

# GIS in Vermont

John E. Adams AICP  
House Committee on Energy and Technology  
February 13, 2018



## **BUILD**

Vermont's Spatial Data  
Infrastructure  
(VSDI)



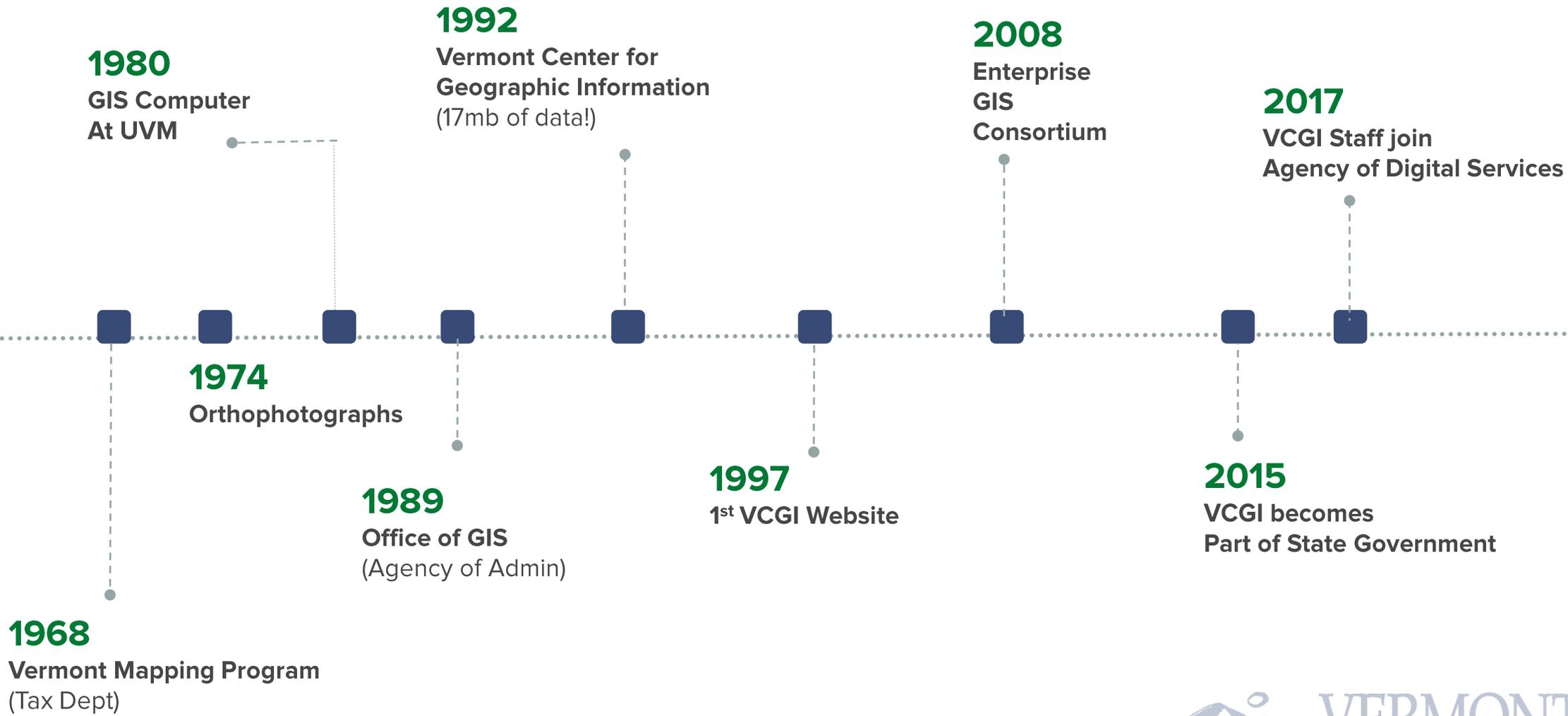
## **LEAD**

Development and  
use of Statewide  
Geographic Information  
System (VGIS)

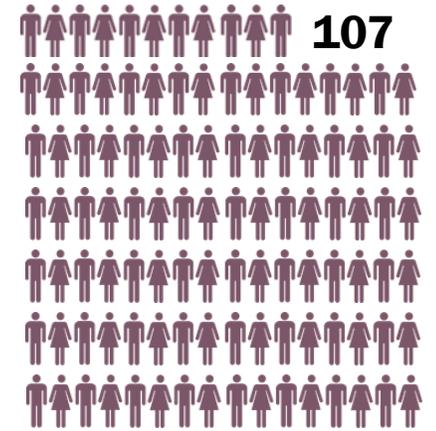


## **EMPOWER**

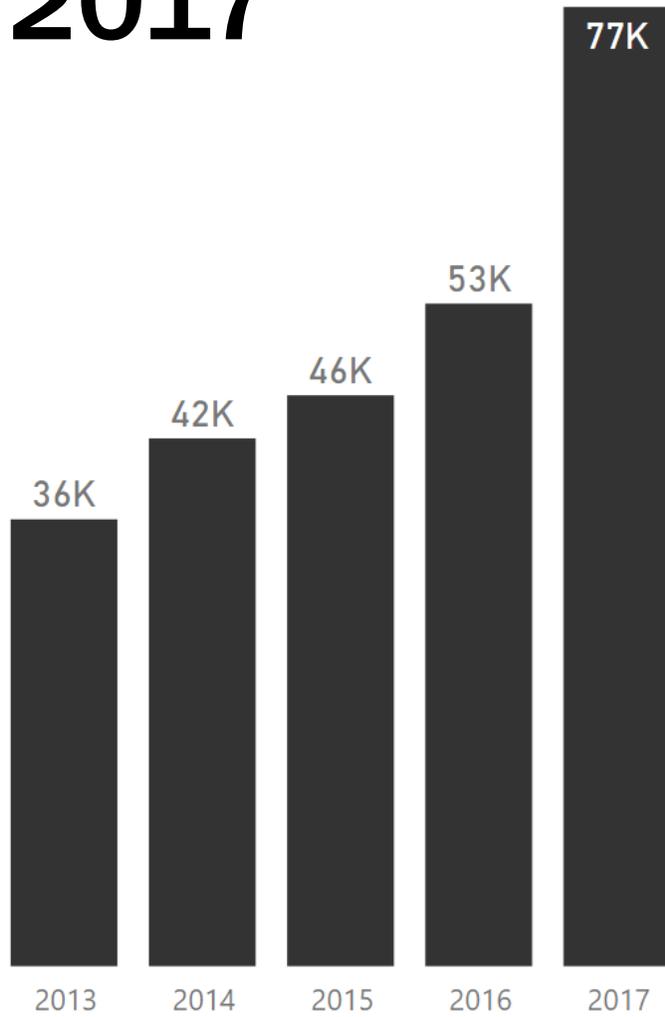
Data analysis,  
visualization and  
informed decision making



