FIG WORKING WEEK 2025
AND Locate25 THE NATIONAL GEOSPATIAL CONFERENCE
Collaboration, Innovation and Resilience: Championing a Digital Generation
FIG Geospatial Council of Australia
Brisbane, Australia 6–10 April

ProSuite QA: Enhancing Geospatial Data Quality and Efficiency with Swiss Precision

Martin BRABEC, Australia
Emanuel MAHLER, Switzerland
Urs-Jakob RUEETSCHI, Switzerland

DIRA GEOSYSTEMS

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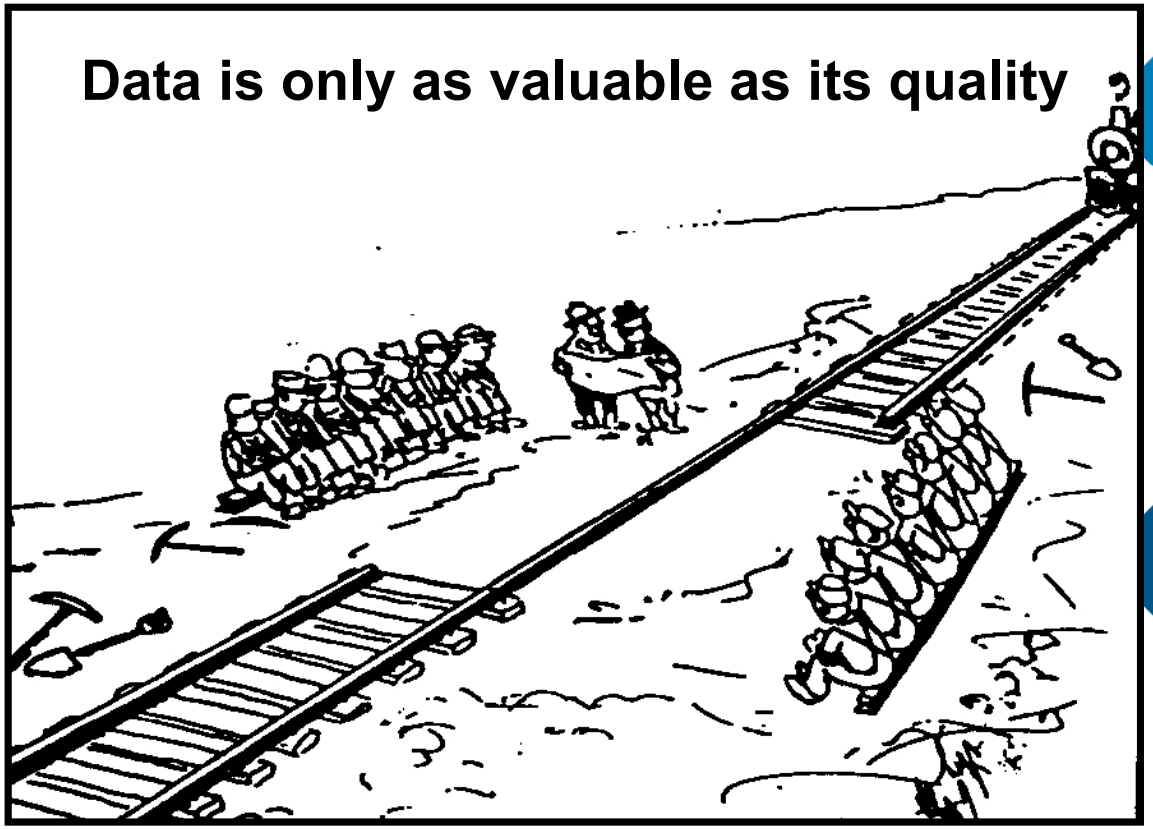
PLATINUM SPONSORS Australian Government CHCNAV esri THE SCIENCE OF WHERE Leica Geosystems HydroMeter Surveyors Australia

Acknowledgement of Country

Dira GeoSystems acknowledges the Jagera people and the Turrbal people as the Traditional Custodians of Meanjin (Brisbane), the lands on which our conference is located and where we meet, work and learn today. We pay our respects to Jagera and Turrbal Elders past, present and emerging



By Fred Balk

swisstopo

Swiss National Mapping Agency

esri SCHWEIZ

Bundesamt für Kartographie und Geodäsie

German National Mapping Agency

DIRA GEOSYSTEMS

Federal Office of Metrology and Surveying

Austrian National Mapping Agency

forest offices
Councils
ETC.

