The implementation of GIS at Greater Vernon Water

URISA BC Conference,
Richmond, BC
February 18, 2004

GREATER VERNON WATER

The implementation of GIS at Greater Vernon Water (GVW)

- Speakers:
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    Project Director, GVW (now General Manager Community Services at the City of Vernon)
  - Tjaart Van den Berg

    GIS Consultant, LandInfo Technologies Inc.

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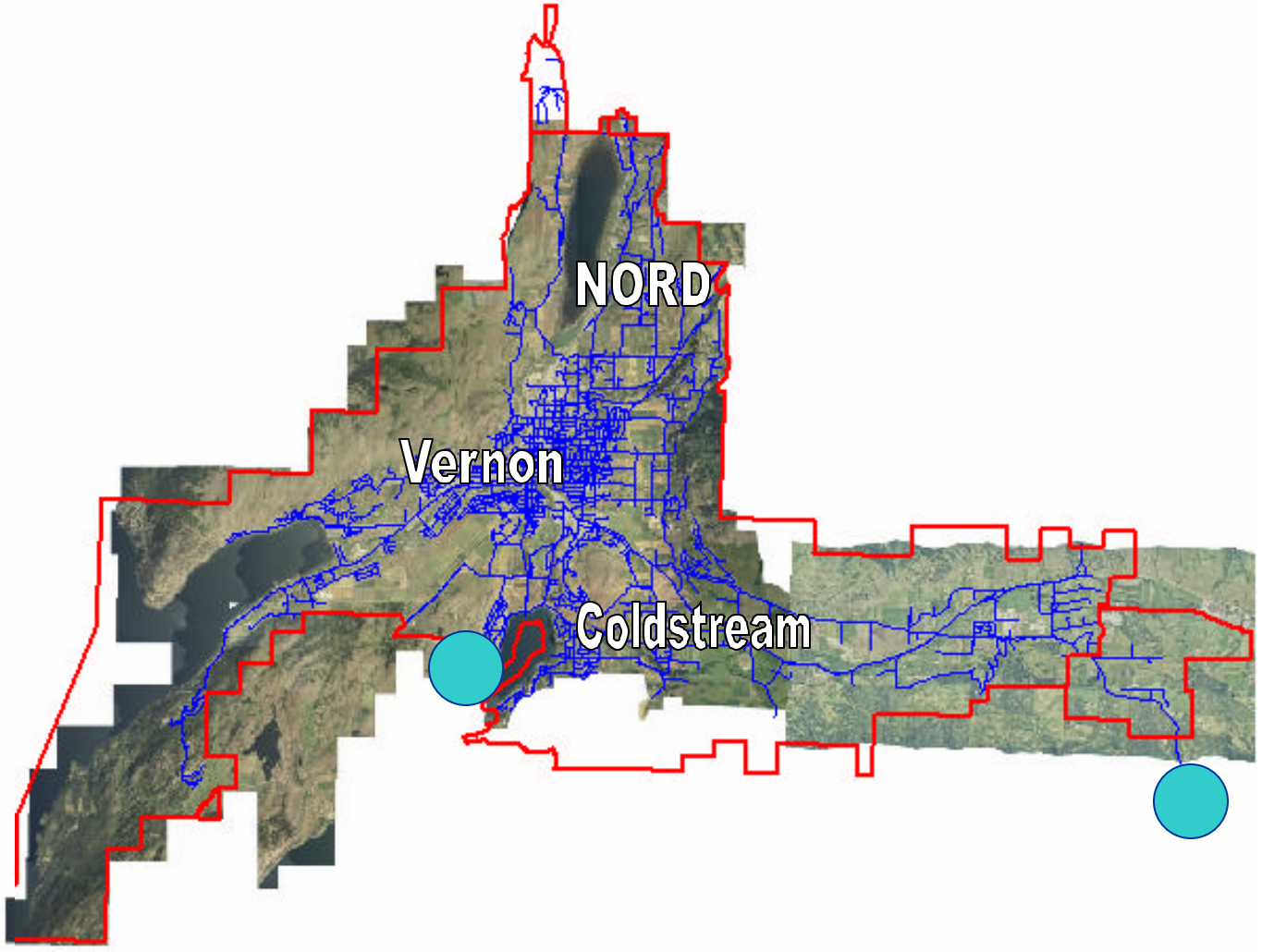
The Greater Vernon Area

- North Okanagan
  - Vernon
  - Coldstream
  - NORD
- 45,000 people
- Tourism
- Retirement
- Agricultural

About GVW

- GVW was established early 2003
- Combined networks of three water utilities
  - North Okanagan Water Authority (NOWA)
  - City of Vernon
  - District of Coldstream
- GVW Mission:
  - ... economical supply and distribution of a sufficient quantity and quality of water in the interests of both agricultural and non-agricultural users in the Greater Vernon Community