# 1992



# 2017



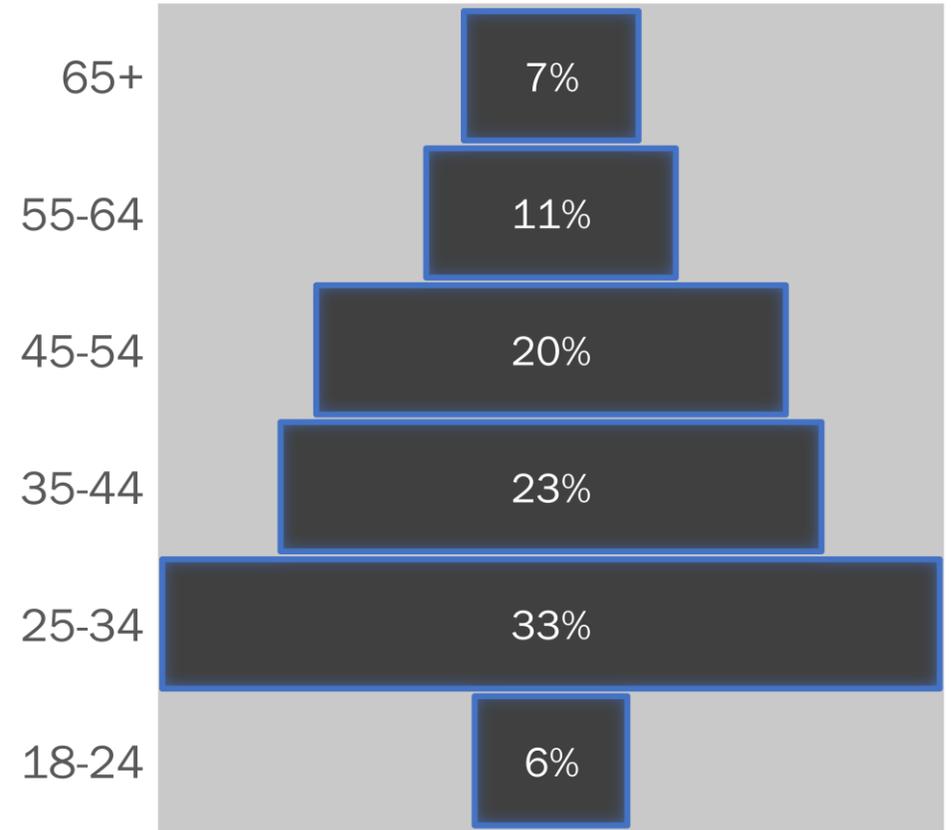
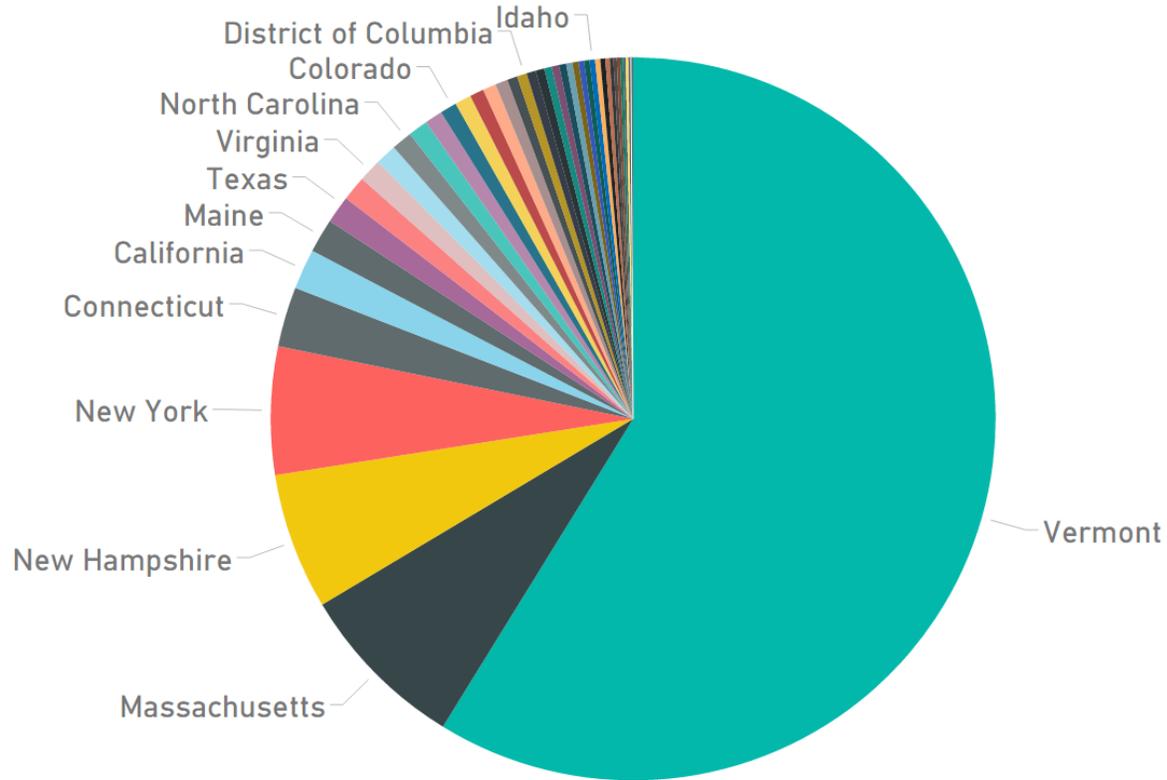
980  
available  
DATASETS

