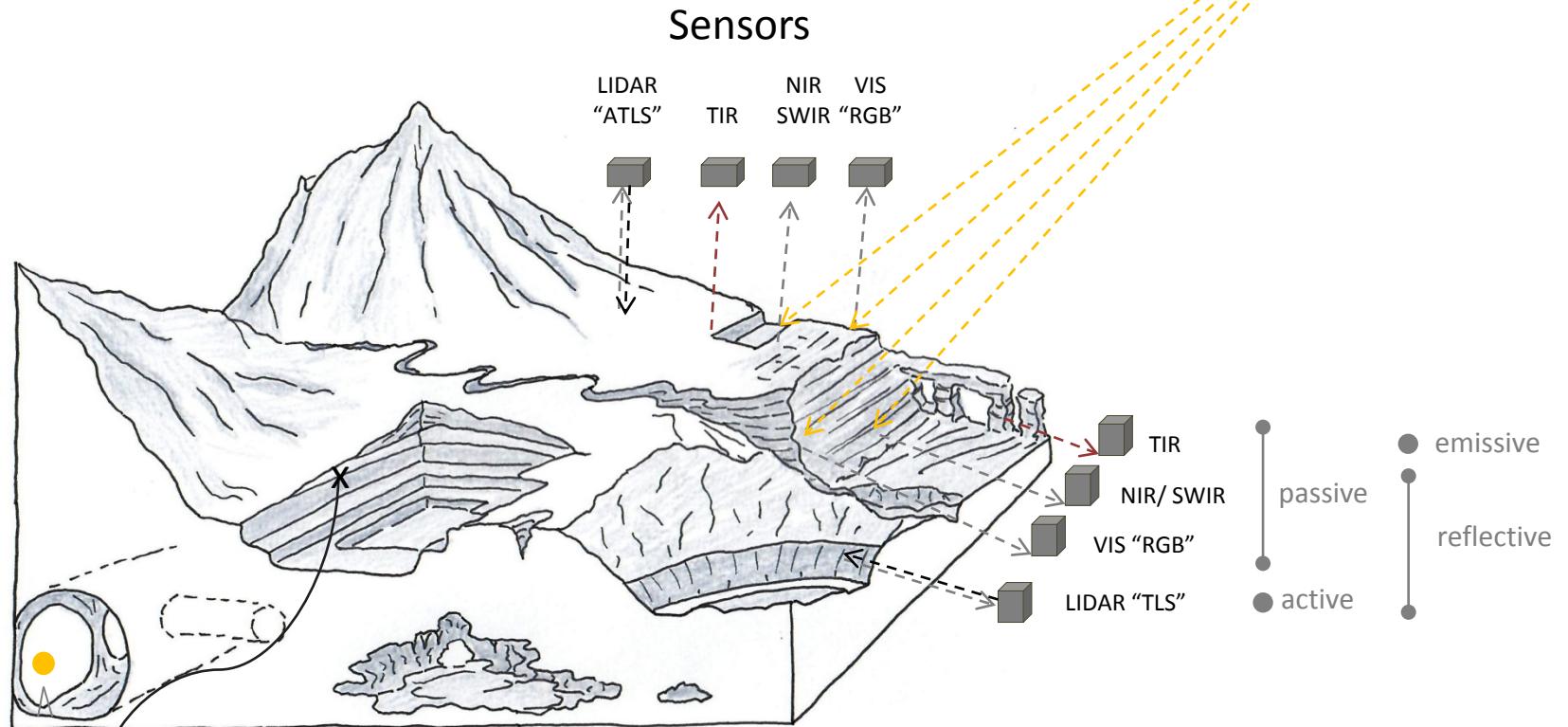


# VOMs & DOMs in Structural Geology

Dr. Bianca Wagner  
Universität Göttingen

3. Arbeitstreffen zu “3D-Geländemethoden in den Geowissenschaften”

# Data acquistion

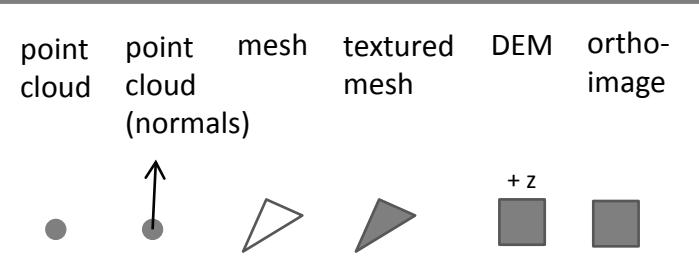


$t_{x+1}$      $x, y, z, R, G, B, i_{(NIR)}, NIR_{(\lambda)}, SWIR_{(\lambda)}, TIR_{(\lambda)}$

