An aerial photograph of a city at night, showing a complex network of roads and buildings. The image is characterized by long, curved light trails from traffic, creating a sense of motion and activity. The colors are predominantly dark blues and greys, with bright white and yellow light trails providing contrast.

MSGIC Tools for
Effective GIS
Management
- Part 3 -

MSGIC

*“A commitment to excellence in the development and coordination
of geographic information technologies.”*

Maryland
State
Government
Geographic
Information
Coordinating
Committee



MSGIC Goals

- | Reduce costly duplication of efforts
- | Support development of data useful to multiple agency purposes
- | Serve as GIS focal point among state agencies
- | Develop guidelines for GIS implementation & preservation of data



GIS System Life Cycle

- Part 1 -

Plan

Acquire Data

Document Data

- Part 2 -

Train Staff

GIS System

Analyze Data

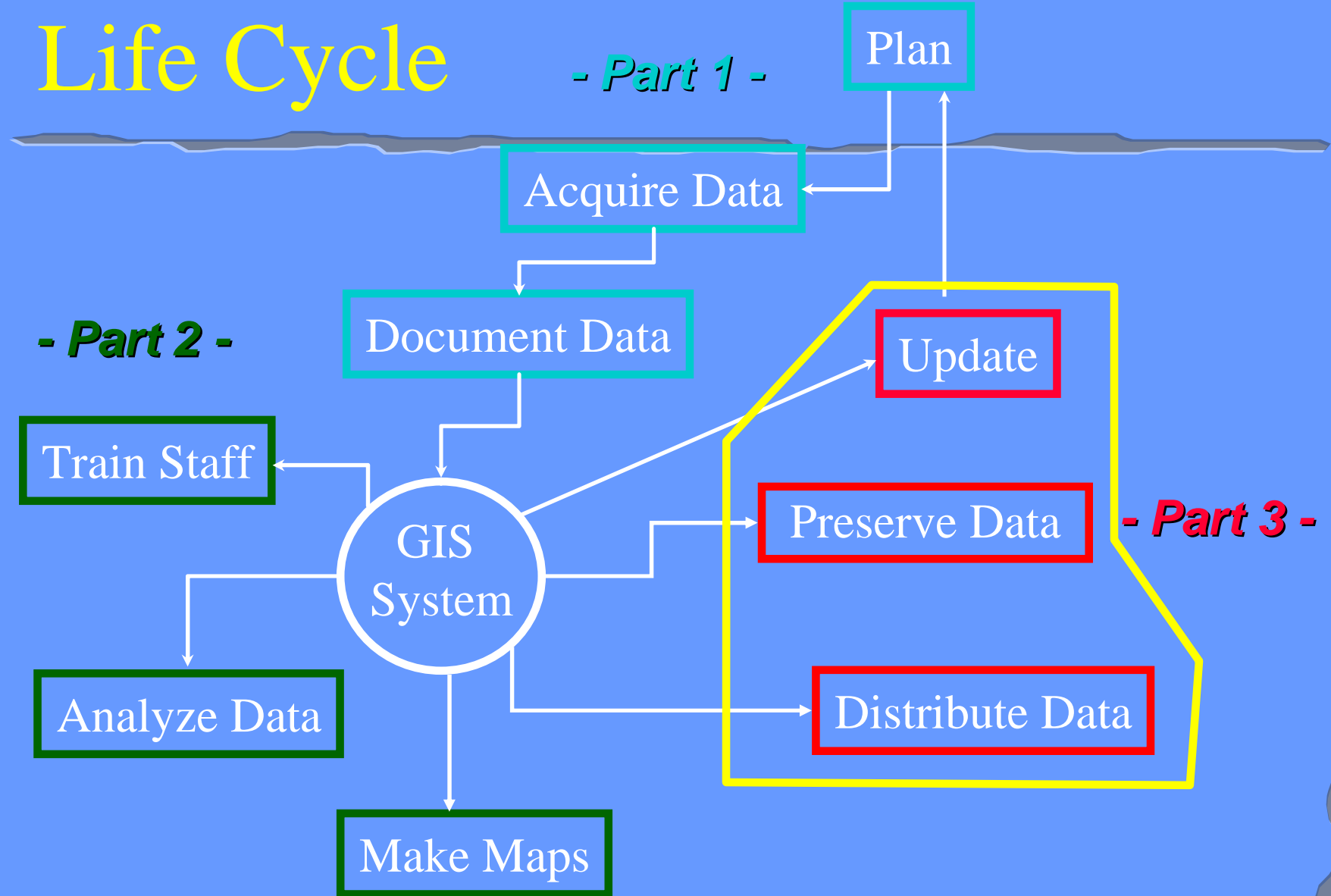
Make Maps

Update

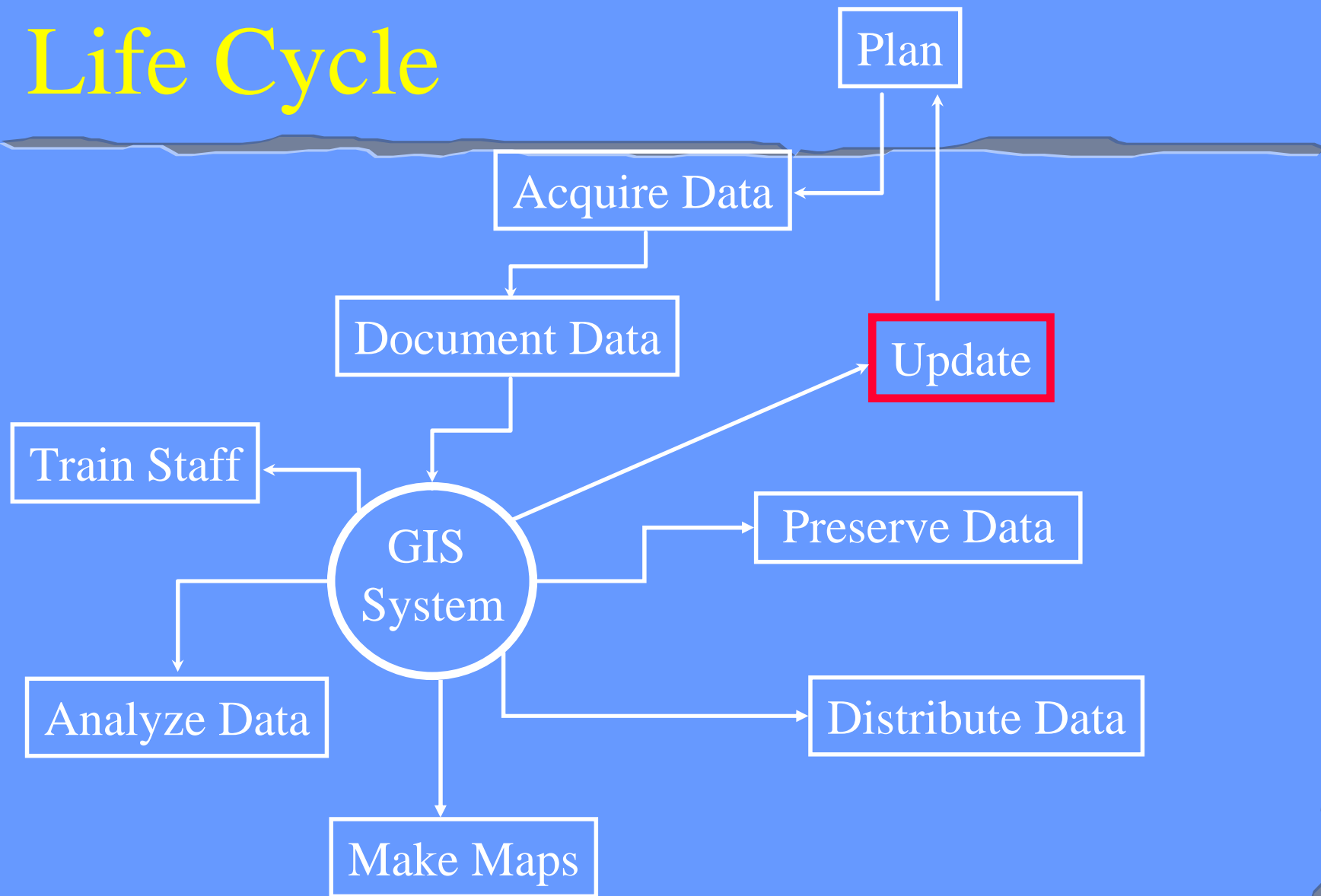
Preserve Data

- Part 3 -

Distribute Data



GIS System Life Cycle

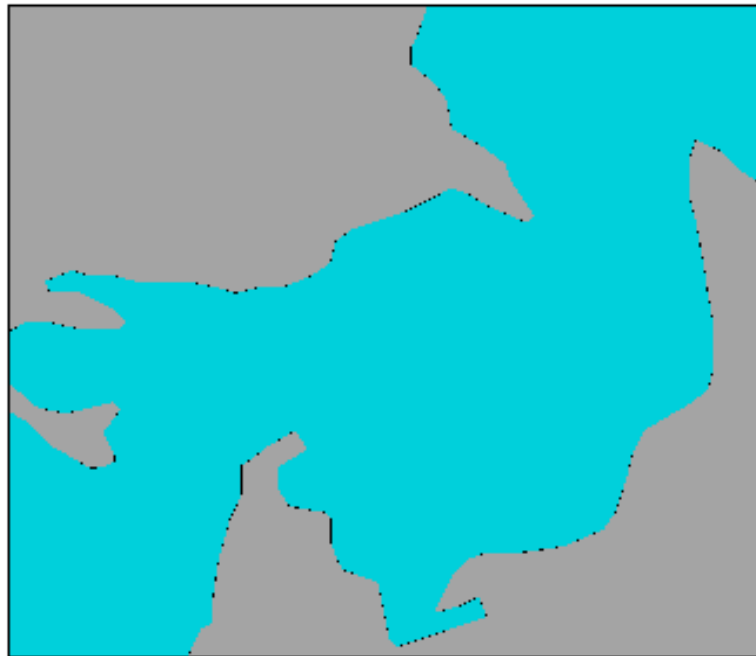


Update Data

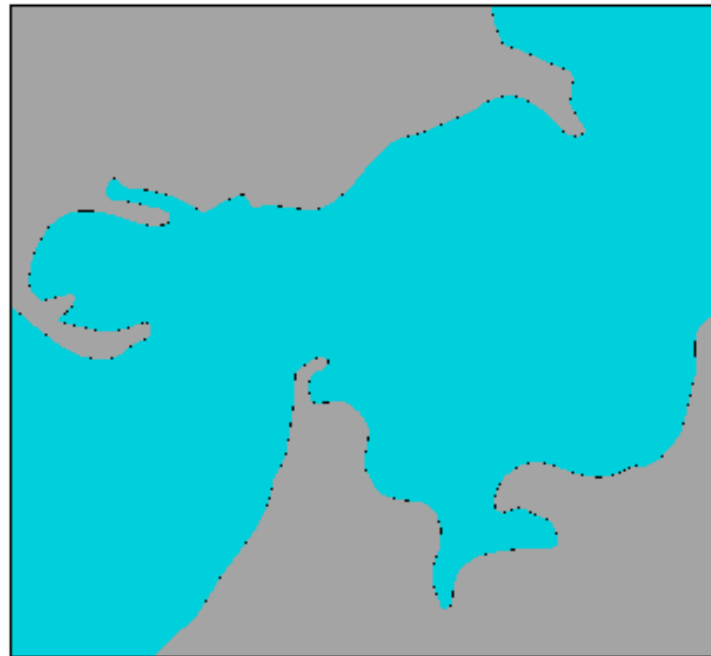
- | Improve accuracy
- | Gather up-to-date information
- | Enhance attributes
- | Use improved techniques/technology
- | Incorporate new standards
- | Keep documentation up-to-date



