



GeoComm

Preparing GIS Data for Next Generation 9-1-1 Data Provisioning

Jessica Beierman
Brooks Shannon

Agenda

GIS Data for NG9-1-1

- *NG9-1-1 Goals*
- *Assessment*
- *Data development needs*
- *GIS data maintenance*
- *Lessons learned*

NG9-1-1 Needs and Goals

9-1-1 call routing

9-1-1 record validation

Call taker mapping display

Near real-time updates

Transitional GIS derived MSAG

GIS data assessment

GIS data layers	Topology
	Attributes
	Data Schema

Associated database	All database
---------------------	--------------

Synchronization	All database to Structure Points
	All database to Road Centerlines
	Structure Points to Road Centerlines

GIS Data layers

Road
Centerline

Service Area
Polygons (Fire,
Law, EMS)

PSAP
Boundaries

Site/Structure
Points

Road Name
Alias

County/State
Boundaries

Municipal
Boundaries

Data assessment & development needs

GIS data layers

Topology

Attributes

Data Schema

Associated database

All database

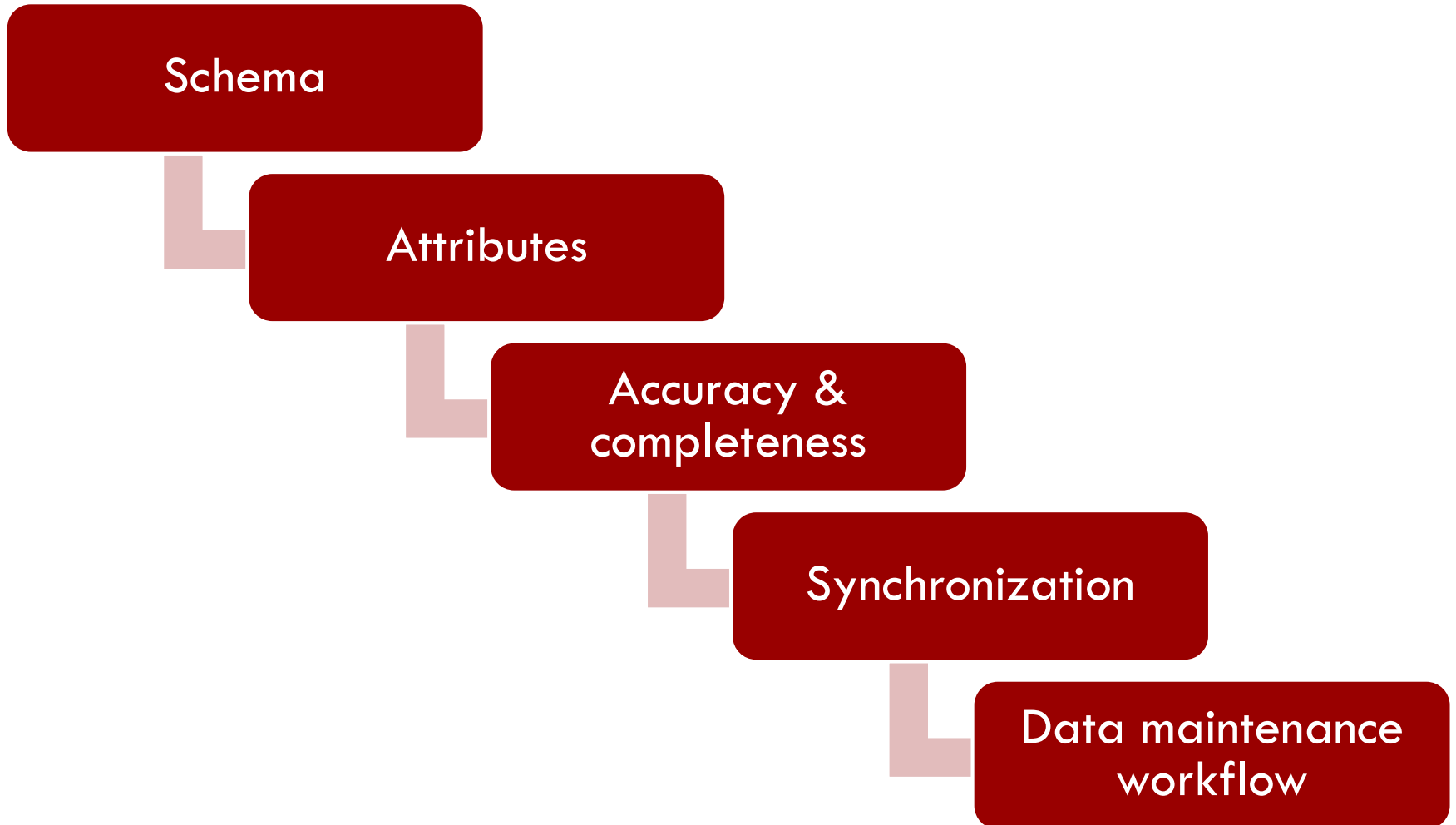
Synchronization

All database to Structure Points

All database to Road Centerlines

Structure Points to Road Centerlines

GIS data development process



Workflow Objectives and Goals

“Review the State’s existing maintenance workflows, recommend / develop new workflows for GIS map data maintenance and associated databases”

Workflows

Data
discrepancies

Addressing Coordinators

Call Takers

New address
additions &
validation

Addressing Coordinator input

Field verification

GIS data
QA/QC

E9-1-1 Board process

GeoComm Managed Services process

GIS data
provisioning

GeoLynx Server for Call Takers

GeoLynx Spatial Router (ECRF & LVF)

MSAG delta files

GIS Data Maintenance tools

GeoLynx Server
Web DMS &
Change Requests

ArcGIS Desktop

&

GeoLynx DMS
tools

- ❑ Configurable display
- ❑ Configurable by user role assignment

- ❑ Configurable to data schema
- ❑ Tool development necessary for workflow needs