$t_x$      $x, y, z, R, G, B, i_{(NIR)}, NIR_{(\lambda)}, SWIR_{(\lambda)}, TIR_{(\lambda)}$

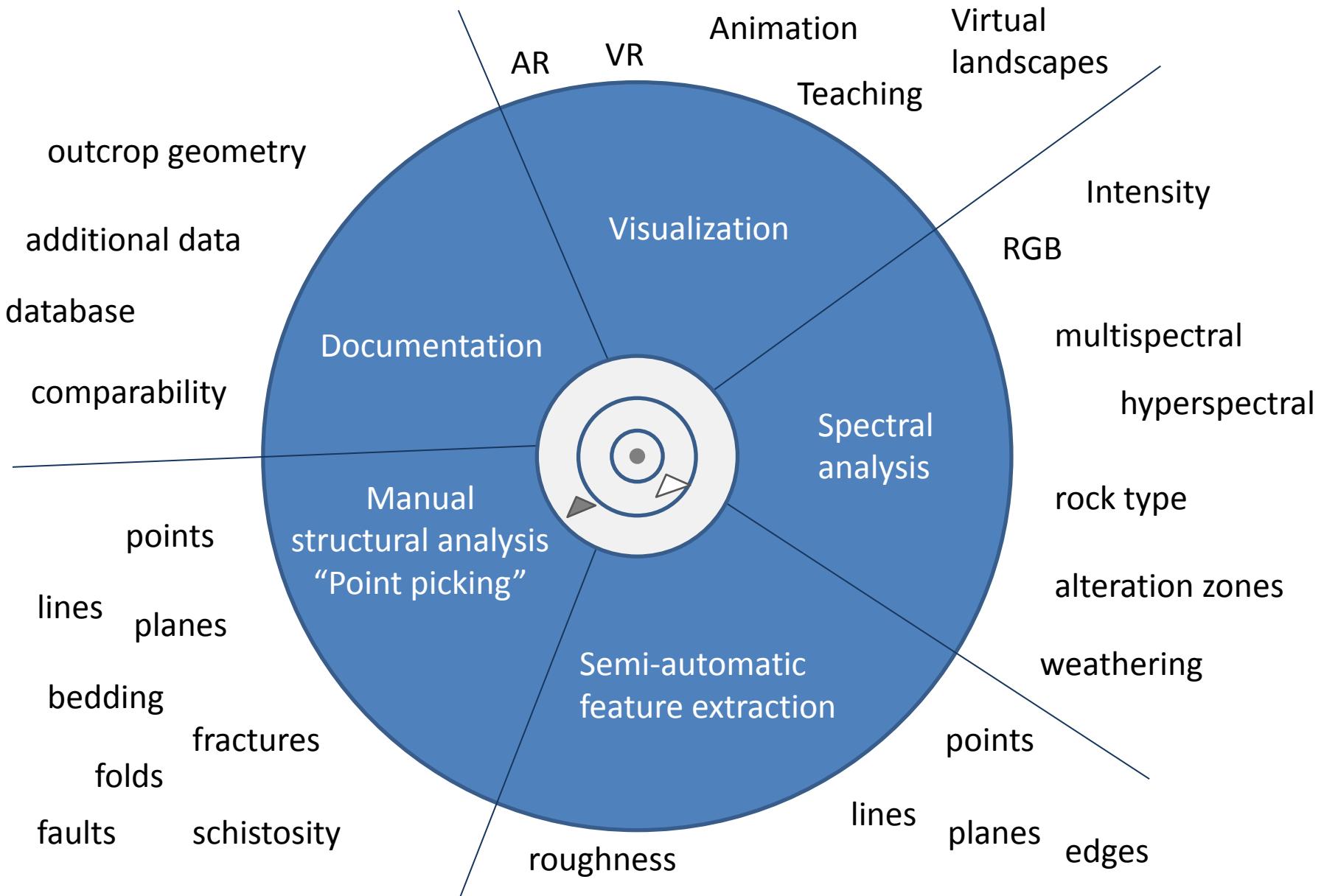
$t_{x-1}$      $x, y, z, R, G, B$

## Data types

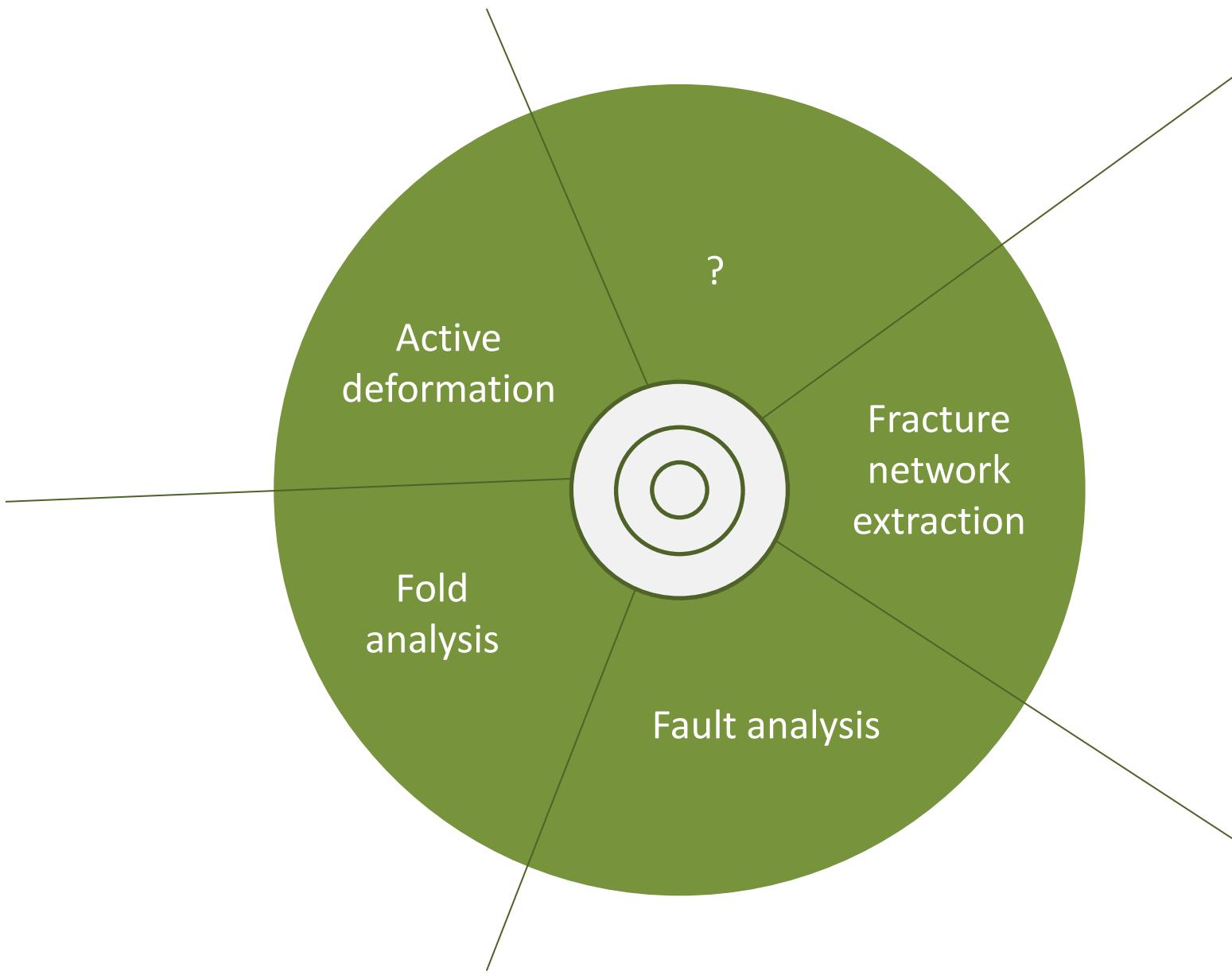


## Data dimensions

# Methodological workflows



# Thematical workflows



## Reconstruction

bedding  
fault plane  
thickness  
thickness variations

generalized

detailed

points, lines  
surfaces

+ field data

points  
lines  
(planes)