Improve Accuracy of Shoreline Detail Charles County



1:100,000 Scale
US Census Bureau
TIGER Line File

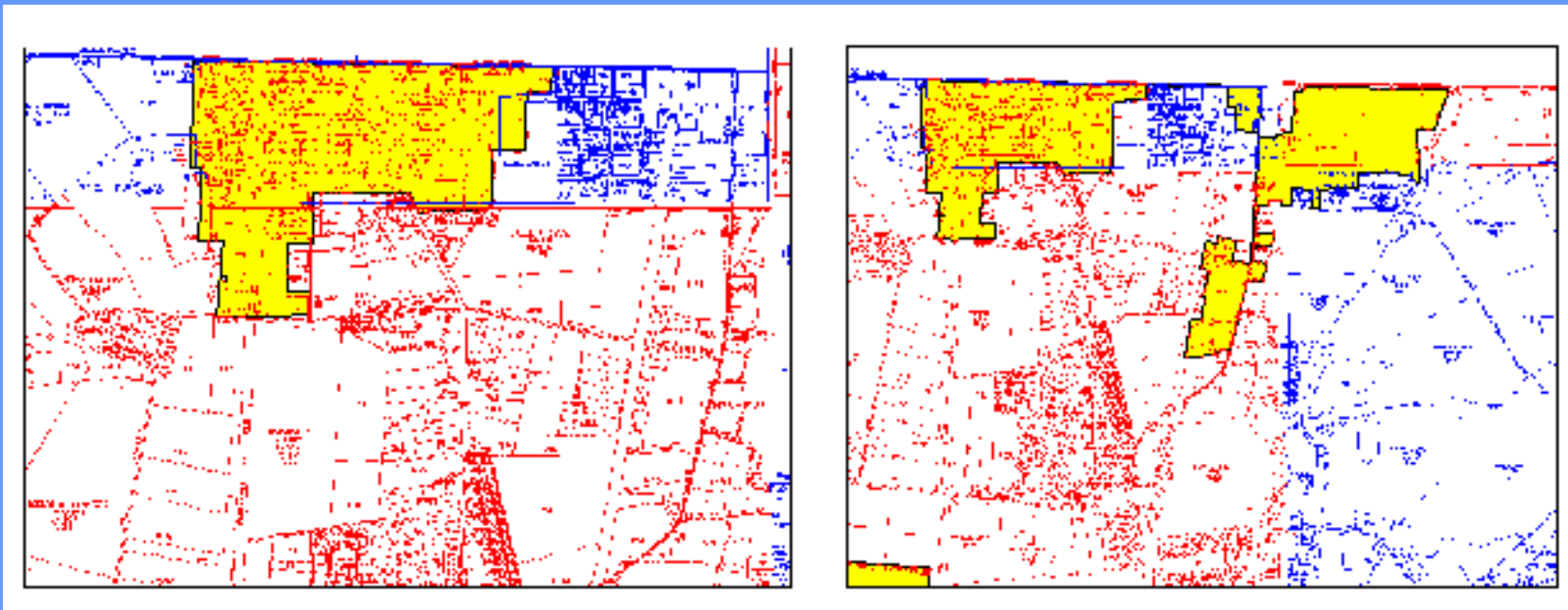


1:24,000 Scale
MD State Highway
Administration



Gather Up-To-Date Information

Town of Delmar - Annexation



1990

1994

Base map from MdPropertyView



Enhance Attributes

Town of Delmar - Annexation

Attributes of Wicomun5.shp

<i>Wicomun2#</i>	<i>Wicomun2-id</i>	<i>Name</i>
2	1	SHARPTOWN
3	2	MARDELA SPRINGS
4	3	DELMAR
5	2	MARDELA SPRINGS
6	8	SALISBURY
7	5	HEBRON
8	6	PITTSVILLE
9	7	WILLARDS
10	8	SALISBURY
11	8	SALISBURY
12	9	
13	10	

Attributes of Wicomun2

<i>Perimeter</i>	<i>Wicomun2#</i>	<i>Wicomun2-id</i>	<i>Name</i>	<i>Type</i>	<i>Muntype</i>	<i>Date</i>
28120.328	9	7	WILLARDS	1	MUN	0
3171.974	10	8	SALISBURY	1	MUN	0
42360.621	11	8	SALISBURY	1	MUN	0
11721.369	12	9		0		0
19002.281	13	10		0		0
1731.837	14	8	SALISBURY	1	MUN	0
23900.822	15	11		0		0
32478.559	16	8	SALISBURY	1	MUN	0
49613.254	17	12	FRUITLAND	1	DGN	100397
4169.628	18	13	FRUITLAND	1	DGN	100397
2146.106	19	14	FRUITLAND	1	DGN	100397



Utilize Improved Techniques/Technology

- | Using new image files as a base map
- | Take advantage of new desktop mapping software
- | Internet delivery of data and services
- | Improved data analysis
 - Cross-correlation, Kriging
- | Improved data input methods
 - Scanning, cameras, CAD, OCR



Incorporate New Standards

- | Adapting newer file formats
 - Vector files - Digital Line Graph (DLG) vs ESRI's Arc Export File (E00) or Shape file
 - Raster Files - TARGA vs Tagged Image File Format (TIFF)
- | Evolving guidelines & standards - federal, state, & industry



Documentation

- Update documentation whenever the data is changed



UMBC's GEM!