- ❑ Tied to each other via Workflow Manager module

Daily GIS provisioning process

GIS dataset maintenance at the State of Vermont level



Replication



Changes processed in GeoComm database



MSAG delta detection



QA/QC

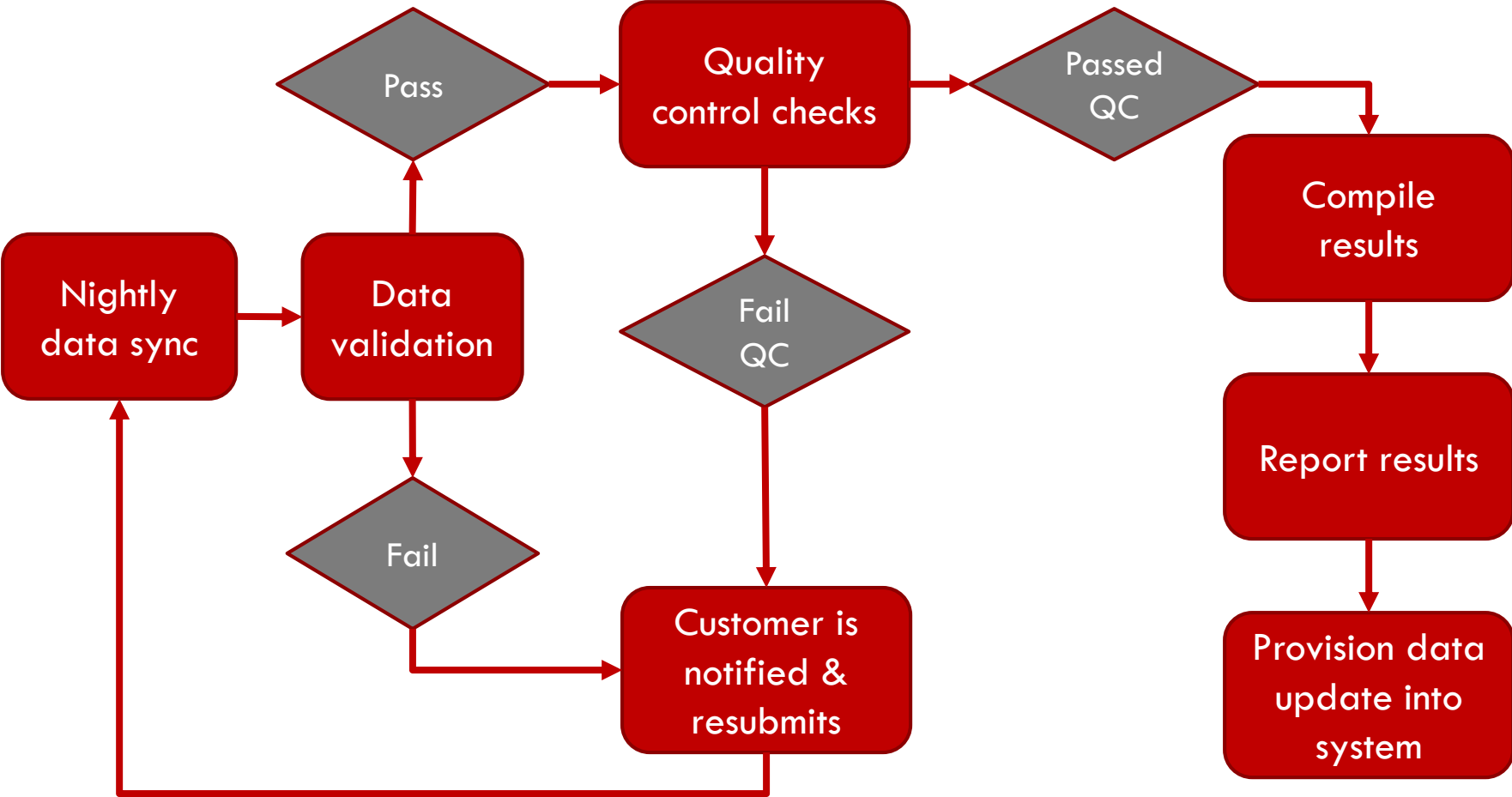


Results reporting



Provisioning

GIS Managed Services Workflow



GIS Managed Services

“GeoComm shall design and install an end-to-end NG 9-1-1 GIS Data provisioning and mapping solution that will reconcile GIS and MSAG data”

MSAG Delta Process

Quality control