Exposed  
fault surface

## Extraction

points  
lines

points  
lines  
(planes)

Related  
outcrops

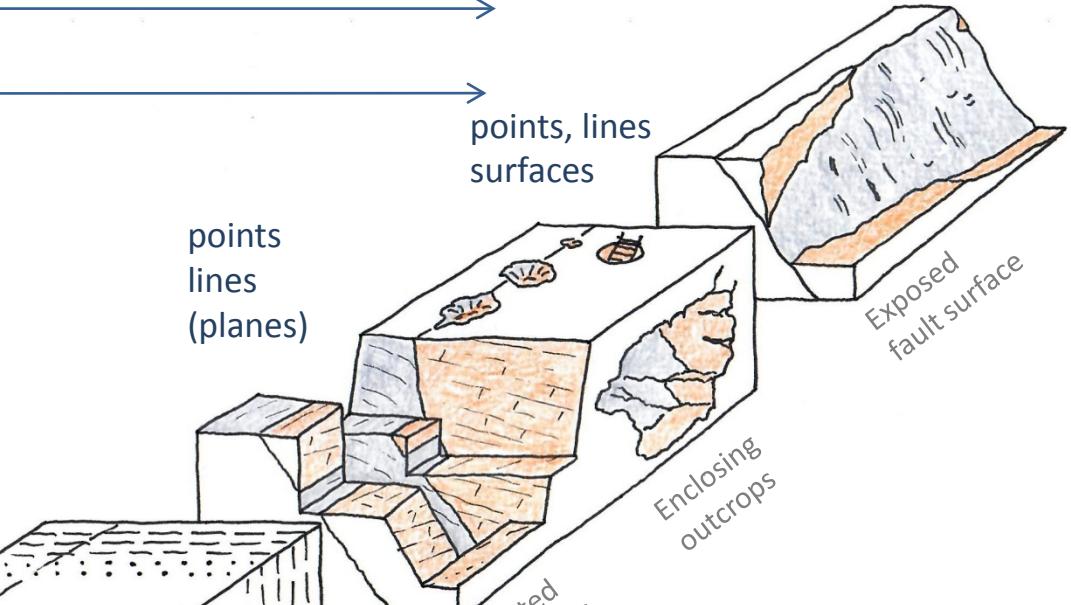
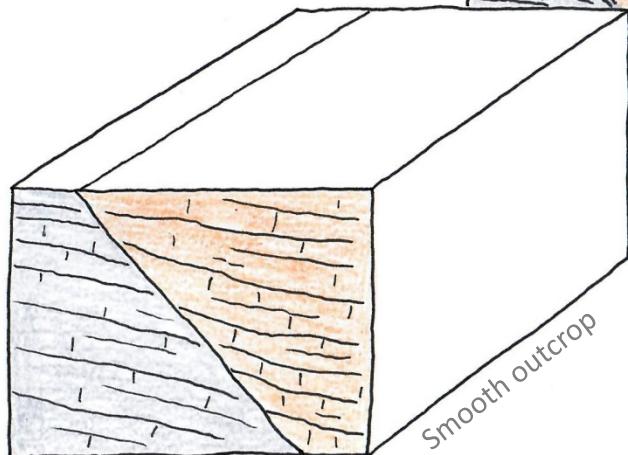
fault surface  
characterisation

