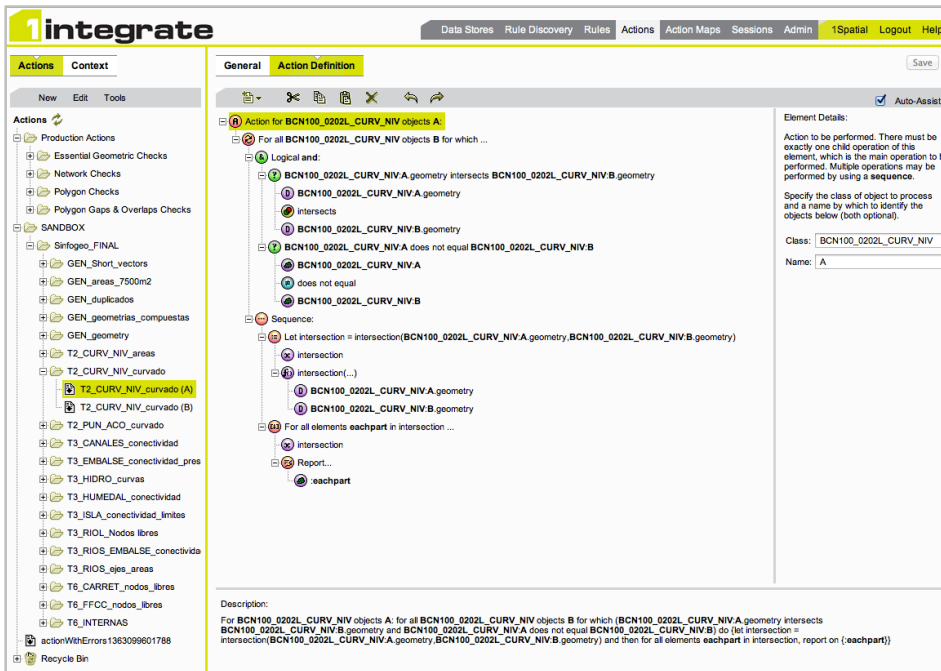




# 1Spatial

Automated Data Quality and Integration

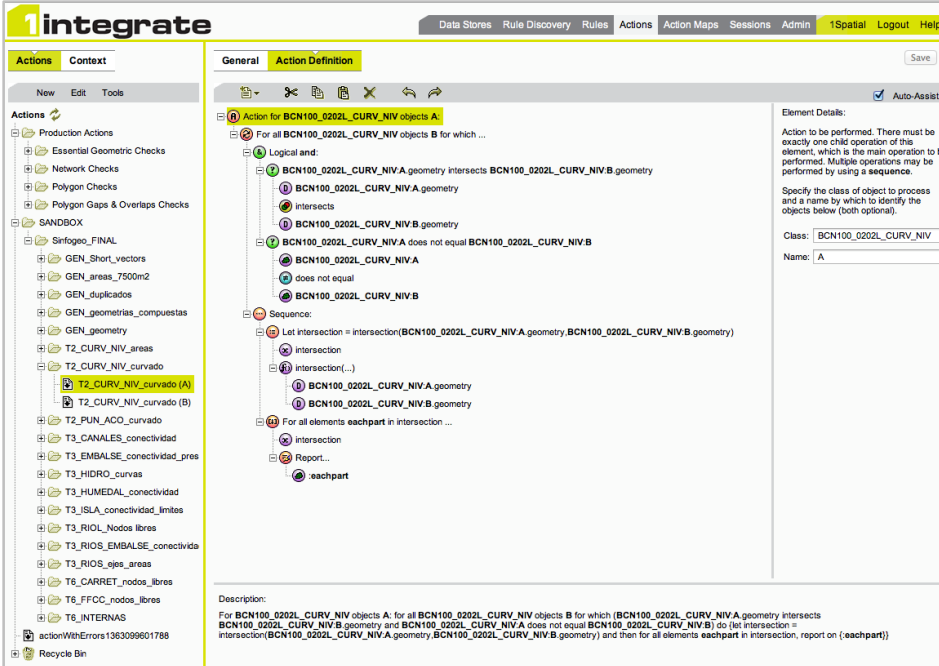


The screenshot shows the 1integrate web interface. The left sidebar contains a tree view of 'Actions' categorized into 'Production Actions' (Essential Geometric Checks, Network Checks, Polygon Checks, Polygon Gaps & Overlaps Checks), 'SANDBOX', and various specific actions like 'T2\_CURV\_NIV\_curvado (A)'. The main area is titled 'Action Definition' and shows a rule definition for 'Action for BCN100\_0202L\_CURV\_NIV objects A'. The rule is a logical 'and' condition consisting of:
 