GVW Network



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GIS Strategy

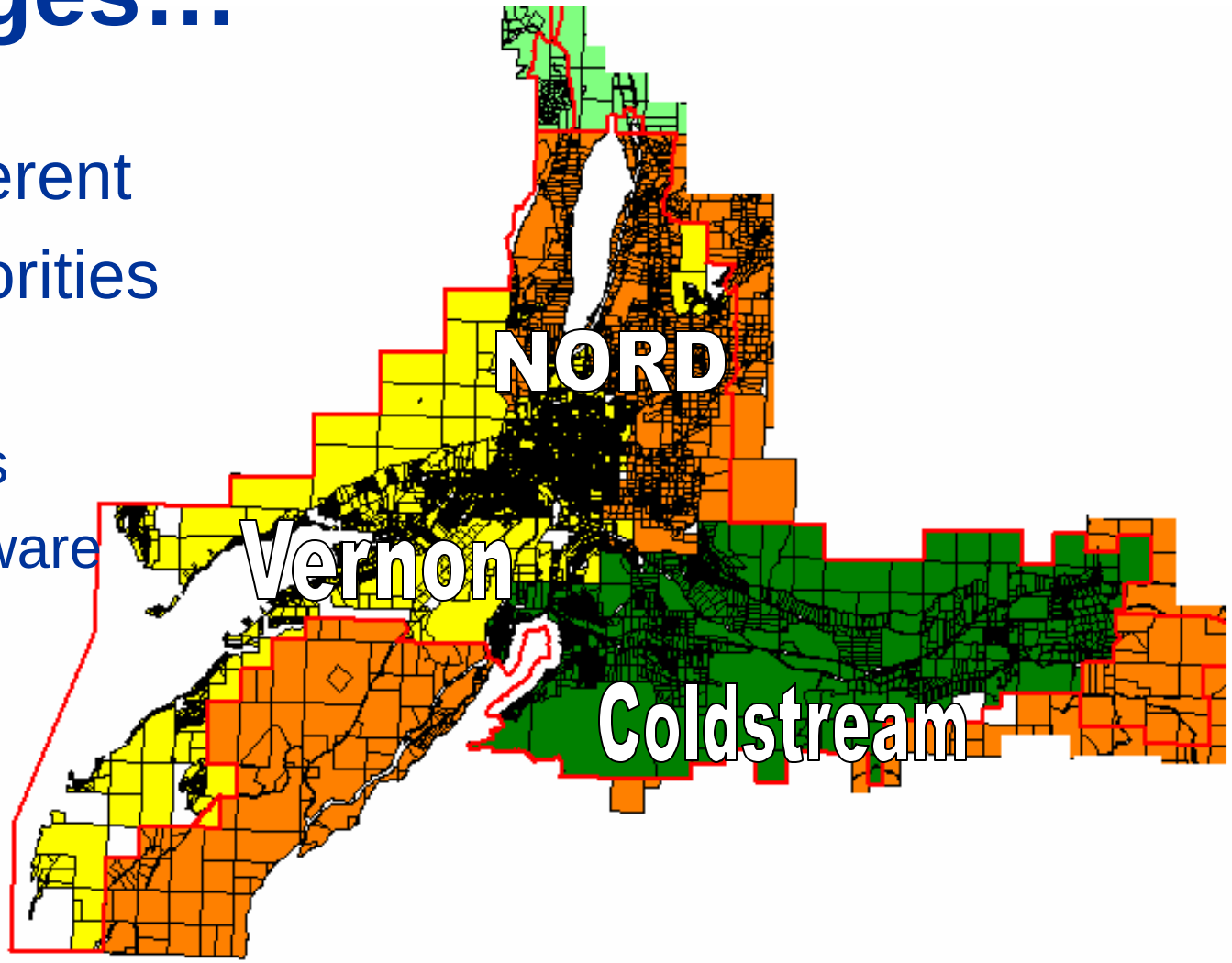
- GIS to be an integrated part of GVW from the start.
- Providing decision support for:
  - Strategic planning (long term)
  - Day to day operations
- Make data accessible to local authorities and public
- GIS to be:
  - a cost effective
  - operational as soon as possible

Steps

- Status quo report
- Workshops with role players
- Identified data needs
- Determined high priority needs
- Implementation ASAP