Progressive  
Quarrying

generalized

detailed

fault orientation  
fault type  
fault displacement  
slip sense



# Fault analysis

## Reconstruction

bedding  
fold axis  
thickness

generalized

detailed

thickness  
variations

+ field data

## Extraction

points  
lines

points  
lines  
(planes)

points  
lines  
(planes)

fold surface  
characterisation

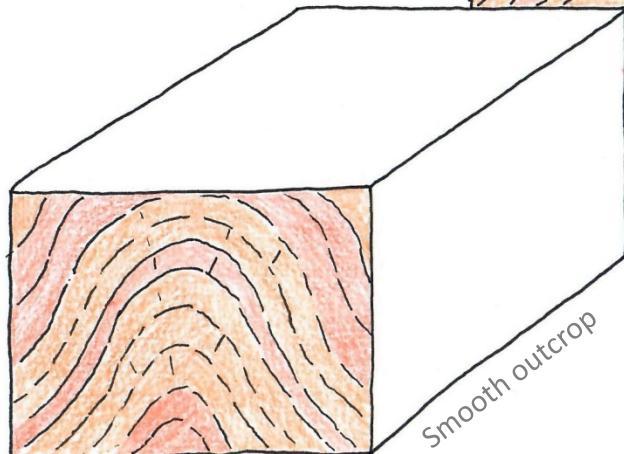
points, lines  
surfaces

Exposed  
fold surface

Related  
outcrops

Progressive  
Quarrying

Rough outcrop



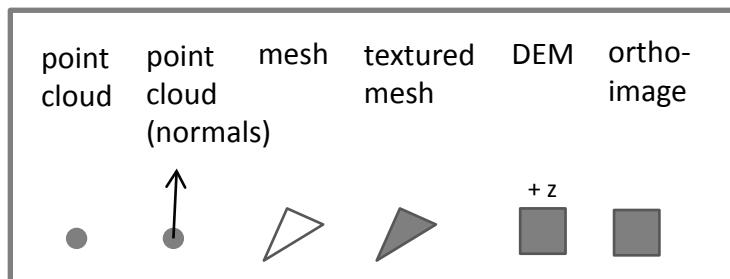
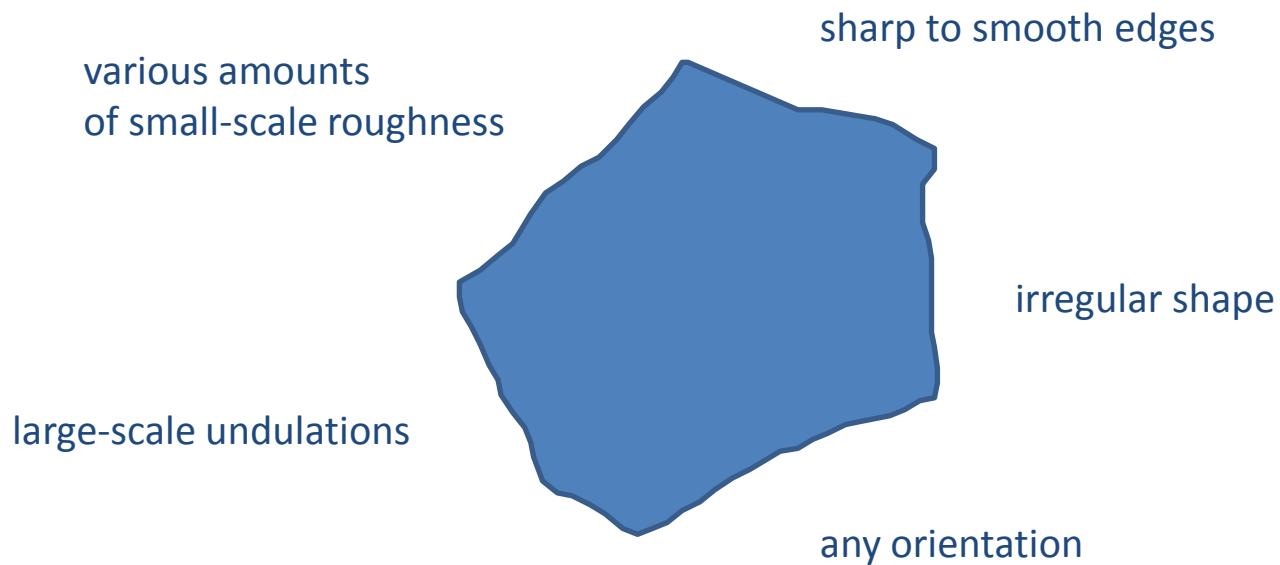
Smooth outcrop