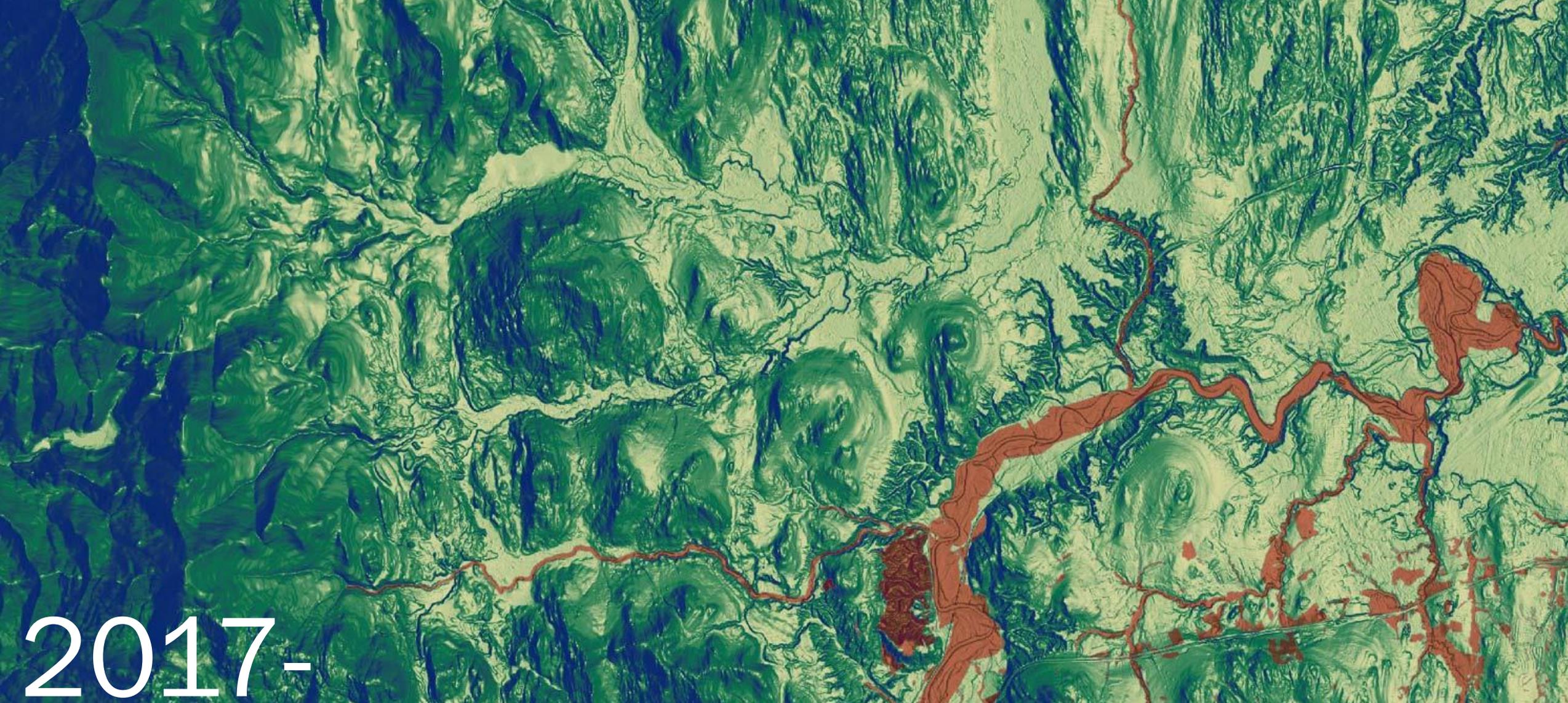
495  
thousand  
PAGEVIEWS

38.8  
million  
API REQUESTS

9  
terabytes  
DATA

# User Geography/Demographics





# 2017- 2020

STRATEGIC PLAN - ADOPTED 11/10/17

# Vermont's Enterprise GIS Consortium

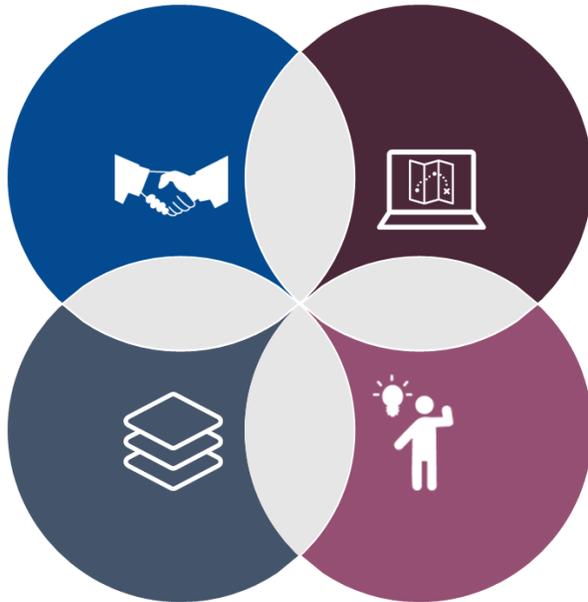
**MISSION:** The mission of the EGC is to improve quality & lower the cost of government services through coordinated investment, management, and application of geospatial data & systems.

## PARTNERSHIPS

Engage partners and lead a culture of information sharing that supports responsible decision making based on accurate data.

## DATA

Lead efforts to create and maintain high quality geospatial data necessary to meet the State's Goals.



## TECHNOLOGY

Coordinate investment & application of GIS technologies to support effective information sharing, collaboration, and cost savings.

## PEOPLE

Empower people to make, use, analyze, and share maps and geographic information.

# Vision for 2020

The work of the EGC will have contributed significantly to the Statewide strategic goals set by the Governor of Vermont: 1) **Growing the Vermont Economy**; 2) **Making Vermont an affordable place to live, work, and do business** and; 3) **Protecting vulnerable Vermonters**.

Whether having improved water quality, optimized snow plow routing, increased the predictability and speed of permitting or helped better target services for those struggling with opiate addiction – the geospatial data and technologies will have contributed to the partnerships, data, technology, and people responsible for finding innovative solutions some of the Vermont's biggest challenges.

# SPATIAL DATA INFRASTRUCTURE

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Digital Orthoimagery

Elevation

Governmental Units

Cadastral (Parcels)

Land Cover

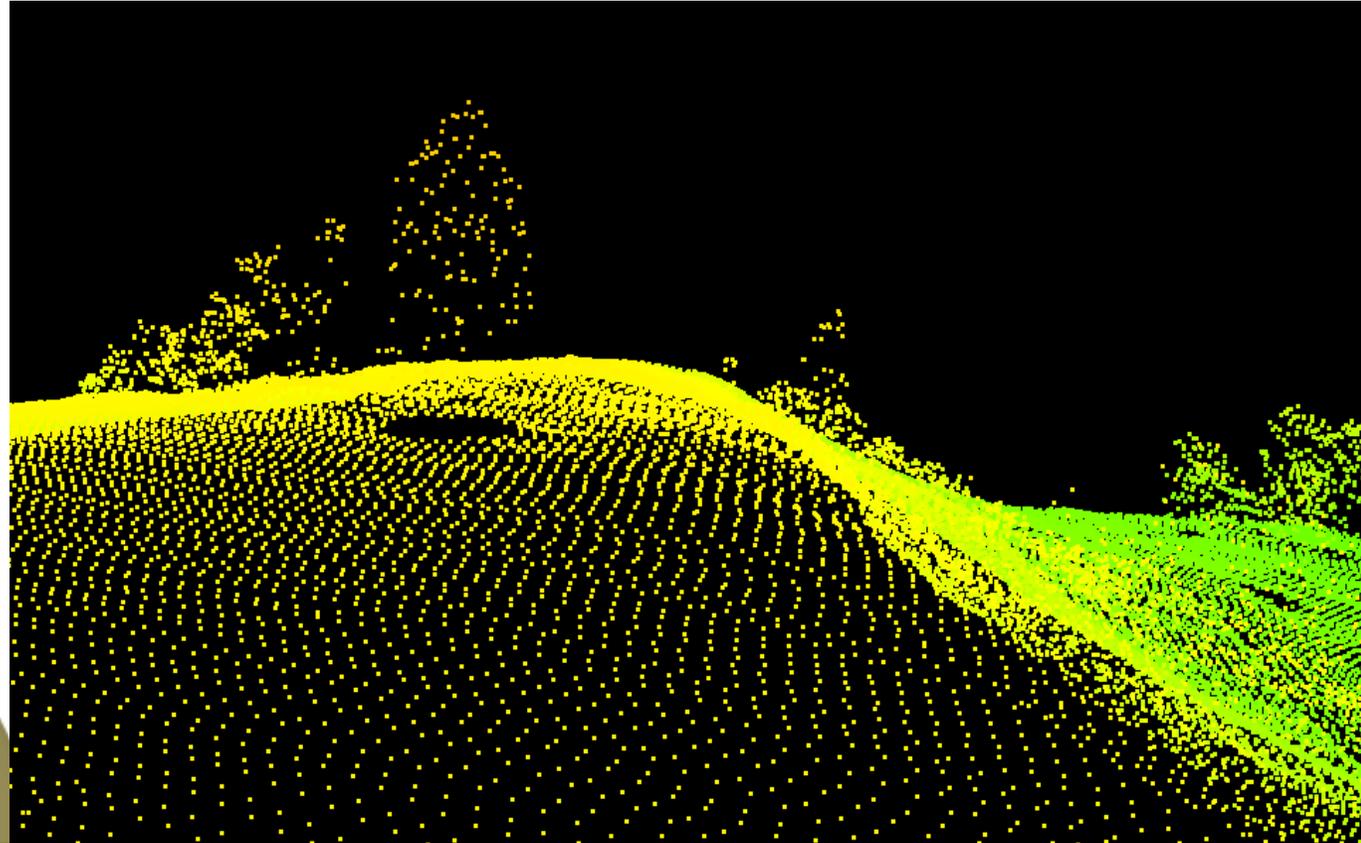
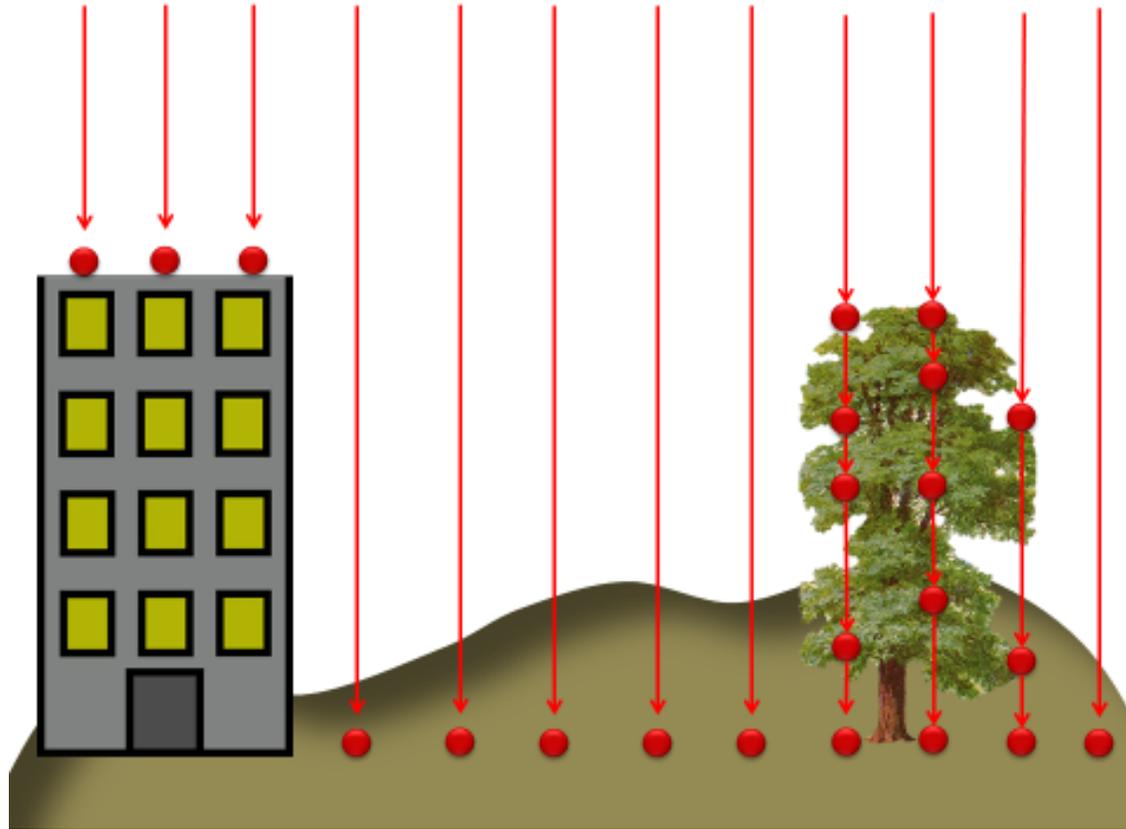
E911 Addresses (E911)