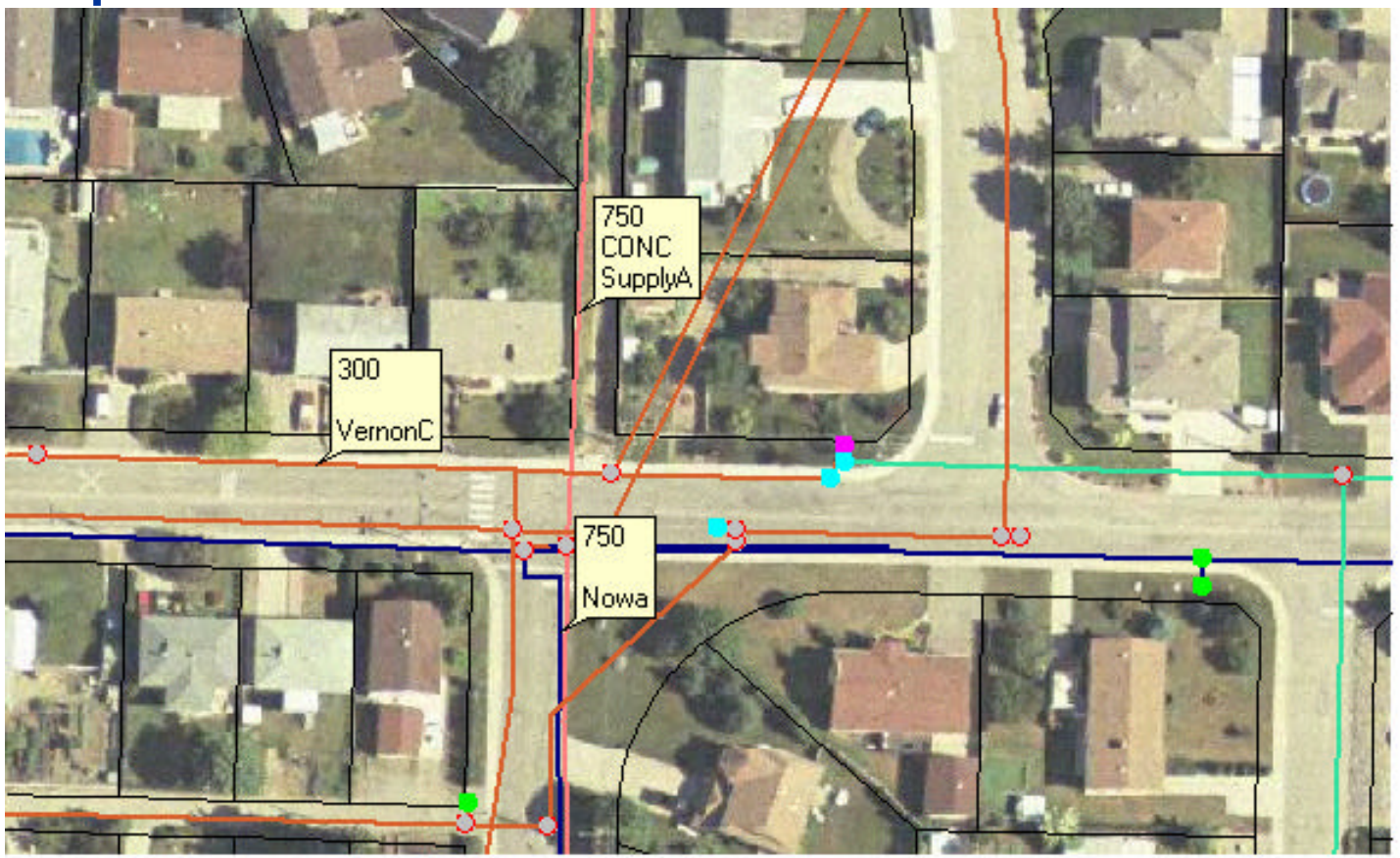
Challenges…

- Three different local authorities with own:
  - Data sets
  - GIS software
  - Financial Systems



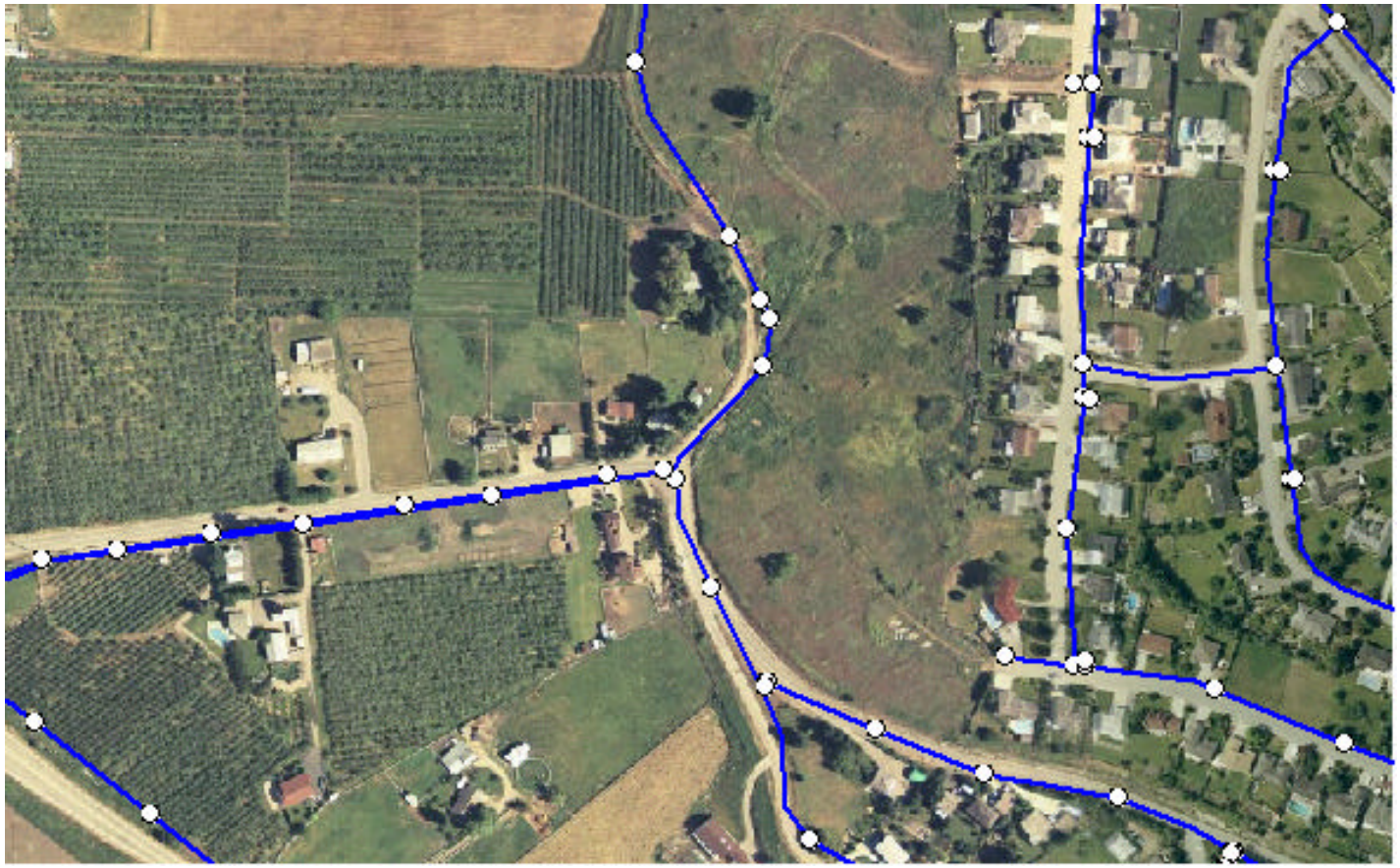
Challenges..