ProSuite QA

enhanced productivity and reliability in geospatial data management

- Efficient, powerful validation logic (> 130 QA test algorithms)
- Executable on ArcGIS Pro workstation, ArcGIS Enterprise or via Python Client API
- Great for large & complex datasets
- Central configuration via Data Dictionary Editor with easy setup
- Precise error/issue localisation & handling
- Optimised Edit Tools

Attributes:

QaConstraint
QaConstraintsListFactory
QaDatasetConstraintFactory
QaDateFieldsWithoutTime
QaEmptyNotNullTextFields
QaForeignKey
QaGdbConstraint
QaGdbConstraintFactory
QaGroupConstraints
QaRegularExpression
QaRelConstraint
QaRelGroupConstraints
QaRelRegularExpression
QaRelUnique
QaRequiredFields
QaTrimmedTextFields
QaUnique
QaUnreferencedRows
QaValidCoordinateFields
QaValidDateValues
QaValidUrls
QaValue

Edge matching:

QaEdgeMatchBorderingLines
QaEdgeMatchBorderingPoints
QaEdgeMatchCrossingAreas
QaEdgeMatchCrossingLines

Intersection parameters

QaLineIntersectAngle
QaLineIntersectZ
QaMinAngle
QaMinIntersect
QaZDifferenceOther
QaZDifferenceSelf

Geometry:

Qa3dConstantZ
QaCoplanarRings
QaCurve
QaExtent
QaGeometryConstraint
QaHorizontalSegments
QaInteriorRings
QaMaxArea
QaMaxLength
QaMaxSlope
QaMaxVertexCount
QaMeasures
QaMinArea
QaMinLength
QaMinMeanSegmentLength
QaMinSegAngle
QaMonotonicMeasures
QaMonotonicZ
QaMpAllowedPartTypes
QaMpConstantPointIdsPerRing
QaMpFootprintHoles
QaMpHorizontalAzimuths
QaMpHorizontalHeights
QaMpHorizontalPerpendicular
QaMpNonIntersectingRingFootprints
QaMpSinglePartFootprint
QaMpVerticalFaces
QaMultipart
QaNoBoundaryLoops
QaNoClosedPaths
QaNonEmptyGeometry
QaNoTouchingParts
QaSegmentLength
QaSimpleGeometry
QaSliverPolygon
QaSmooth
QaValidNonLinearSegments
QaVertexCoincidence
QaWithinBox
QaWithinZRange

M values:

QaMeasures
QaMeasuresAtPoints
QaMonotonicMeasures
QaRouteMeasuresContinuous
QaRouteMeasuresUnique

Polygon networks:

QaBorderSense
QaCentroids

Proximity:

QaFullCoincidence
QaMinNodeDistance
QaMpVertexNotNearFace
QaMustBeNearOther
QaNotNear
QaPartCoincidenceOther
QaPartCoincidenceSelf
QaPointNotNear
QaPointOnLine
QaRelMustBeNearOther
QaTopoNotNear
QaTopoNotNearPolyFactory

Schema:

QaGdbRelease
QaSchemaFieldAliases
QaSchemaFieldDomainCodedValues
QaSchemaFieldDomainDescriptions
QaSchemaFieldDomainNames
QaSchemaFieldDomains
QaSchemaFieldNameRegex
QaSchemaFieldNames
QaSchemaFieldProperties
QaSchemaFieldPropertiesFromTable
QaSchemaReservedFieldNameProperties
QaSchemaReservedFieldNames
QaSchemaSpatialReference

Terrain:

QaSurfaceSpikes

Topology:

QaBorderSense
QaCentroids
QaContainedPointsCount
QaContainsOther
QaCrossesOther
QaCrossesSelf
QaDangleCount
QaDuplicateGeometrySelf
QaGdbTopology
QaInteriorIntersectsOther
QaInteriorIntersectsSelf
QaIntersectionMatrixOther
QaIntersectionMatrixSelf
QaIntersectsOther
QaIntersectsSelf
QaIsCoveredByOther
QaLineIntersect
QaLineIntersectZ
QaMinIntersect
QaMustIntersectMatrixOther
QaMustIntersectOther
QaMustTouchOther
QaMustTouchSelf
QaNeighbourAreas
QaNoGaps
QaOverlapsOther
QaOverlapsSelf
QaTouchesOther
QaTouchesSelf
QaVertexCoincidenceOther
QaVertexCoincidenceSelf
QaZDifferenceOther
QaZDifferenceSelf

Z values:

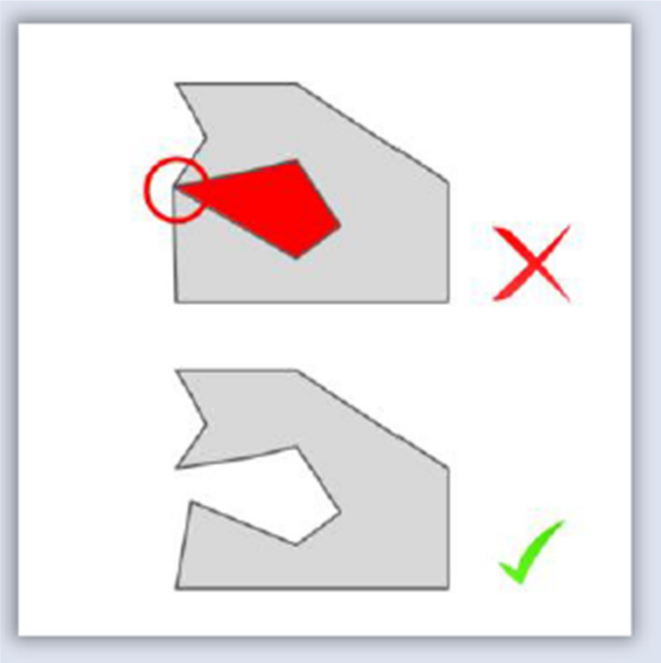
Qa3dConstantZ
QaHorizontalSegments
QaLineIntersectZ
QaMaxSlope
QaMinNodeDistance
QaMonotonicZ
QaSmooth
QaSurfacePipe
QaSurfaceVertex
QaWithinZRange
QaZDifferenceOther
QaZDifferenceSelf

No Category:

