

## Pricing

Sagata® offers software licensing, training, and voting equipment allocation consulting.



## Software Licensing

VotePro's annual license includes three (3) hours of phone software training.

Description	County Size*		
	Small	Medium	Large
Annual license	\$8,000	\$15,000	\$25,000

\*Small < 60,000 registered voters, Medium < 340,000 registered voters

Software System Requirements:  
Windows 2000/XP, Microsoft® Excel 2000/2003 or later versions

## Training and Consulting

Sagata Ltd. facilitates machine allocation by either assisting in the use of VotePro or by leading the entire project including data collection.

Description	Price
1-hour remote service	\$275.00
1-person onsite	\$2,500/day + travel
Project pricing and flat fees	contact us

Prices are subject to availability of our trained personnel.  
Advance planning of machine allocation is advised.

## Contact

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## Sagata® VotePro

Leading software for voting equipment allocation & budgeting

Sagata VotePro - [My county 2008]				
File Edit View Insert Format Tools Data Window Vote				
J42				
	A	B	C	D
1	<b>Elections - Machine Allocation Output</b>			
2				
3	Total Number of Machines Allocated			
4	1250			
5				
6	Allocation Evaluation under the 'optimization' scenario			
7	Criterion	Estimate	StDev (mean)	SI
8	Max of Avg (mins)	72.3	12.0	
9	Avg of Avg (mins)	6.5	0.2	
10	Avg of Max (mins)	30.2	0.6	
11	Max Overtime (mins)	192.1	14.0	
12	Avg Overtime (mins)	15.9	0.5	
13	#Centers wait > 30 mins	7.9	0.7	
14	#Centers wait > 45	2.9	0.5	
15	#Centers wait > 60	0.7	0.3	
16	#Centers wait > 120	0.1	0.1	
17				
18	Proposed Machine Allocation for Each Vote Center			
19	Vote Center	# machines		
20	GROVE CITY	5		
21	URBANCRES	3		
22	MADISON-B	5		
23	GAHARA	5		
Allocate Machines / Input /				

## Why You Need Sagata® VotePro

Sagata® VotePro software supports decisions on the most important questions faced by election planners when allocating voting machines:

- How many machines are needed in total?
- How many machines are needed at each voting location?
- How long will the voting lines be for a given machine allocation?
- Which locations are undersupplied?

Sagata® VotePro uses computer simulation to “play out” an election to predict how the day will unfold before the election takes place.

## The Risks of Existing Practices

Election officials typically allocate machines based on the corresponding numbers of registered voters.

The risks in using this method are:

- Unequal voter wait times across voting locations
- Disgruntled voters and negative publicity
- Litigation based on discrimination
- Unnecessary budget expenditures

The inadequacy of using current methods has been often cited in the media, such as the article entitled “Voting Machine Placement A Real Problem” by Elliot Jaspin, Cox News Services, October 10, 2006.

## Transparent and Defendable Machine Allocation

VotePro software offers an objective and systematic way to decide how many machines are needed and where to place them using scientific methodology.

Based on Sagata's work with counties and analysis of years of election data, factors that affect voting lines and wait times include:

- Ballot size
- Rate of machine failures
- Number of registered voters
- Voter turnout
- Number of direct recording equipment (DRE) machines.

The following is a sample of the information used by VotePro to generate the allocation evaluation.

Evaluate Locations Setup	
# Vote Centers	730
Election Day Start Time	6:30
Election Day Length (hours)	13
Scenario	
Turnout Ratio	0.4
Base Voting Time (mins)	5
Out-of-service rate	0.1
Out-of-service time (mins)	60
Arrival Pattern	U. 4pm-6pm double
Options	
# samples when evaluating	10
Random seed	1

## What VotePro Can Forewarn About Your Upcoming Election

Metrics that Sagata® VotePro can reliably predict include those in the following table. This offers an opportunity to make suitable adjustments and to prevent problems such as voting bottlenecks and negative publicity *before* the election takes place.

Total Number of Machines Allocated	1250
Metric/Criterion	Forecast
Average waiting time at the worst location	72.3 minutes
Average waiting time of all voters	6.5 minutes
Expected overtime minutes of the voting location that closes last	192.1 minutes
Number of voting locations with average waits longer than 30 min.	7.9 centers
Number of voting locations with average waits longer than 60 min.	0.7 centers
Number of voting locations with average waits longer than 120 min.	0.1 centers

## Expertise

The Sagata Ltd. team has extensive experience in the election industry and includes Ph.D.'s in operations research and related fields.

*"These guys are probably the best in the country at voting machine allocation."*

Steven Hertzberg, President,  
Election Science Institute