- Separate water networks



Challenges…

- Combined Domestic and Irrigation Network



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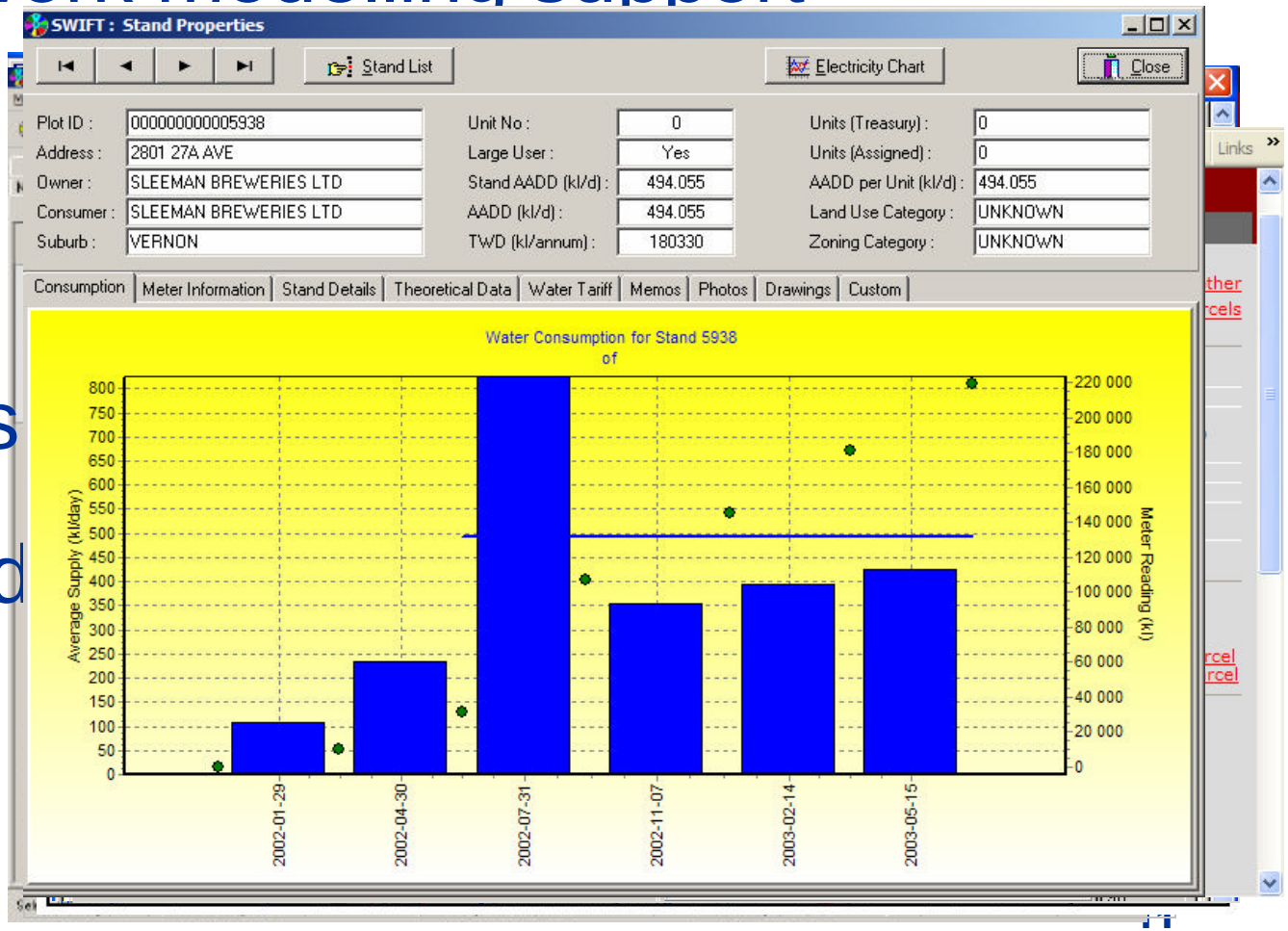
Priorities

- Water network modelling support
  - Demand
  - Hydraulic
  - Financial
- Map Books
- Web based viewer



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GIS goals

- Cost effective: Return on Investment
- Data warehouse concept
  - Use existing available data sets
  - GVW responsible for water network only
- Minimize duplication of data