ArcView GIS

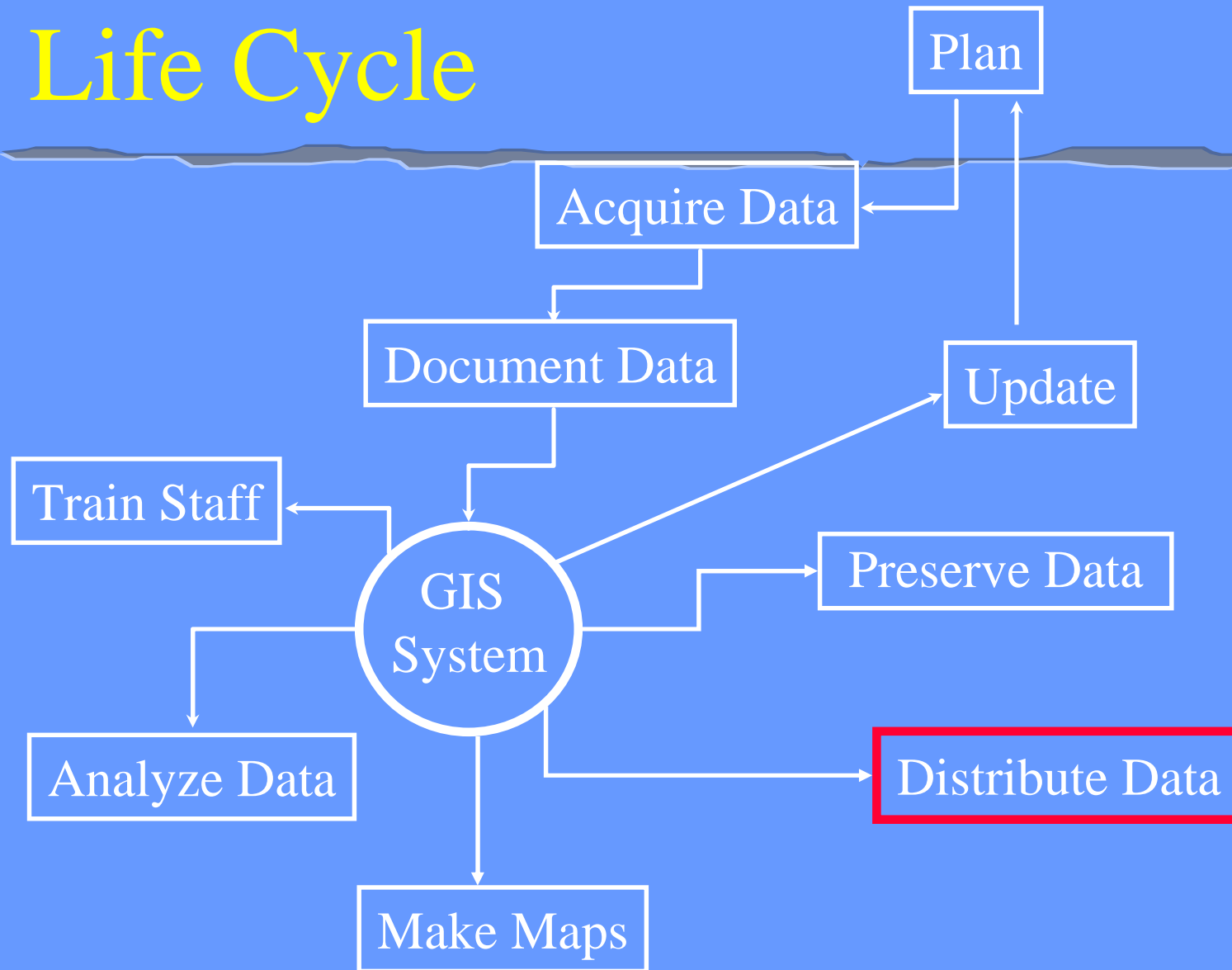


MSGIC Products Supporting Updating Data

- | GIS Resource Guide
- | Theme Layer & Base Map Survey
- | GIS Spatial Quality Guidelines
- | Technology Toolbox
- | Cartographic Guidelines
- | FGDC's Content Standards for Digital Geospatial Metadata
- | Bounding Coordinates for Maryland



GIS System Life Cycle



Distribute Data

- | Who are customers?
- | What file format?
- | Media?
- | What to charge?
- | License agreement
- | Partnerships
- | Proactive vs reactive



Customers

- | Experienced vs novice users
- | Citizen or Freedom of Information Act requests
- | Anticipated hardware and software platforms
- | Customer education
- | How much help or support?



File Formats

- | Generic file structures
 - Raster TIFF/TFW
 - Vector E00 or Shape file
- | Moving targets
 - DLG, SDTS, DOQ
- | Software compatibility
 - GIS, “graphics” packages, CADD
- | Multi-platform
 - PC (DOS, Windows), UNIX, MAC



Media

- | Who chooses - provider or user?
- | Floppy
- | Tape, Zip, Jazz
- | CD-ROM, CD-R, DVD-ROM, DVD-R, etc.
 - ISO 9660, Multi-session, Packet writing
- | On-line
 - NSDI Clearinghouse
 - Web site



Cost

- | Federal model
 - Free, no license agreement
- | Maryland State model (at present)
 - Copyrighted, license agreement, charge
- | Cost recovery
 - Distribution
 - Program development



License Agreements

- | Maintain copyright
 - Helps leverage partnerships
- | Limit redistribution
 - Controls data integrity
- | Warranties and liabilities
- | Many other state's with similar position



Partnerships

- | Technology Toolbox
 - State agencies data (federal, local, private)
 - Non-exclusive resellers (7 at present)
- | MSGIC & MLOGIC relationship
- | Vertical integration
 - Federal - State - Local