Transportation (VTrans)

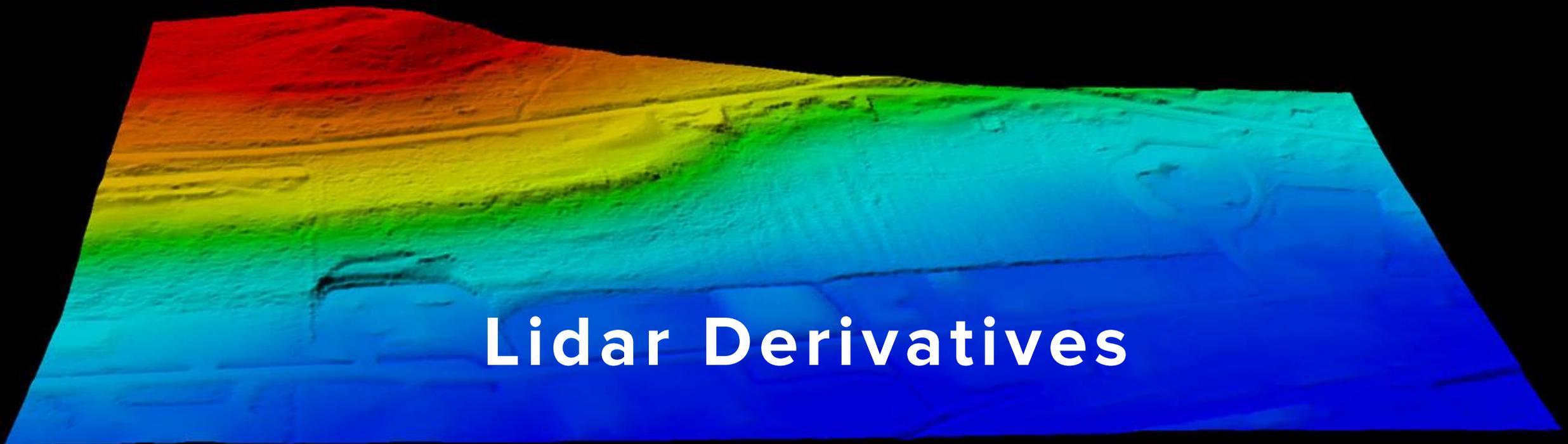
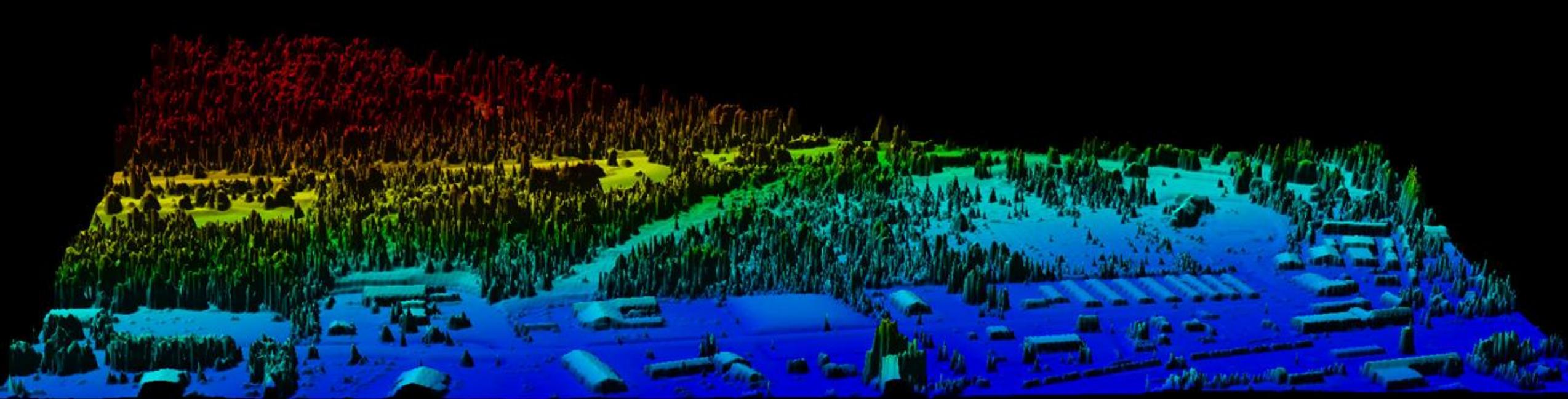
Hydrography (ANR)