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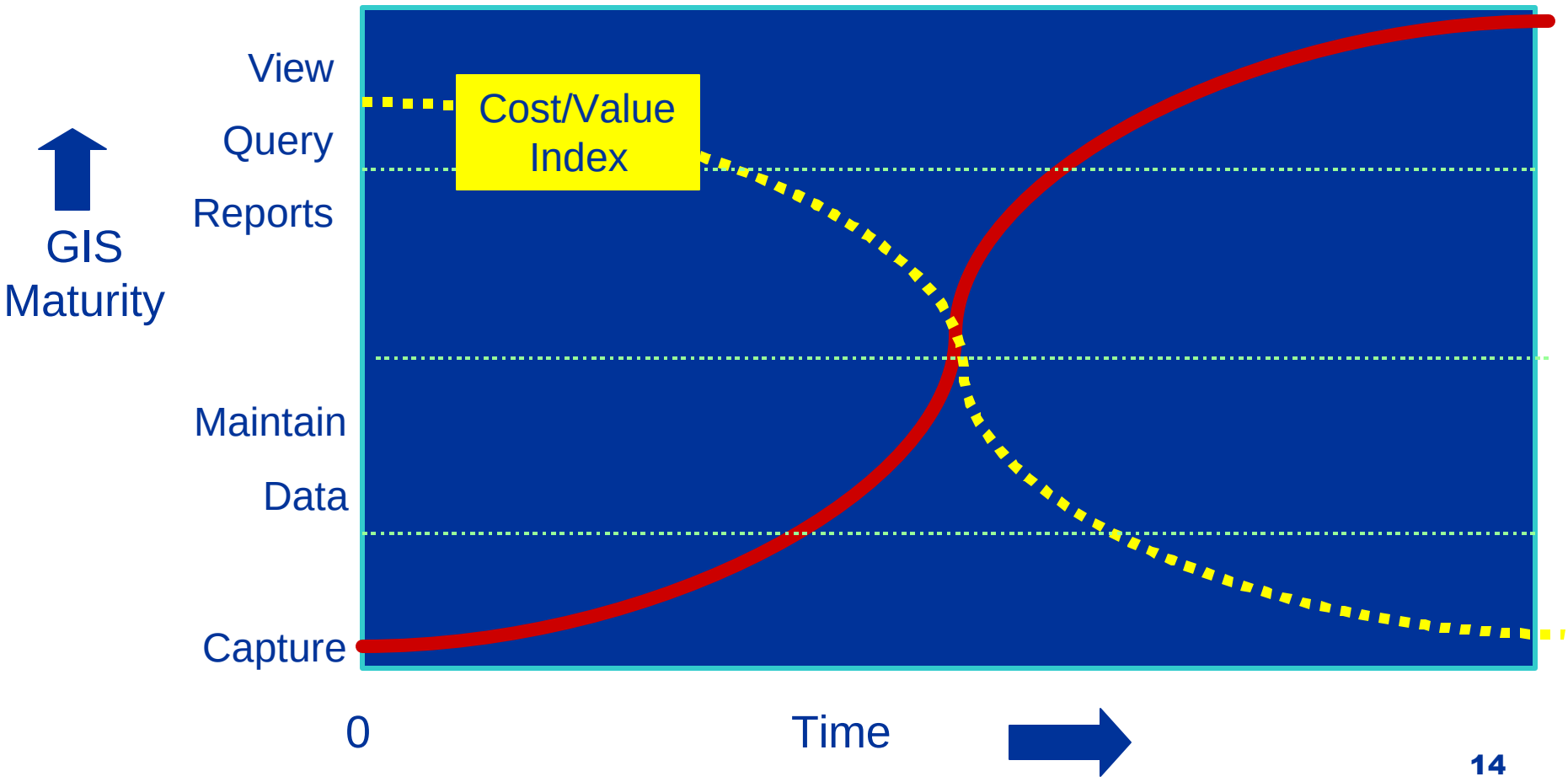
Cost effective GIS



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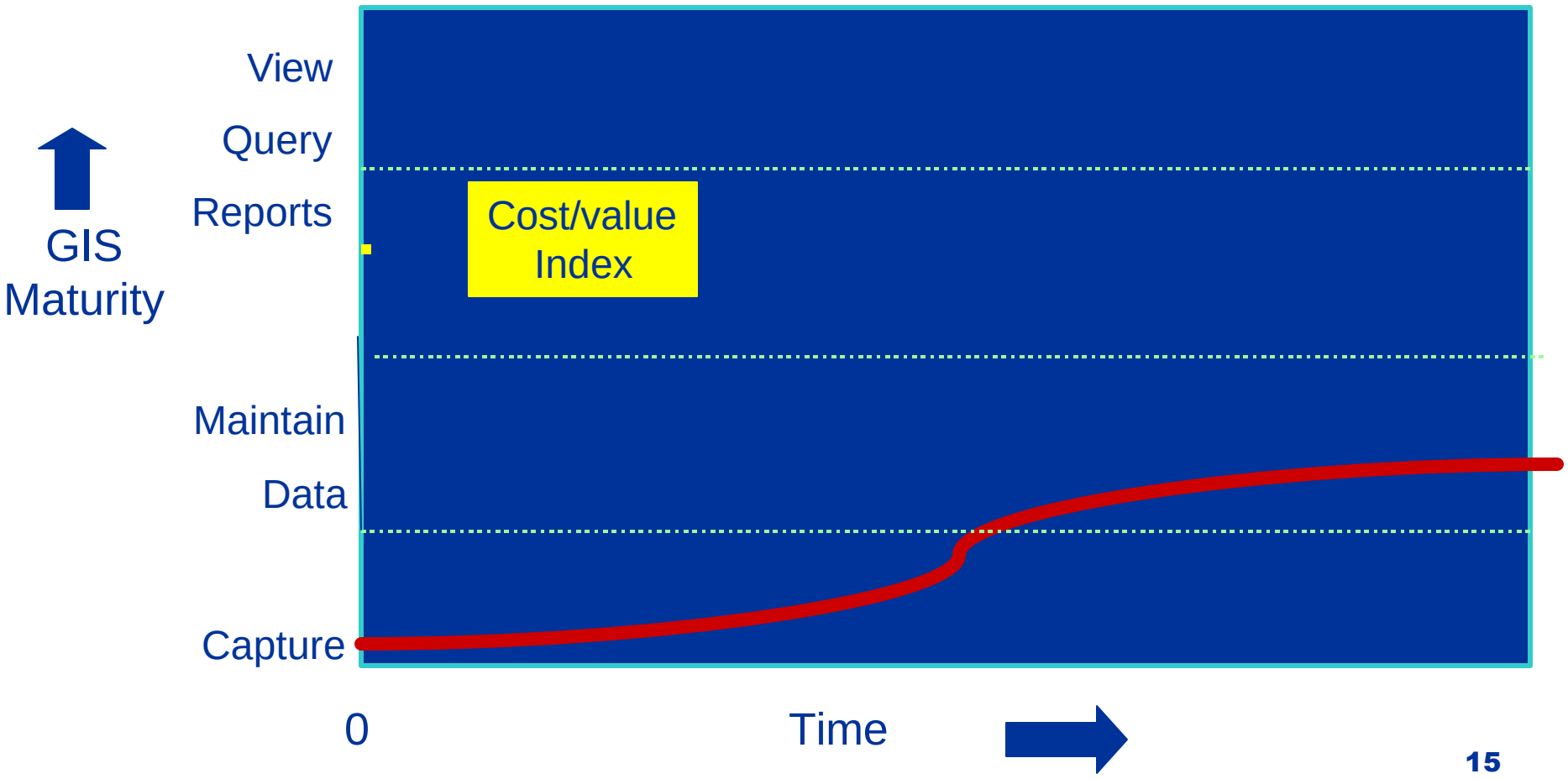
Cost effective GIS