- BCN100\_0202L\_CURV\_NIV.A geometry intersects BCN100\_0202L\_CURV\_NIV.B geometry
- BCN100\_0202L\_CURV\_NIV.A geometry intersects BCN100\_0202L\_CURV\_NIV.B geometry
- BCN100\_0202L\_CURV\_NIV.A does not equal BCN100\_0202L\_CURV\_NIV.B
- BCN100\_0202L\_CURV\_NIV.A does not equal BCN100\_0202L\_CURV\_NIV.B

 A 'Sequence' follows, starting with 'Let intersection = intersection(BCN100\_0202L\_CURV\_NIV.A geometry, BCN100\_0202L\_CURV\_NIV.B geometry)', followed by 'intersection(...)', and finally 'For all elements eachpart in intersection ...' with a 'Report...' action and 'eachpart' as the target. The 'Element Details' panel on the right shows 'Class: BCN100\_0202L\_CURV\_NIV' and 'Name: A'. A description at the bottom explains the rule's logic: 'For BCN100\_0202L\_CURV\_NIV objects A: for all BCN100\_0202L\_CURV\_NIV objects B for which (BCN100\_0202L\_CURV\_NIV.A geometry intersects BCN100\_0202L\_CURV\_NIV.B geometry and BCN100\_0202L\_CURV\_NIV.A does not equal BCN100\_0202L\_CURV\_NIV.B) do (let intersection = intersection(BCN100\_0202L\_CURV\_NIV.A geometry, BCN100\_0202L\_CURV\_NIV.B geometry) and then for all elements eachpart in intersection, report on (eachpart))'.

- Intelligent Rules engine
- Creation of Rules to interrogate data
  - Data Validation
- Creation of Actions to alter data:
  - Automated data fix-up
  - Automated data integration
  - Automated data inference



The screenshot shows the 1integrate software interface. The left sidebar contains a tree view of actions, with 'T2\_CURV\_NIV\_curvado (A)' selected. The main window displays the 'Action Definition' for this action. The definition is a sequence of operations:

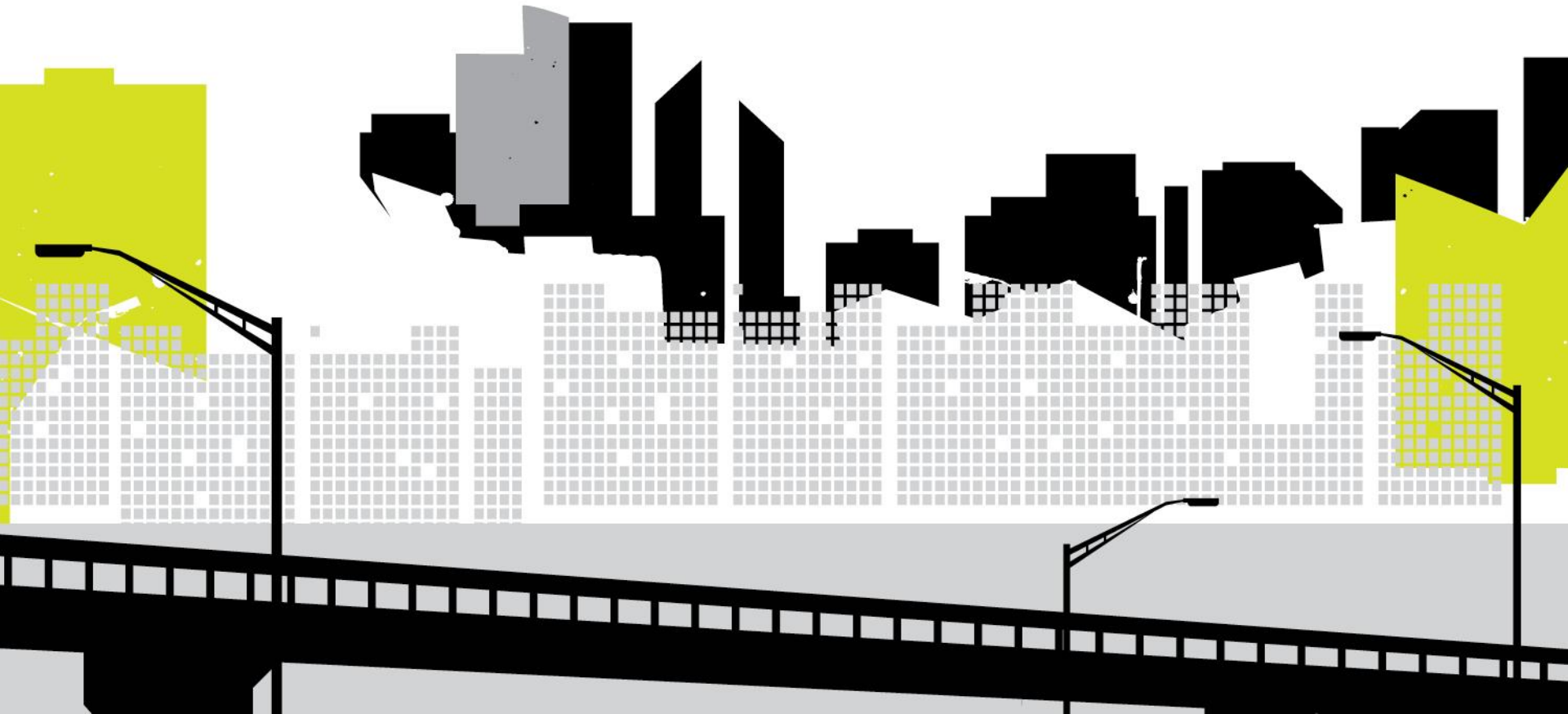
- For all BCN100\_0202L\_CURV\_NIV objects B for which ...
  - Logical and:
    - BCN100\_0202L\_CURV\_NIV.A geometry intersects BCN100\_0202L\_CURV\_NIV.B geometry
      - Intersects
        - BCN100\_0202L\_CURV\_NIV.A geometry
        - BCN100\_0202L\_CURV\_NIV.B geometry
      - BCN100\_0202L\_CURV\_NIV.A does not equal BCN100\_0202L\_CURV\_NIV.B
        - BCN100\_0202L\_CURV\_NIV.A
        - does not equal
        - BCN100\_0202L\_CURV\_NIV.B
    - Sequence:
      - Let intersection = intersection(BCN100\_0202L\_CURV\_NIV.A geometry, BCN100\_0202L\_CURV\_NIV.B geometry)
        - Intersection
        - Intersection(...)
        - BCN100\_0202L\_CURV\_NIV.A geometry
        - BCN100\_0202L\_CURV\_NIV.B geometry
      - For all elements eachpart in intersection ...
        - Intersection
        - Report...
        - eachpart