QaExportTables
QaRowCount

Geometry

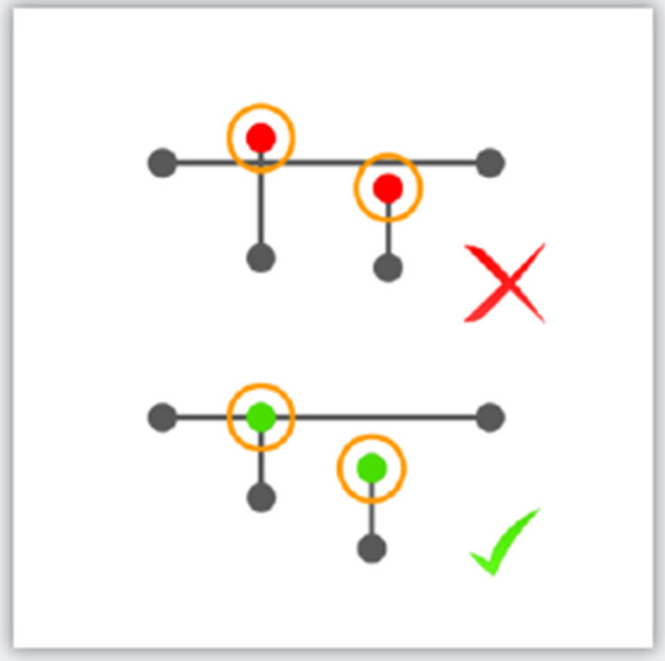
No boundary loops



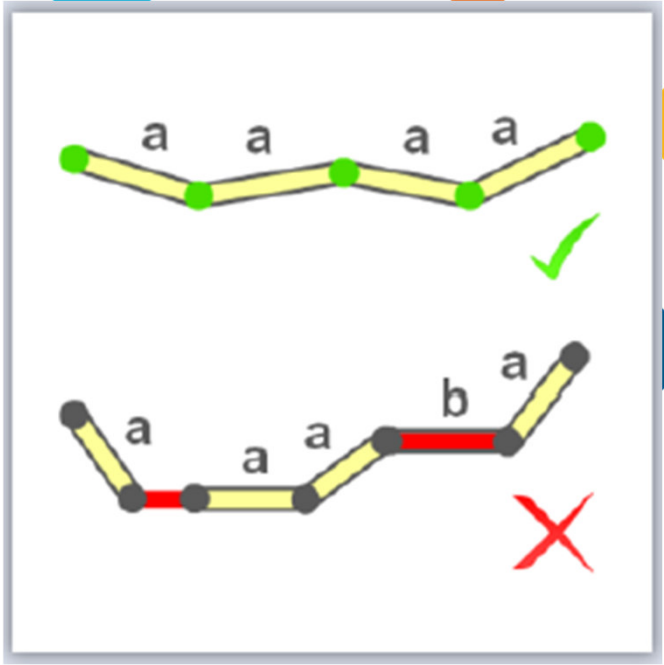
No non-linear segments

Linear Networks

No over- and undershots

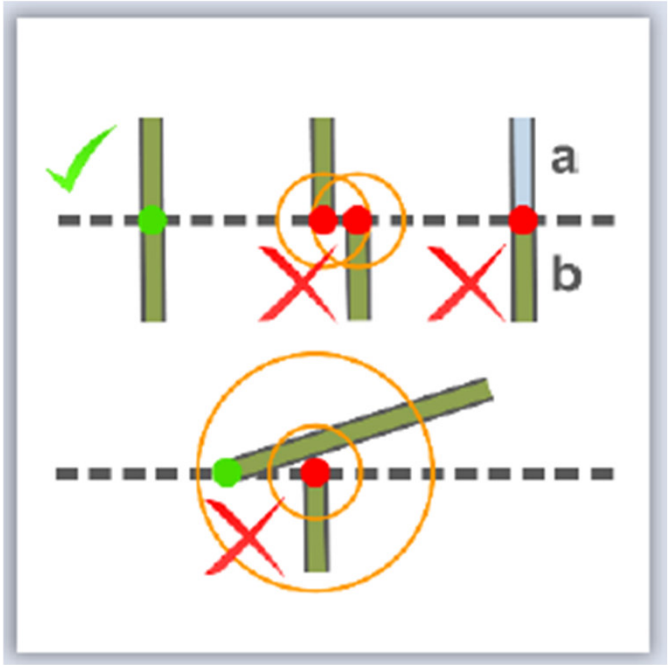


No gaps in a connected group of lines segments

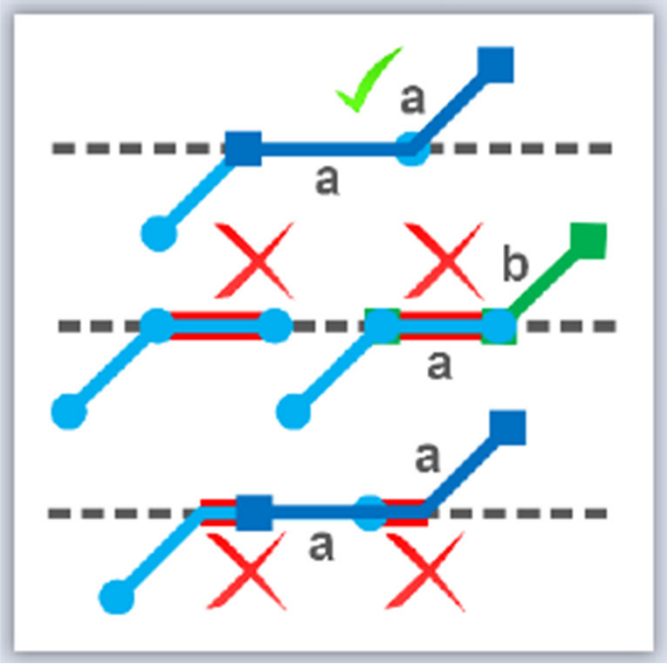


Edge Matching

Consistent continuation of border-crossing lines

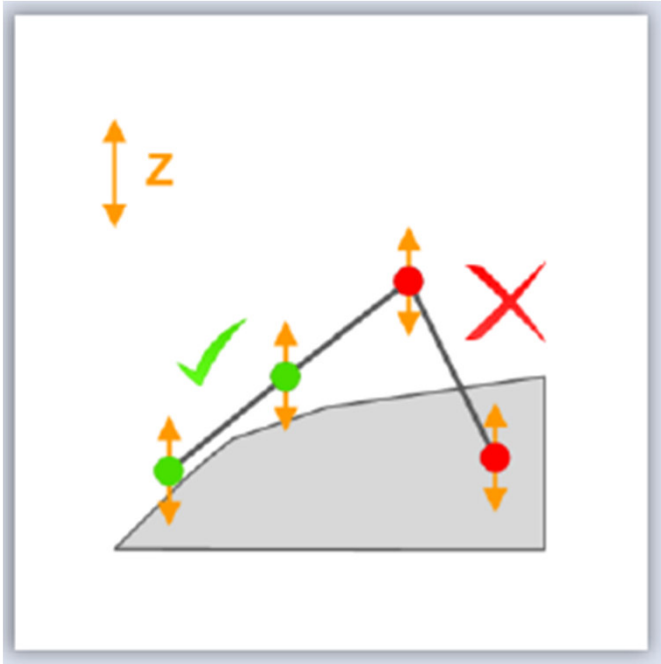