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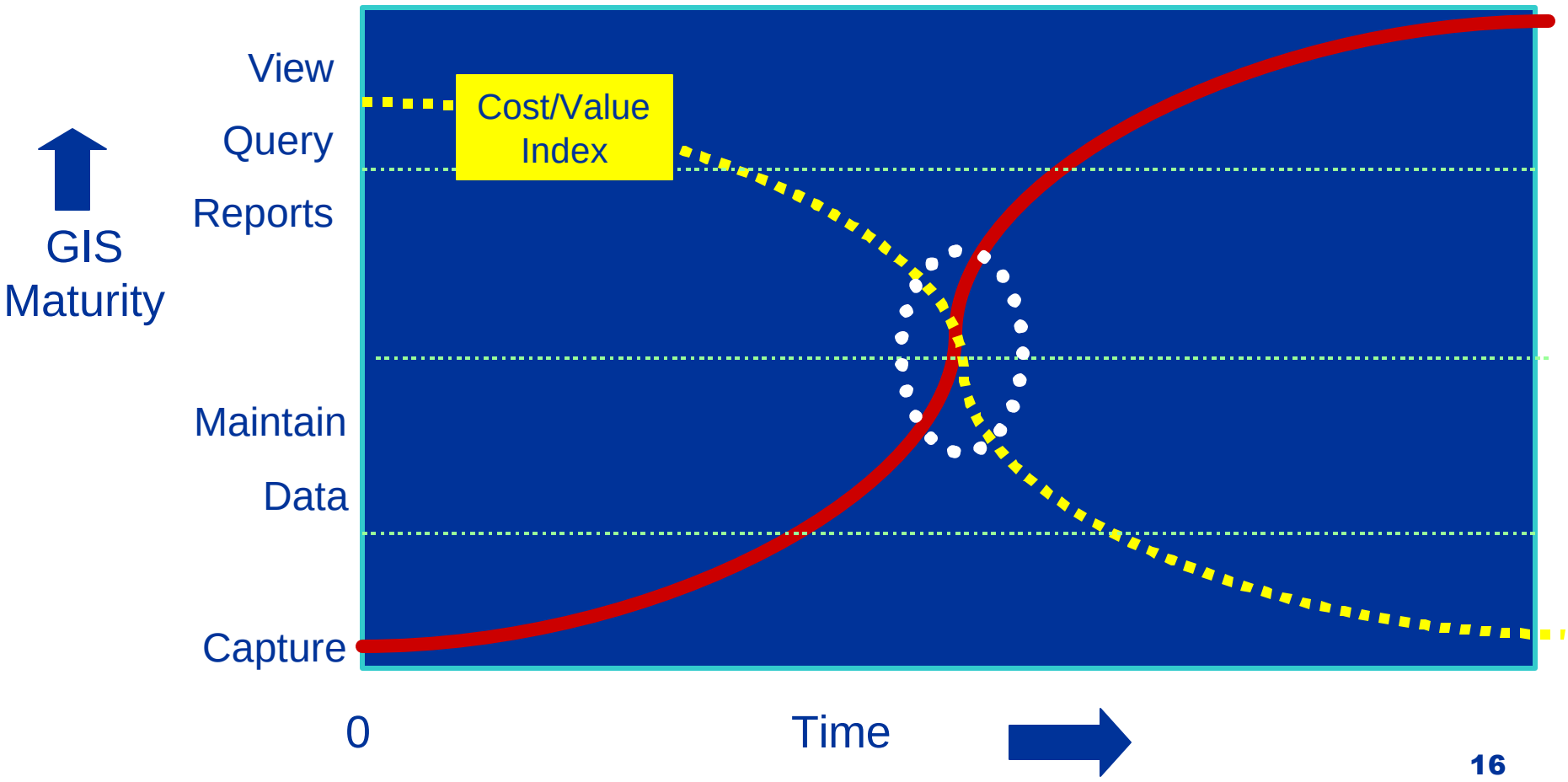
Cost effective GIS