Review GeoLynx Spatial Router Transaction logs

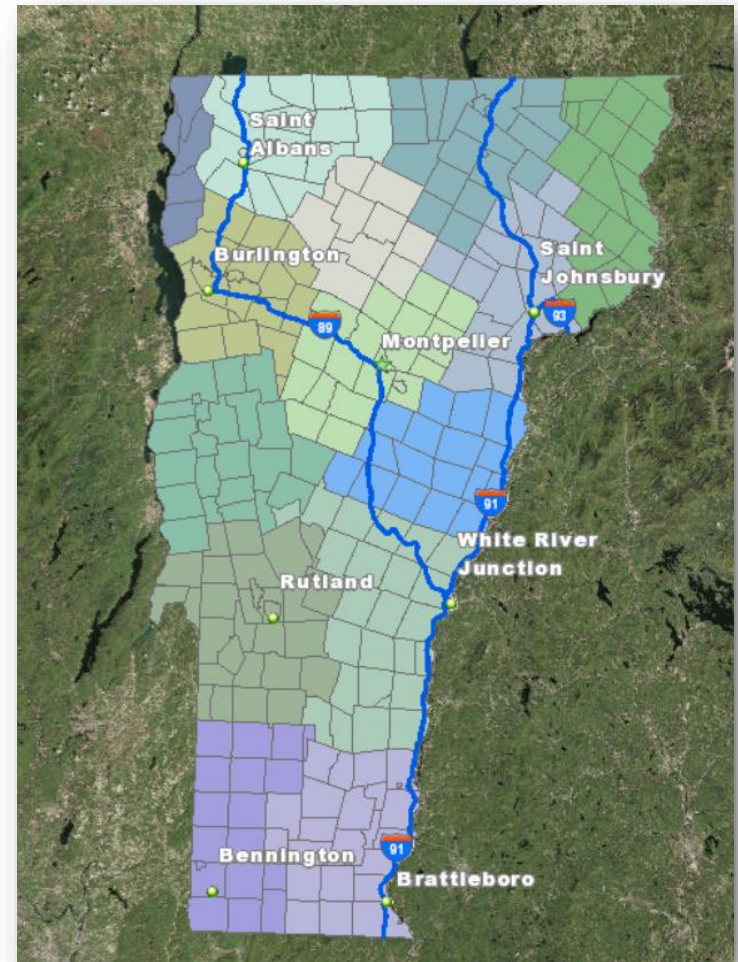
GeoLynx Spatial Router Provisioning

GeoLynx Server Provisioning

Caching

Lessons Learned

- Importance of well-established workflows for ongoing maintenance
- Importance of early focus on GIS data quality control and development for NG9-1-1



Discussion

An aerial photograph of a city grid, showing a river on the right side and a pond in the center. The text "Mapping the Future of 9-1-1" is overlaid on the left side of the image.

**Mapping the
Future of 9-1-1**

GeoComm