Correspondence of bordering lines

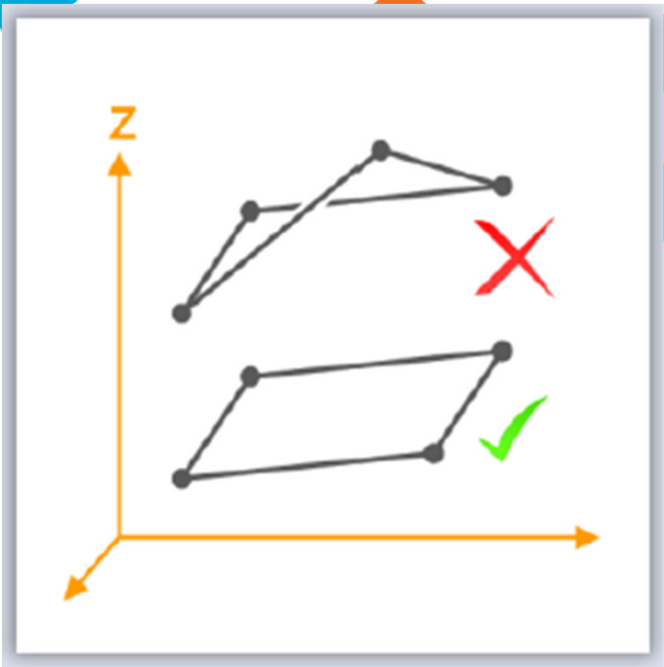


Z Values

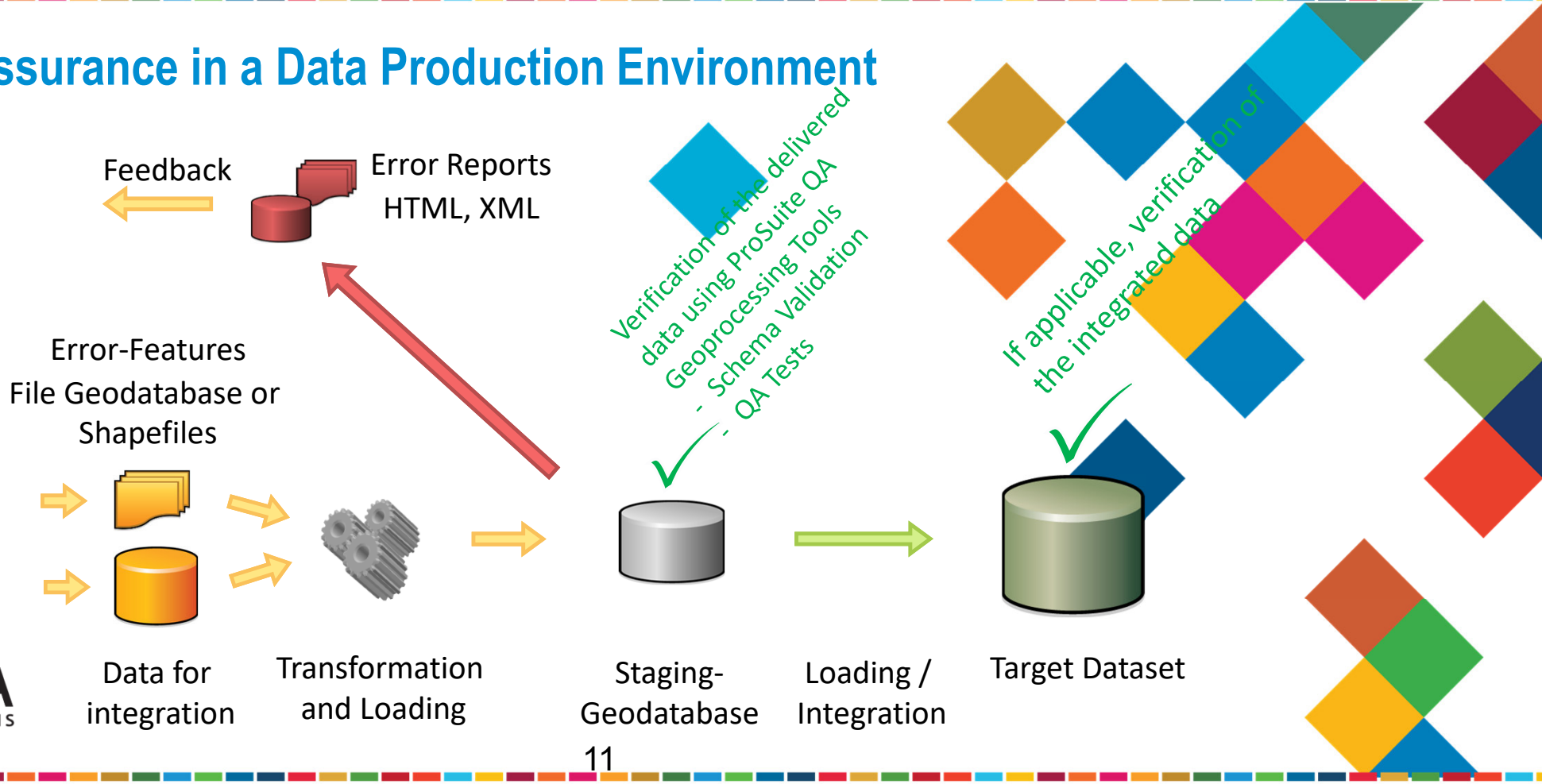
Distance from terrain surface (vertices)



Coplanar Rings



Quality Assurance in a Data Production Environment



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A brief glimpse at

ProSuite QA

by

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ProSuite Edit Tools

Reshape of Line Features using "Reshape Along"

by

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The most relevant SDGs related to the presentation and theme of this session

1st relevant SDG

2nd relevant SDG

3rd relevant SDG

SUSTAINABLE DEVELOPMENT GOALS

International Federation of Surveyors supports the Sustainable Development Goals

STEP 1: SELECT HERE THE THREE MOST RELEVANT SDGs
STEP 2: COPY THE SDG INTO PREVIOUS SLIDE