GIS Data Warehouse

Water Network Data Set

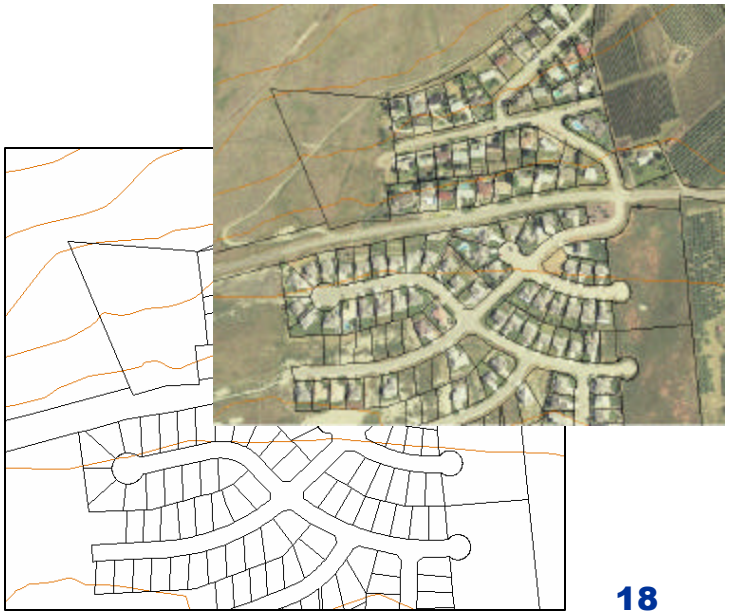
- Water network
- Water meter readings

GIS Data Warehouse

Water Network Data Set

Shared Data Sets

- Ortho-photos
- Contours/DEM
- Parcel base map



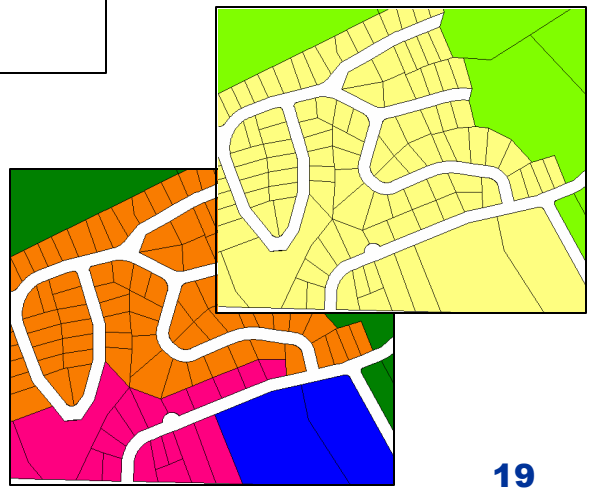
GIS Data Warehouse

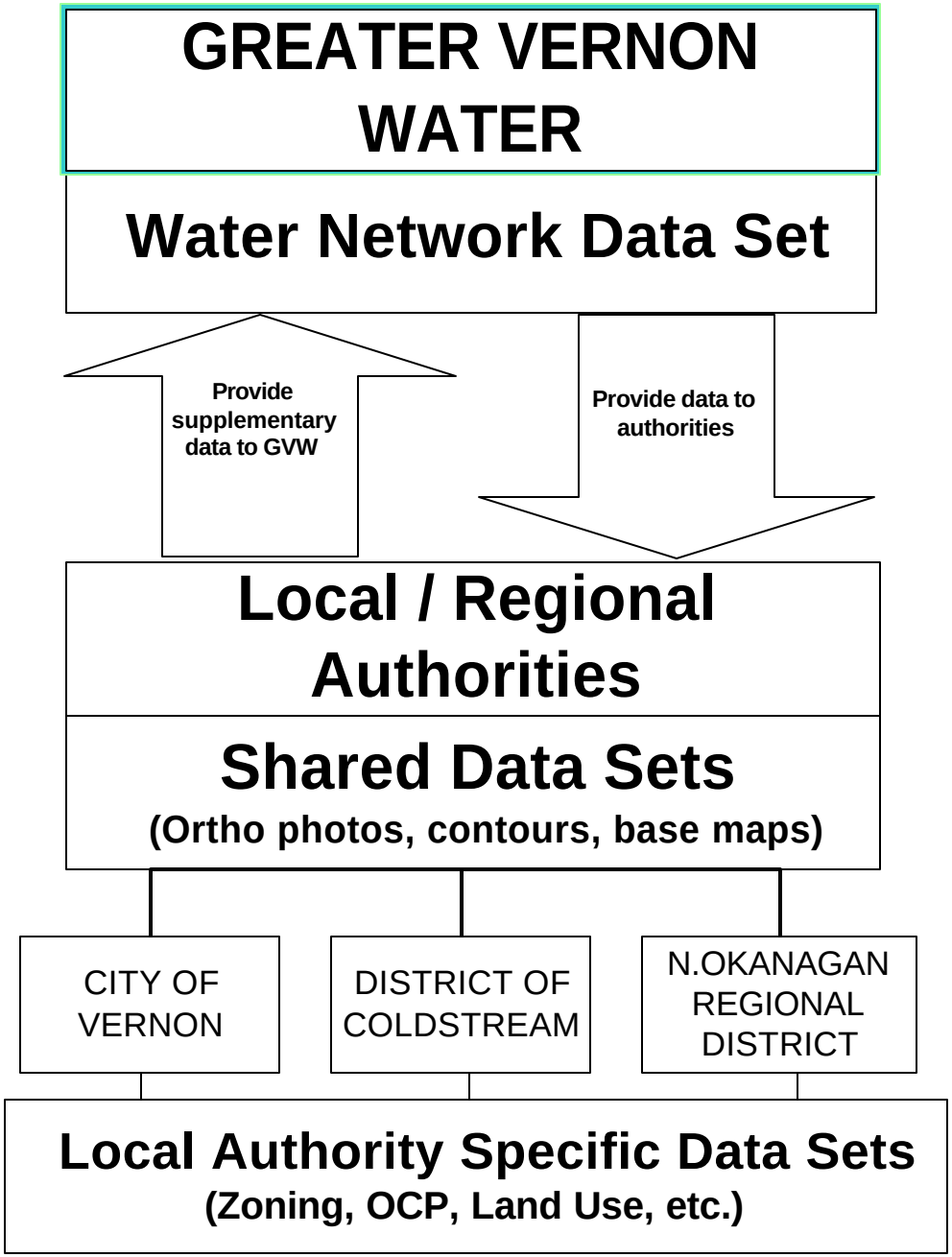
Water Network Data Set

Shared Data Sets

Local Authority Specific Data Sets

- Land use
- Zoning
- OCP

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Water Network Data Set
Provide supplementary data to GVW
Provide data to authorities
Local / Regional Authorities
Shared Data Sets
(Ortho photos, contours, base maps)