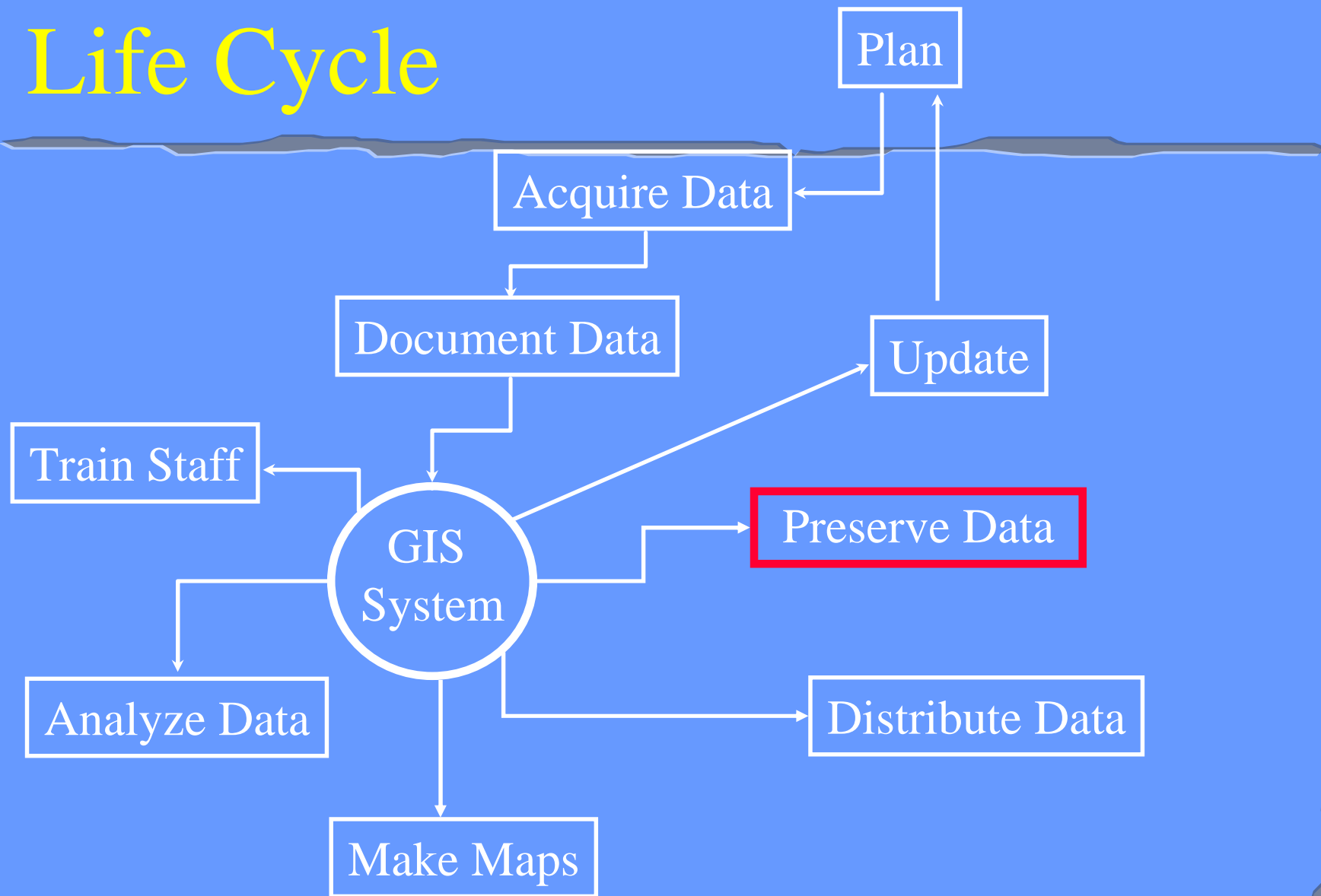


MSGIC Products Supporting Data Distribution

- | GIS Resource Guide
- | Digital Spatial Data Transfer Guidelines
- | Data Distribution License Agreement
- | Technology Toolbox Business Plan
- | Reseller's License Agreement
- | Maryland's Coastal Bays CD-ROM
- | FGDC's Content Standards for Digital Geospatial Metadata



GIS System Life Cycle



Data Preservation

- | Permanent means forever
 - Inventories
 - Retention schedules
 - Deposits
- | Keeping pace with technology
 - Form
 - Format
- | Force of law, force of habit



Will it Still be There Tomorrow?



Where are my 8-Tracks?



Spatial Data of the Past



Spatial Data of Today



Documentation Metadata and Inventory

- | Questions for the data manager
& archivist?
 - What is it?
 - Where is it?