# Lidar



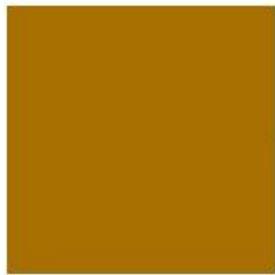
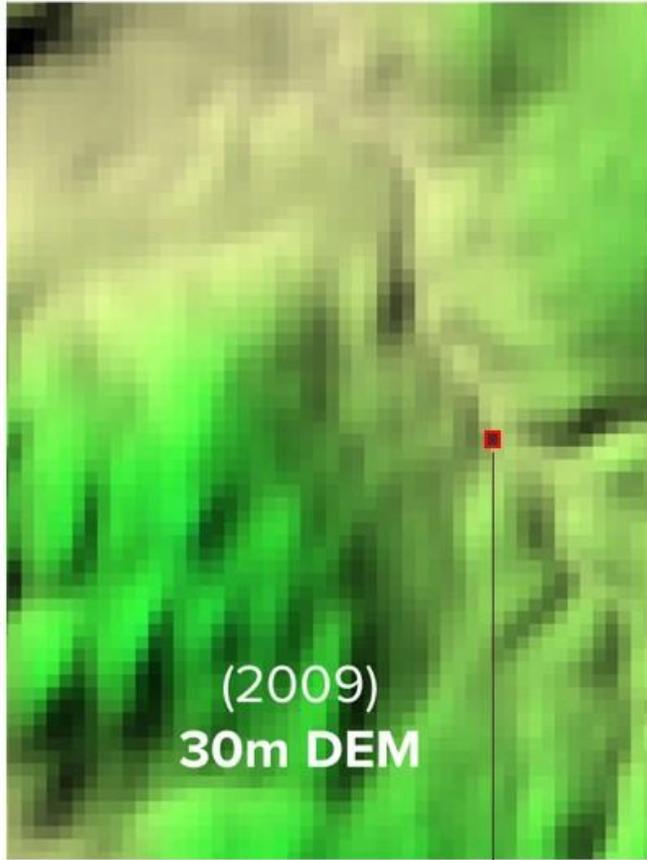




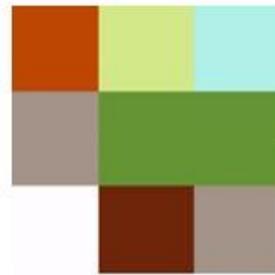
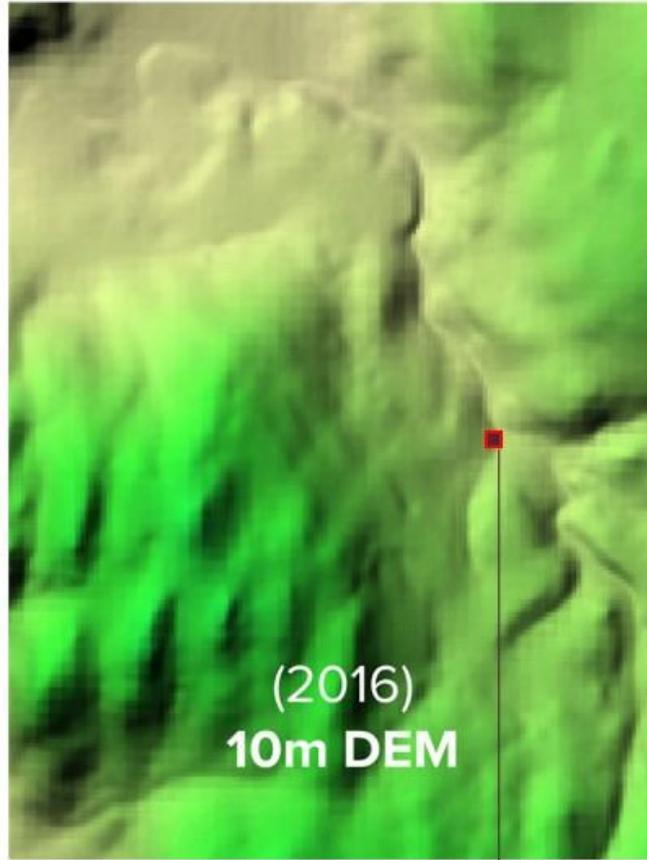
# Lidar Derivatives

**National Elevation Dataset:** Reported vertical accuracy= 8 ft.

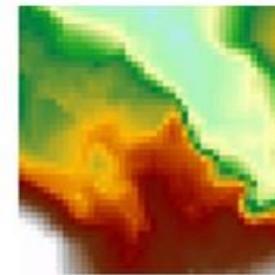
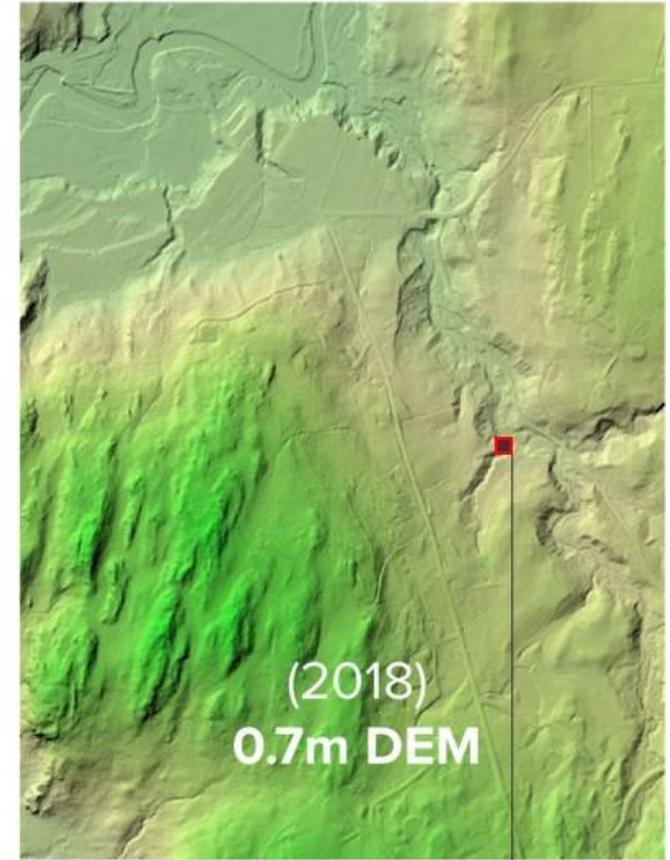
**LIDAR:** Vertical accuracy= 3.6 in.