CITY OF VERNON
DISTRICT OF COLDSTREAM
N.OKANAGAN REGIONAL DISTRICT
Local Authority Specific Data Sets
(Zoning, OCP, Land Use, etc.)

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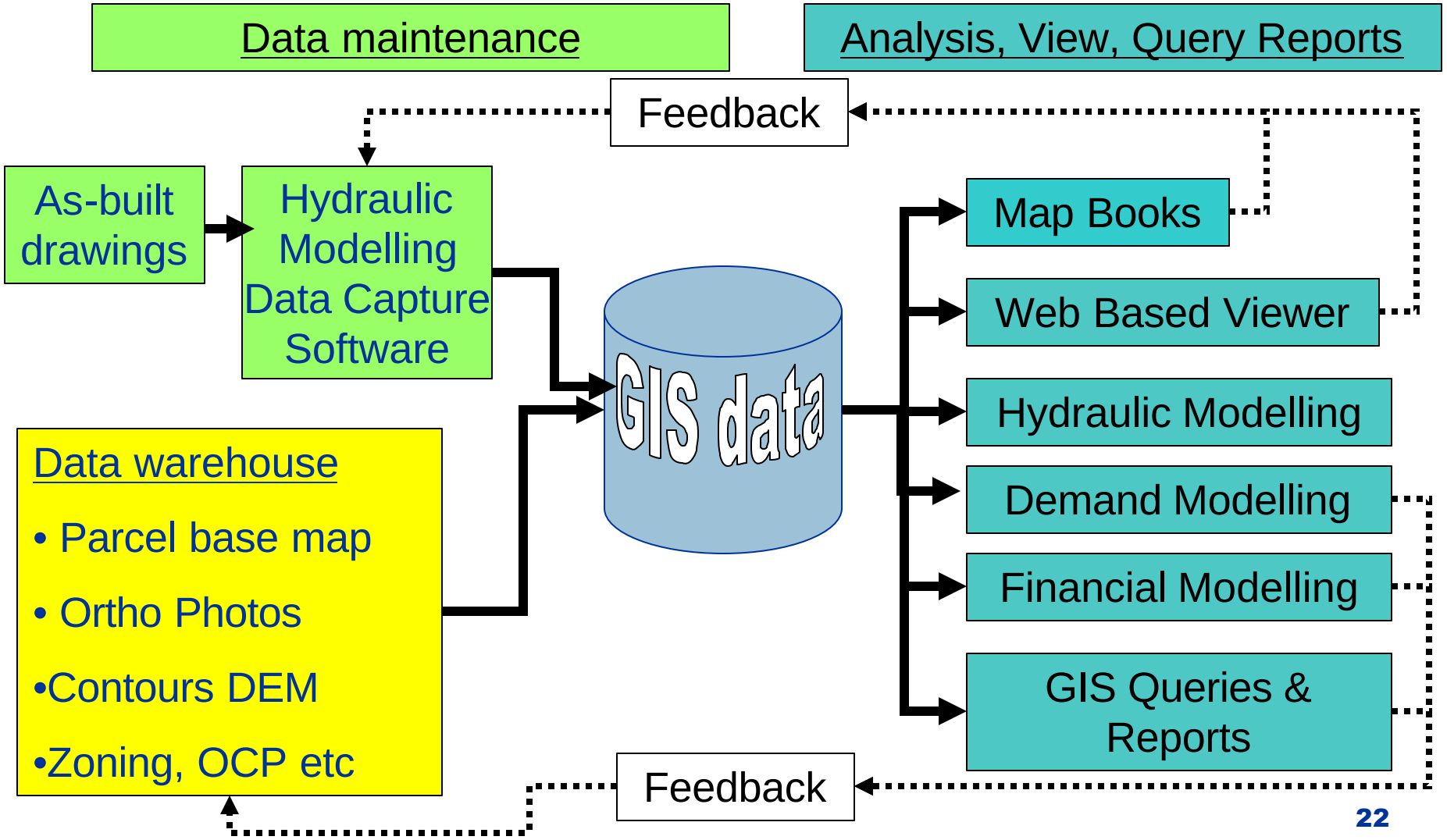
Minimize Duplication of Data

- Previously different data sets for:
  - Modelling applications
  - GIS
  - Mapbooks etc..
- Combined to **one** network data set for all applications

GIS data flow



Lessons learned

- Management support
- Focus on high priority projects
- Result orientated
- Be sensitive to needs of organization
- Encourage the use of GIS to support projects.

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