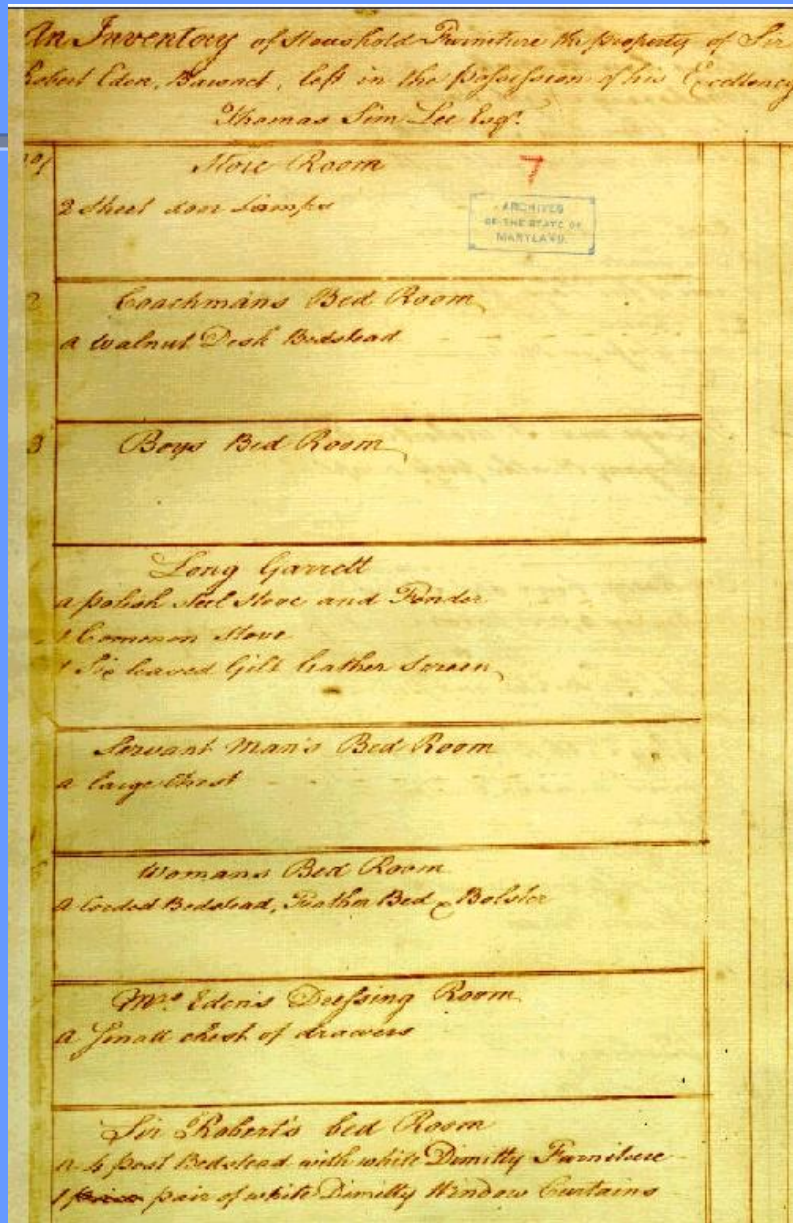


Variety of Documents

Maryland State Archives S455-D012242A.TIF



Inventories of the Past



Inventory of confiscated
property:

Robert Eden, 1781

Annapolis



Inventories of Yesterday

ASSESSMENTS AND TAXATION		Special Programs/Map Division
Item No.	Description	Retention
	- Supersedes Schedule #708 -	
1	<p><u>Tax Maps (Property Maps)</u></p> <p>On these linen and sepia maps, blueprints and tracings of acreage and subdivision property are parcel numbers, deed reference, ownership and acreage. Remade annually.</p>	Microfilm annually, deposit at the Archives. Retain originals permanently.
2	<p><u>Acreage Card File</u></p> <p>Each card gives the map and grid numbers where property appears on the map, name of owner, the parcel number, the district, the name of area and deed liber and folio. Partial transfers of property are recorded giving name of the buyer, amount of acreage, and date of transition. This file is used in searching for titles when ownership is unknown.</p>	Retain permanently.



Inventories of Today

MS-DOS Prompt - DBASE

Auto

Records Organize Go To Exit

COUNTY
MUNICIP
AGENCY OFFICE OF PLANNING

SERIES (MdProperty View)

DATE 1996

DATE_ADDED

QUALIFIER T

TRANSER 2775

DECK 1

RANGE 36

SECTION 8

CONTAINER 50

DATE_REC 06/25/97

DATE_PROC / /

NEW_VOLUME 0


NO_VOLUMES 0

NEW_BOXES 0

NO_BOXES 0

Edit	I:\transer\TRANSER	Rec 2775/2927	File	RecLock	Num
------	--------------------	---------------	------	---------	-----

Record may have been changed (press SPACE)



Confused?

- | MSGIC to the rescue
- | System discipline
- | Storage media and format
- | Transfer of permanent records to the Archives





**Maryland
State Government
Geographic Information
Coordinating Committee (MSGIC)**

William Donald Schaefer
Governor

"A commitment to excellence in the development and coordination of geographic information technologies."

Digital Spatial Metadata Standard

Advisory Report to the Maryland State Government Geographic Information Coordinating Committee (MSGIC)

Prepared by the
MSGIC Standards Subcommittee

July 1994





Parris N. Glendening
Governor

Maryland
State Government
Geographic Information
Coordinating Committee (MSGIC)

"A commitment to excellence in the development and coordination of geographic information technologies."