Cell size: 9688 sq ft



Cell size 1078 sq ft

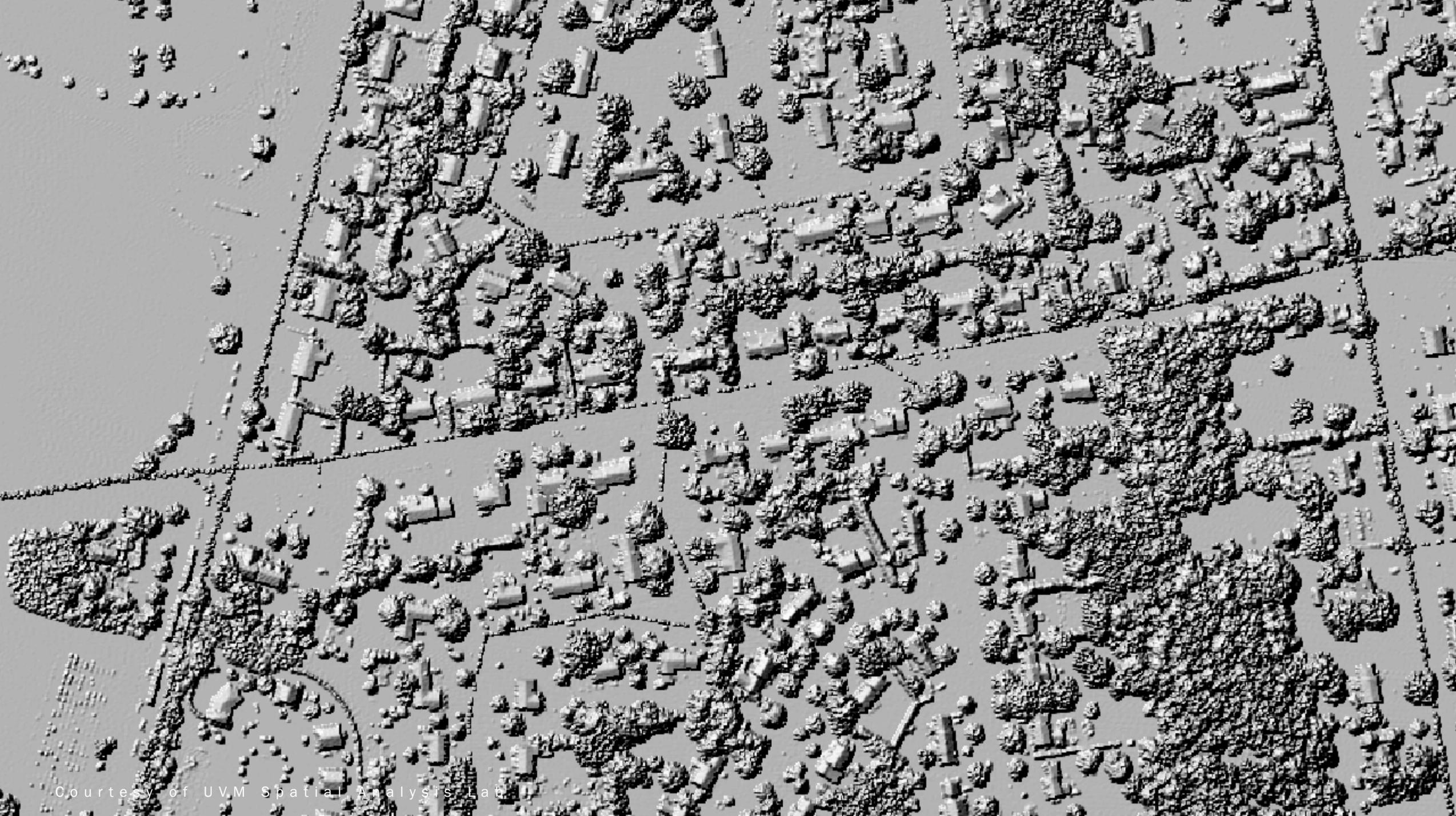


Cell size 5.27 sq ft



# Building Footprint Extraction





Courtesy of UVM Spatial Analysis Lab





**Missing E-911  
Points**

STATE OF VERMONT

# Vermont Open Geodata Portal

[DATA](#)

[WEB SERVICES](#)

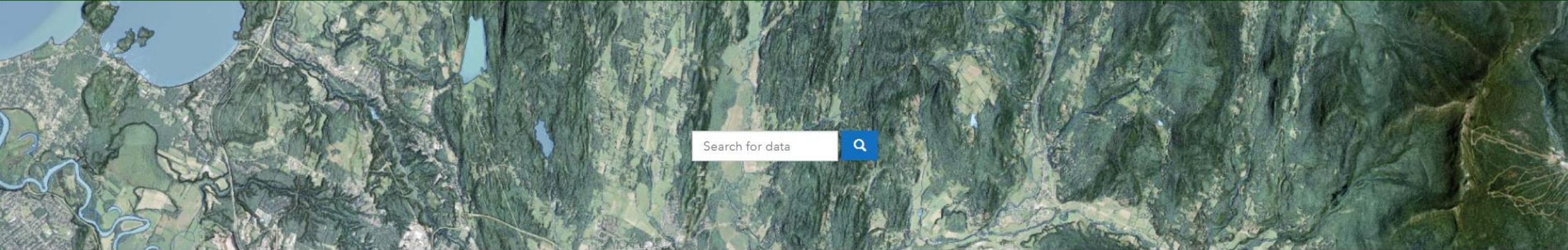
[APPLICATIONS](#)

[DEVELOPERS](#)

[CONTACT US](#)

[HELP](#)

[Sign In](#)



Agriculture



Basemap



Boundaries



Climate



Demographic +  
Economic

# DATA GOVERNANCE



**BOSTITCH**  
HEAVY DUTY STAPLER  
MODEL B300HDS

Uses SB35 Staples  
To 30 Sheets To 60 Sheets To 100 Sheets

**heavy duty stapler**  
For best results, use only Swingline Heavy Duty Staples.

HD Staple Size	Sheet Capacity*
1/4"	2-25
3/8"	25-60
1/2"	40-90
5/8"	75-120
3/4"	90-160

\*Capacity based on 20lb paper weight.  
Do NOT use 1/4" standard staples. They will jam this stapler.

Swingline

# Web Services

Find web map services that allow you to stream basemaps, imagery, lidar, and other information directly into your web map or GIS desktop app.

**Popular Services:** [Best of Color](#) and [Black and White Imagery](#) | [Hillshade + Contours](#) | [Parcels](#)



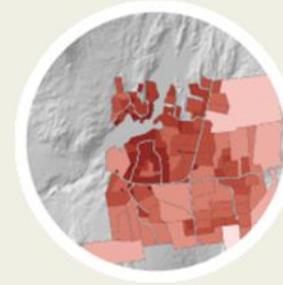
## Imagery Services

Aerial Photos



## Elevation Services

DEMs, Contours, and Lidar



## Parcel Map Services

Municipal Parcel Boundaries



## More Services

Basemaps, Geocoding, etc.

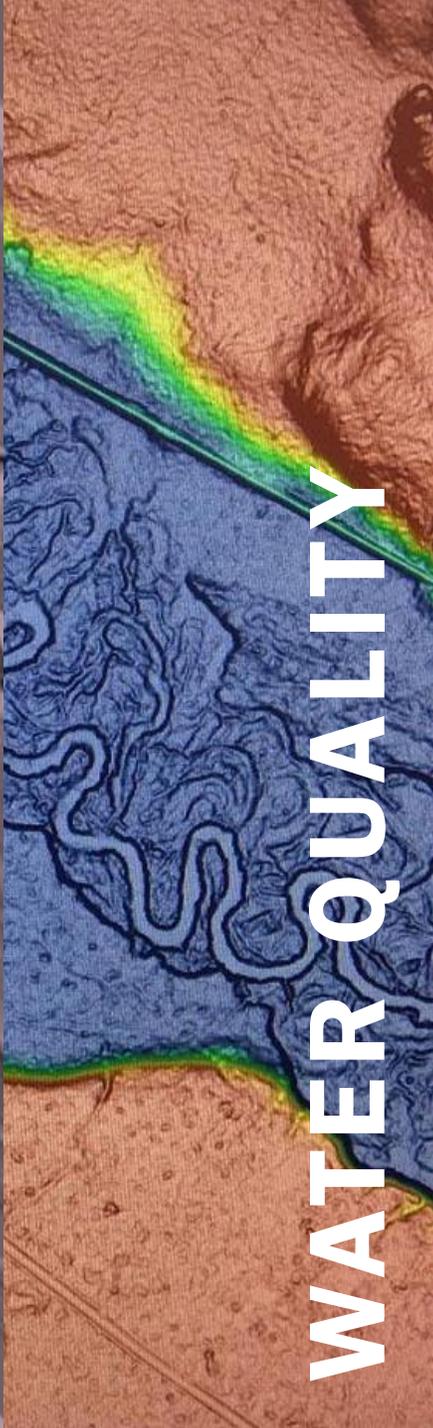
**Life Cycle Policies:** [VCGI Policy](#) | [ANR Policy](#)



