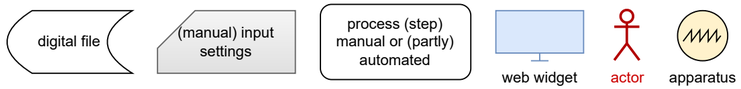
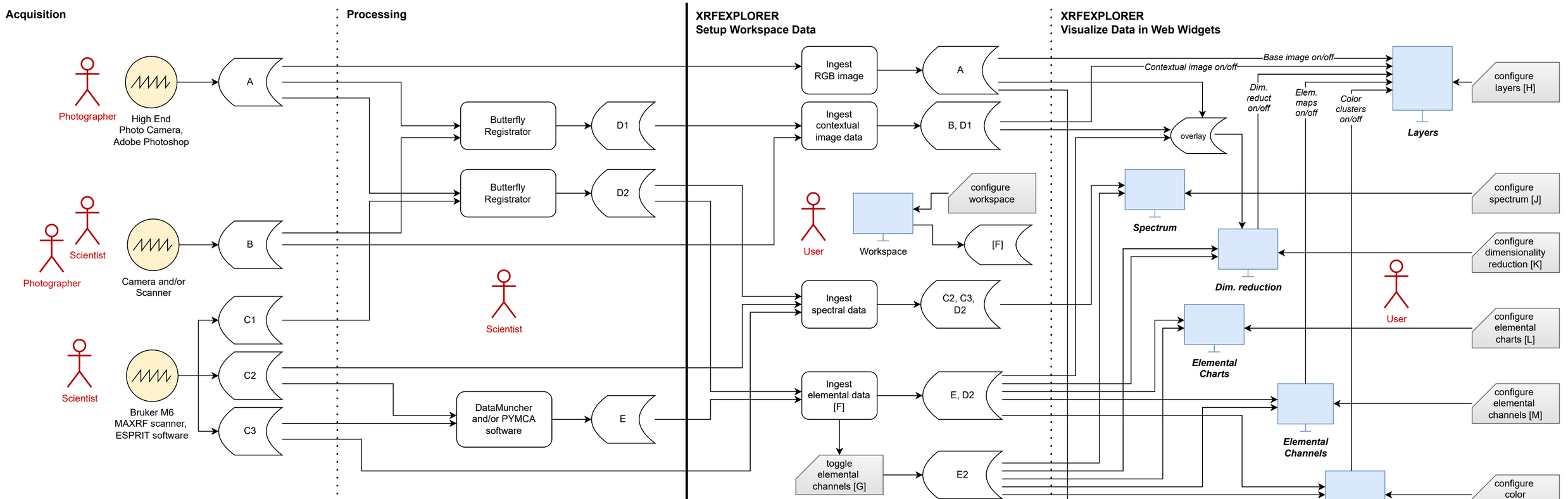
# Process: Data input chart for xrf-explorer-v0.2

**Version: 20241219 by MarcoR)**

LEGEND




Additional description:
[A] high resolution RGB image of the painting (part, or full) (.TIF)

[B] RGB image of the painting (part, or full) that represents a modality,
for example: Xray, UV, IR, Element map (.TIF, .JPG, .PNG)

[C1] image file, showing the scanned area (.TIF),
scanned area can be a part of a painting, or the full painting
[C2] spectral data cube (.RAW), binairy data,
containing data points (X;Y;Channels[1..n];Count)
[C3] instrument metadata (.RPL), human/machine readable,
containing scanning dimensions (x,y,channels), data type, depth scale

NOTE: for now, it is assumed that one scanned area covers an enclosed 2D plane, and stitching of scan fragments is done by the scanner software.

Additional description:
[D1] registration recipe file (.CSV) that maps B to A
[D2] registration recipe file (.CSV) that maps C1 to A

[E] elemental data cube (.DMS),
containing data points (X;Y;Z=ChemElements[1..n];Count)

Additional description:
[F] ingest leads to the automatic generation of
a list of available elemental channels
[G] user can toggle on/off chemical elements
that will be shown in the elemental channels widget
[E2] a list of elemental channels,
chosen by the user, for use in visualization widgets
[F] configuration of the workspace leads to the automatic
creation of a .JSON config file

Additional description:
[H] for each layer, user can adjust
visibility, opacity, lens, image correction
[J] user can choose global average, selection average,
element theoretical, excitation level
and generate a spectra chart (temp files created)
[K] user can choose an element, threshold, and then
let the system generate an embedding, after that,
the user can choose one overlay
(A, B, or elemental channel images generated from E)
and the system generates a Umap (temp files created)
[L] user can choose bar chart, line chart, display elements,
and an element chart is automatically generated
[M] user can adjust visibility, color, threshold
for each elemental channel
[P] user can choose element, threshold and number of clusters
and generate an interactive color cluster map
(temp files created)