MARYLAND STATE GEOGRAPHIC INFORMATION COORDINATING COMMITTEE:

STANDARDS FOR RECORDS PRESERVATION

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[RATIONALE](#)

[APPRAISAL AND RETENTION SCHEDULES](#)

[PRESERVATION AND STORAGE](#)

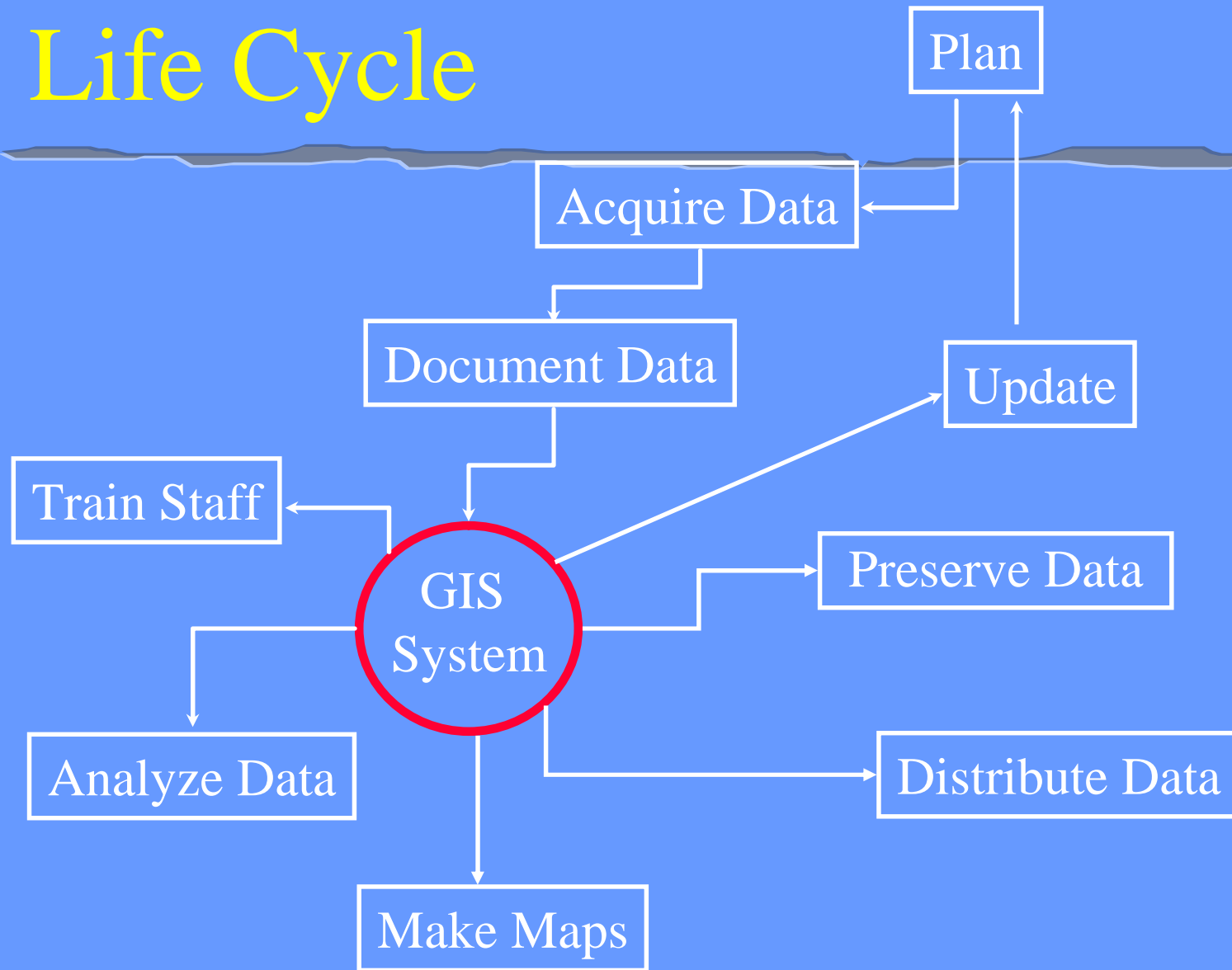
[www.mdarchives.state.md.us/
msgic/html/standcyr.html](http://www.mdarchives.state.md.us/msgic/html/standcyr.html)

MSGIC Products Supporting Preservation

- | Digital Spatial Metadata Standard
- | Preservation Standard
- | Cartographic Guidelines




GIS System Life Cycle



GIS System

“Now You Do that Voodoo Too”



An aerial photograph of a city at night, showing a complex network of roads and buildings. The image is characterized by numerous light trails from moving vehicles, creating a sense of motion and activity. The colors are predominantly dark blues and blacks, with bright white and yellow light trails from the cars. The overall atmosphere is dynamic and modern.

MSGIC Tools for
Effective GIS
Management
- Part 3 -