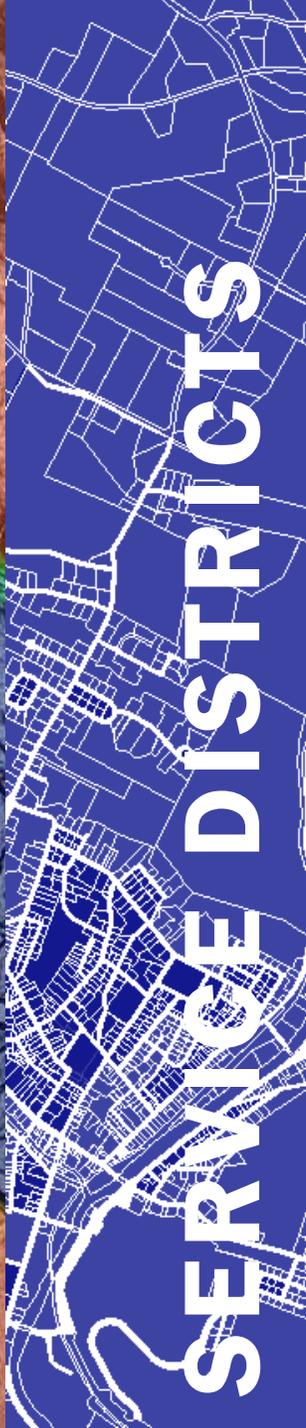
**SOLAR POTENTIAL**



**ARCHEOLOGY**



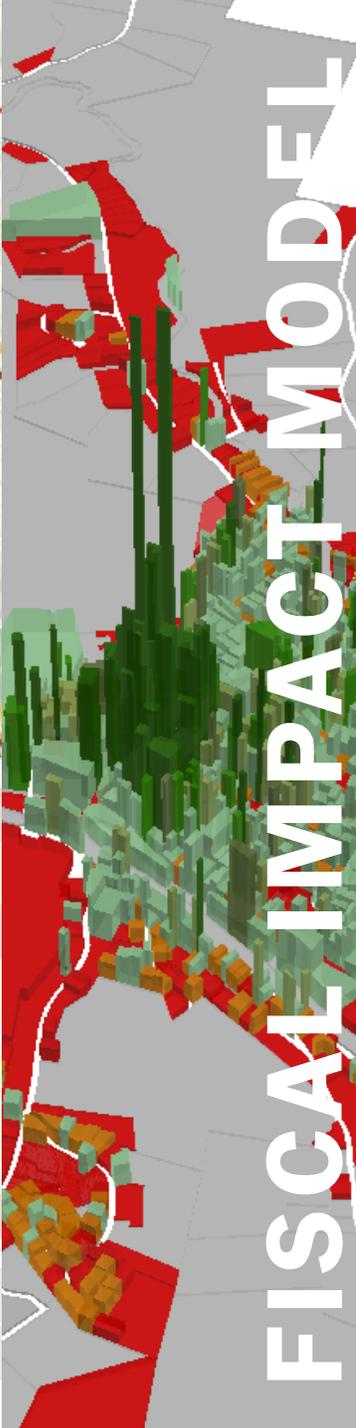
**WATER QUALITY**



**SERVICE DISTRICTS**



**ASSET MANAGEMENT**



**FISCAL IMPACT MODEL**



**DEVELOPMENT SUITABILITY**

# GIT Enterprise Architecture Plan

PROJECT CHARTER  
11/30/17

# 19 ESRI Customer Account #s

# 9 Entities w/ Servers?

# 1019 licenses?





Customer Name	Department	State	DT Advanced	DT Basic	DT Standard	PLTS	Roads & Hwys 3D	Spatial	Publish Data Interop	Geostat	Network	ArcPres Server	ArcSDE	ArcIMS	Roads & Hwys	Image Server	ArcPad	AG Dev Subs criptions	AG Online	Grand Total				
State of Vermont	Housing & Conservation Board	VT		1	1																			
State of Vermont	Enhanced 911 Board	VT		1	5			2	1				1					1						
State of Vermont	Community Development Dept	VT		2	2			1					1											
State of Vermont	Agriculture Food & Market Agency	VT	2	4	7		1	2					1						5					
State of Vermont	Public Safety Dept	VT		1									3											
State of Vermont	Natural Resources Agency	VT	5	38	2		3	9	1		1		1				3							
State of Vermont	Mapping Program	VT	1									1												
State of Vermont	Public Service Dept	VT		1					1															
State of Vermont	Employment & Training Dept	VT		1																				
State of Vermont	Agency of Human Services	VT	1	12				3	1		1	3	1						1					
State of Vermont	Public Safety Dept	VT	2	1		1							8											
State of Vermont	Commerce & Community Development Agency	VT	9	1		1	1	4	5	1	2	3	1	1	4	1								
State of Vermont	Animal Health Dept	VT		1																				
State of Vermont	Public Safety Dept	VT		1				1																
State of Vermont	Information & Innovation Dept	VT	2			1		1	1	1														
State of Vermont	Legislative Joint Fiscal Office	VT		1																1				
State of Vermont	Education Dept	VT		1																500				
State of Vermont	Green Mountain Care Board	VT																		5				
Vermont Agency of Transportation		VT	18	31		3	2	1	3	1	1	10	2			1	1	1	250	323				
			36	100		18	4	2	10	27	7	3	1	17	1	19	1	4	1	1	4	3	760	1019