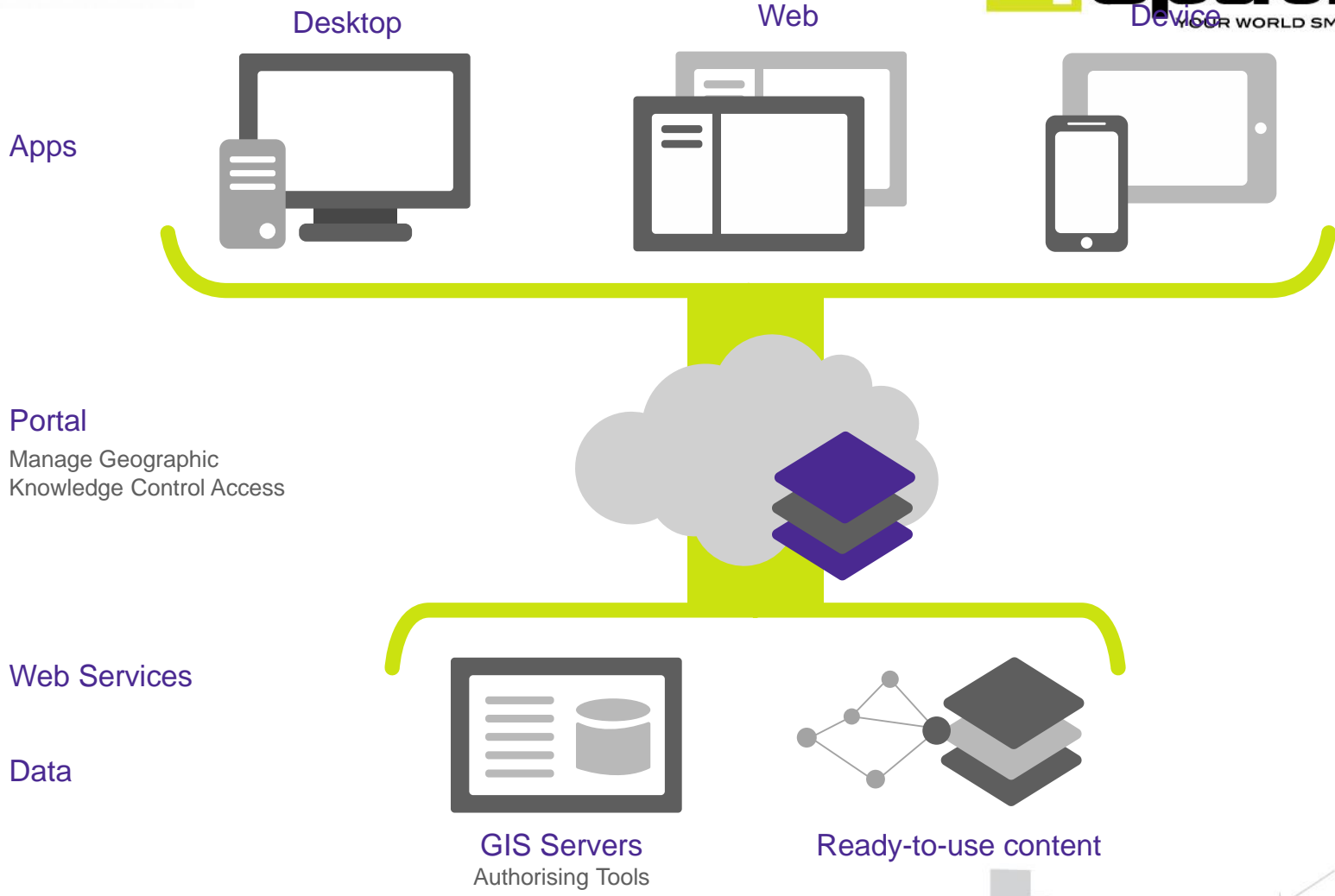
The 'Element Details' panel on the right shows the class 'BCN100\_0202L\_CURV\_NIV' and the name 'A'. The 'Description' at the bottom reads: 'For BCN100\_0202L\_CURV\_NIV objects A: for all BCN100\_0202L\_CURV\_NIV objects B for which (BCN100\_0202L\_CURV\_NIV.A geometry intersects BCN100\_0202L\_CURV\_NIV.B geometry and BCN100\_0202L\_CURV\_NIV.A does not equal BCN100\_0202L\_CURV\_NIV.B) do (let intersection = intersection(BCN100\_0202L\_CURV\_NIV.A geometry, BCN100\_0202L\_CURV\_NIV.B geometry) and then for all elements eachpart in intersection, report on (eachpart))'.

- Customizable rules and actions
- Created by SMEs not developers
- Knowledge Transfer to customers
  - Customer control
  - Reduced consultancy fees
- Sits at the heart of the data processing environment
- GIS agnostic

1spatial.com

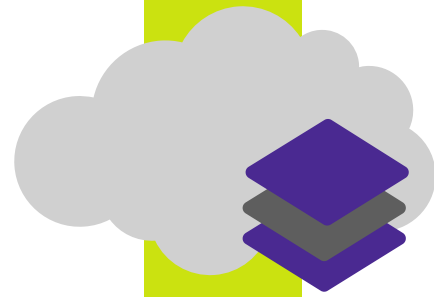
# **integrate** for ArcGIS







Portal  
Manage Geographic  
Knowledge Control Access

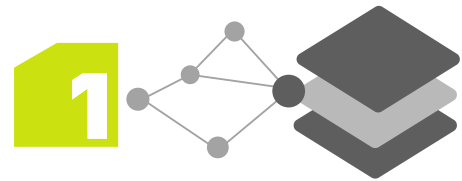


Web Services

Data



GIS Servers  
Authorising Tools



Ready-to-use content

Rules Engine  
Rule Store



# Applications in Transportation



## ARNOLD & HPMS Submissions

- Automated Data Quality & Fix-up
- Automated Data Conflation

## Third Party & Non Centerline Data

- Automated Data Integration



Automated Data Quality & Fix-up



Automated Data Conflation



Automated Data Integration