generalized

detailed

Fold analysis

# Fracture network extraction



## Data sources

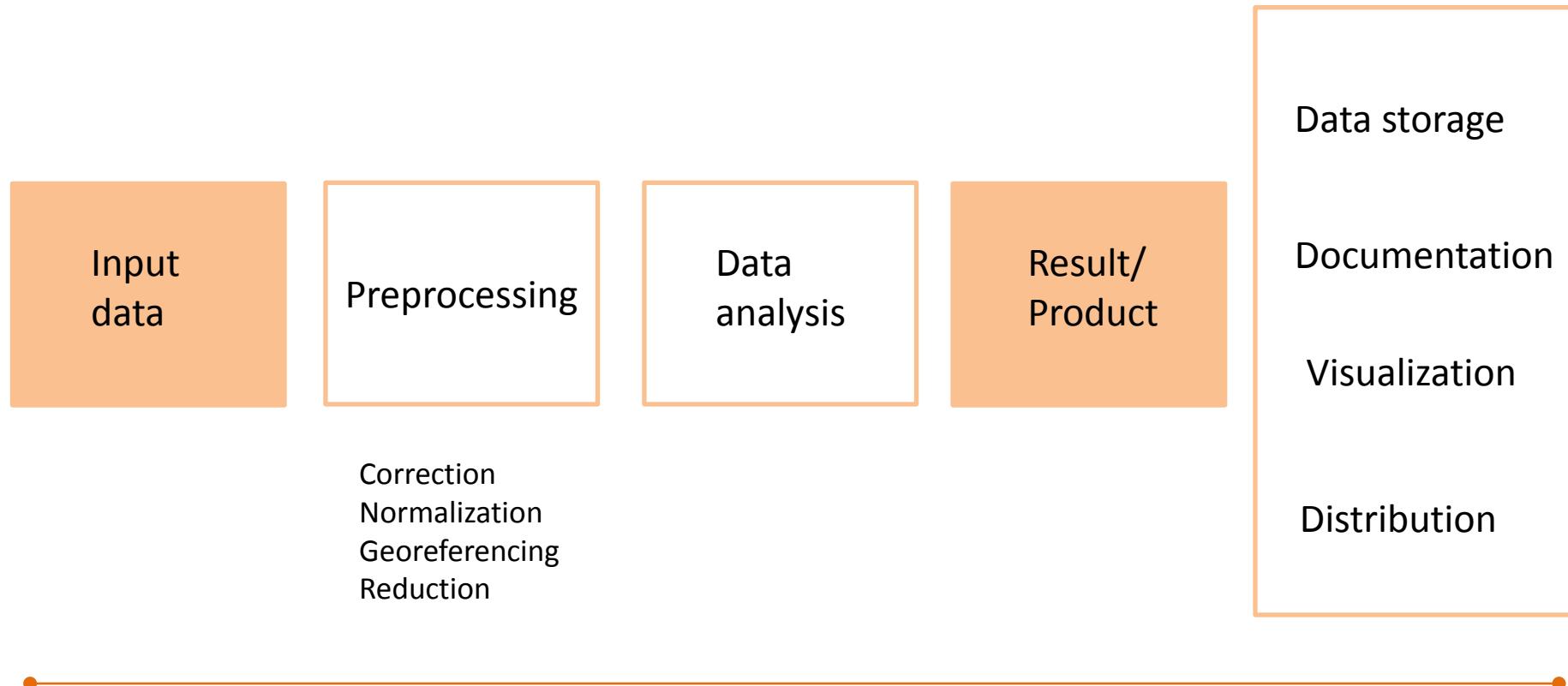
## Starting points

## Preprocessing

on the plane  
or  
at the edges

smoothing  
noise removal  
decimating  
or nothing

# Useful workflows



Correction  
Normalization  
Georeferencing  
Reduction

Algorithms  
Software  
Data types  
File formats