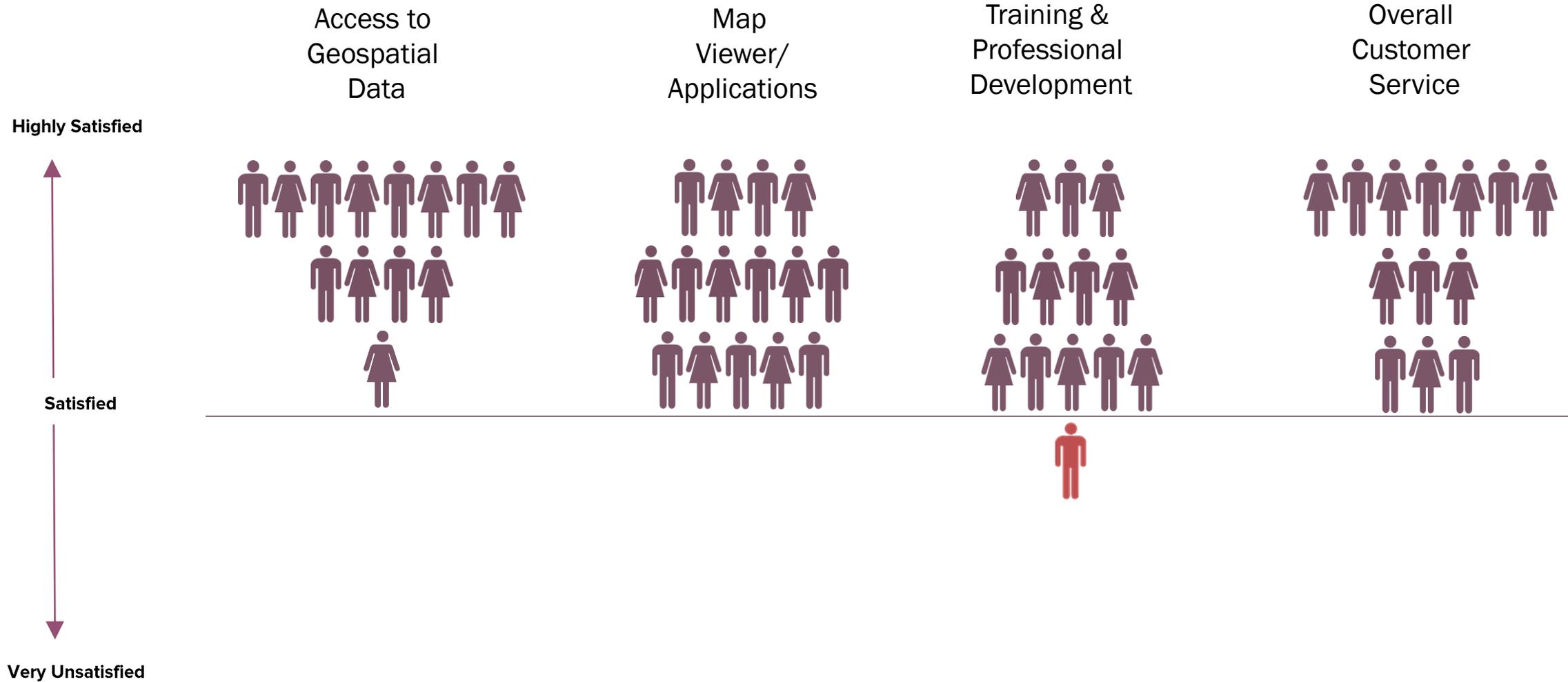
## Enterprise GIS Architecture Plan Project Charter

### Approvals

Role	Name and Title	Signature
Executive Sponsors	John Quinn, Secretary ADS CIO	e-Signed by John Quinn on 2017-12-15 20:42:32 GMT
Executive Sponsor	Mark Combs, ADS - CTO	e-Signed by Mark Combs on 2017-12-04 19:48:57 GMT
Sponsor	John E. Adams, EGC Co-Chair	e-Signed by John Adams on 2017-12-04 20:01:01 GMT
Sponsor	Casey Cleary, EGC Co-Chair	e-Signed by Casey Cleary on 2017-12-04 20:45:43 GMT
Team Leader	Steve Sharp, ADS - VCGI	e-Signed by Stephen Sharp on 2017-12-04 20:49:46 GMT
IT Executive Branch	Shawn Nailor, Deputy Secretary ADS	e-Signed by Shawn Nailor on 2017-12-04 18:51:41 GMT
IT Executive Branch	Darwin Thompson, ADS - AOA/Shared Services	e-Signed by Darwin Thompson on 2017-12-12 20:49:28 GMT
IT Executive Branch	Darin Prail, ADS - AHS	e-Signed by Darin Prail on 2017-12-14 13:21:54 GMT
IT Executive Branch	Peter Telep, ADS - ANR	e-Signed by Peter Telep on 2017-12-05 19:44:49 GMT
IT Executive Branch	Lori Chalmers, ADS - ACCD	e-Signed by Lori Chalmers on 2017-12-04 23:18:03 GMT
IT Executive Branch	Brian Townsend, ADS - AOE	e-Signed by Brian Townsend on 2017-12-06 17:30:50 GMT
IT Executive Branch	Dean Hamel, ADS - DPS	e-Signed by Dean Hamel on 2017-12-12 15:29:45 GMT
IT Executive Branch	Hunter Thompson, ADS - AAFM	e-Signed by Hunter Thompson on 2017-12-08 14:15:21 GMT
IT Executive Branch	Rick Scott, ADS - AOT	e-Signed by Richard Scott on 2017-12-12 20:29:04 GMT
Project Manager	Melissa Prindiville, ADS - ACCD	e-Signed by Melissa Prindiville on 2017-12-18 14:12:46 GMT

# Customer Satisfaction

n 96

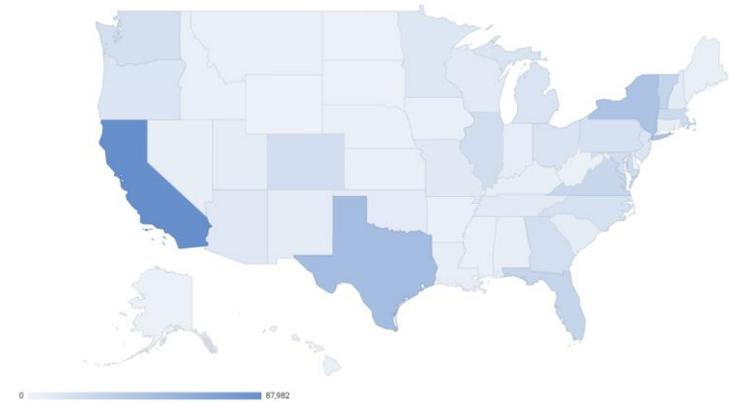




WATCH TIME (MINUTES)  
2,990,704\*

VIEWS  
448,131

VCGI Youtube as of 02/12/2018

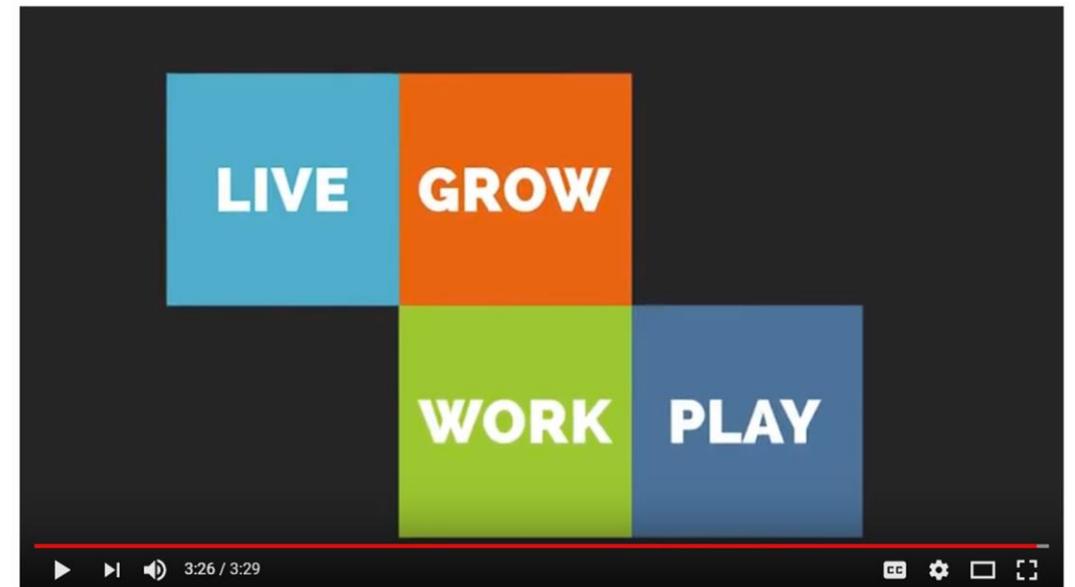


YouTube Search [ ] VCGI



How To - Geocode Addresses in ArcGIS Pro with the Vermont E911 Geocoder

YouTube Search [ ] VCGI



How To - Geocode Addresses in ArcGIS Pro with the Vermont E911 Geocoder

# Thank You

[john.e.adams@vermont.gov](mailto:john.e.adams@vermont.gov)

