

Strategic Office Vacancy Assessment Tool for Enhanced Facilities Space Management



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The Strategic Office Vacancy and Assessment Tool (SOVAT) is a Powersim® Studio 10 simulation developed collaboratively with key members of Sandia National Laboratories Centralized Space Management (CSM) team to assist them in their management of the approximately 20000 spaces that the Sandia workforce occupies. SOVAT runs at a monthly timestep over a 6-year period, projecting the supply of space by leveraging a corporately-maintained dataset with detailed information on the ~20000 spaces, along with planned space additions, and projecting the demand for space using HR data on the current actual workforce and projected growth in the workforce over the simulation period. The dynamic nature of workforce growth, being driven by addition of new employees, replacement of retirees, and the time to process clearances, which effects what kind of space these new hires can occupy, presents a challenge for the CSM team when it comes to planning for Sandia's future space needs. SOVAT is currently helping the CSM team identify mitigation strategies for projected space shortages, assess the tradeoffs between strategies, and communicate potential strategies to the senior level leadership that will ultimately support or oppose said strategies.



Between Sandia's two main sites, there are nearly **20000 individual spaces** that must be managed

- New Mexico ~16000, California ~2200;
- Spaces are characterized by a security level (cleared or uncleared) and type (administrative, lab, office, and storage).

Historically, space has been managed by individual divisions in close coordination with their organizations.

Recently, Sandia moved to manage space under the concept of **Centralized Space Management**

- The CSM team (~20 individuals) is now responsible for the function of more than 70 organizations.

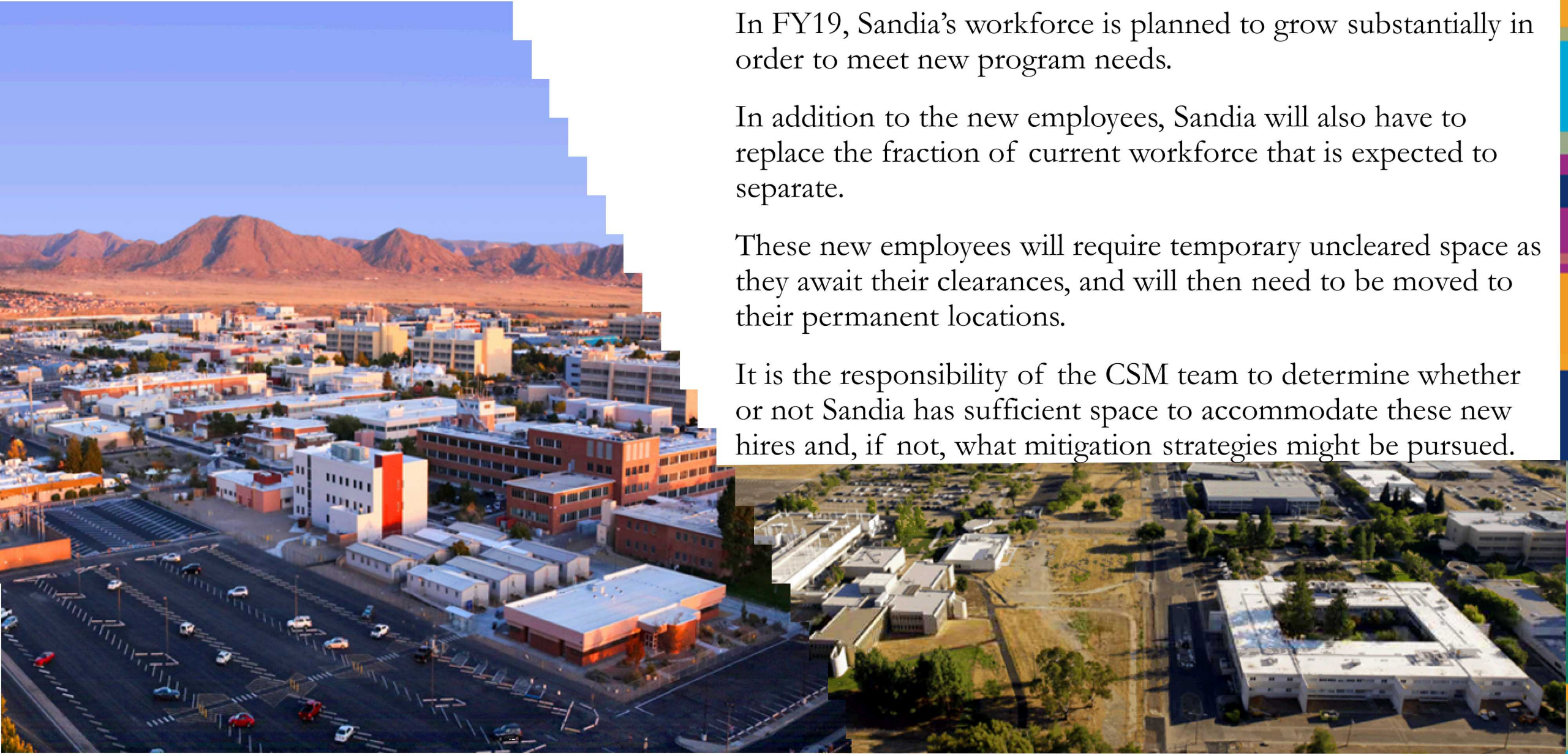


In FY19, Sandia's workforce is planned to grow substantially in order to meet new program needs.

In addition to the new employees, Sandia will also have to replace the fraction of current workforce that is expected to separate.

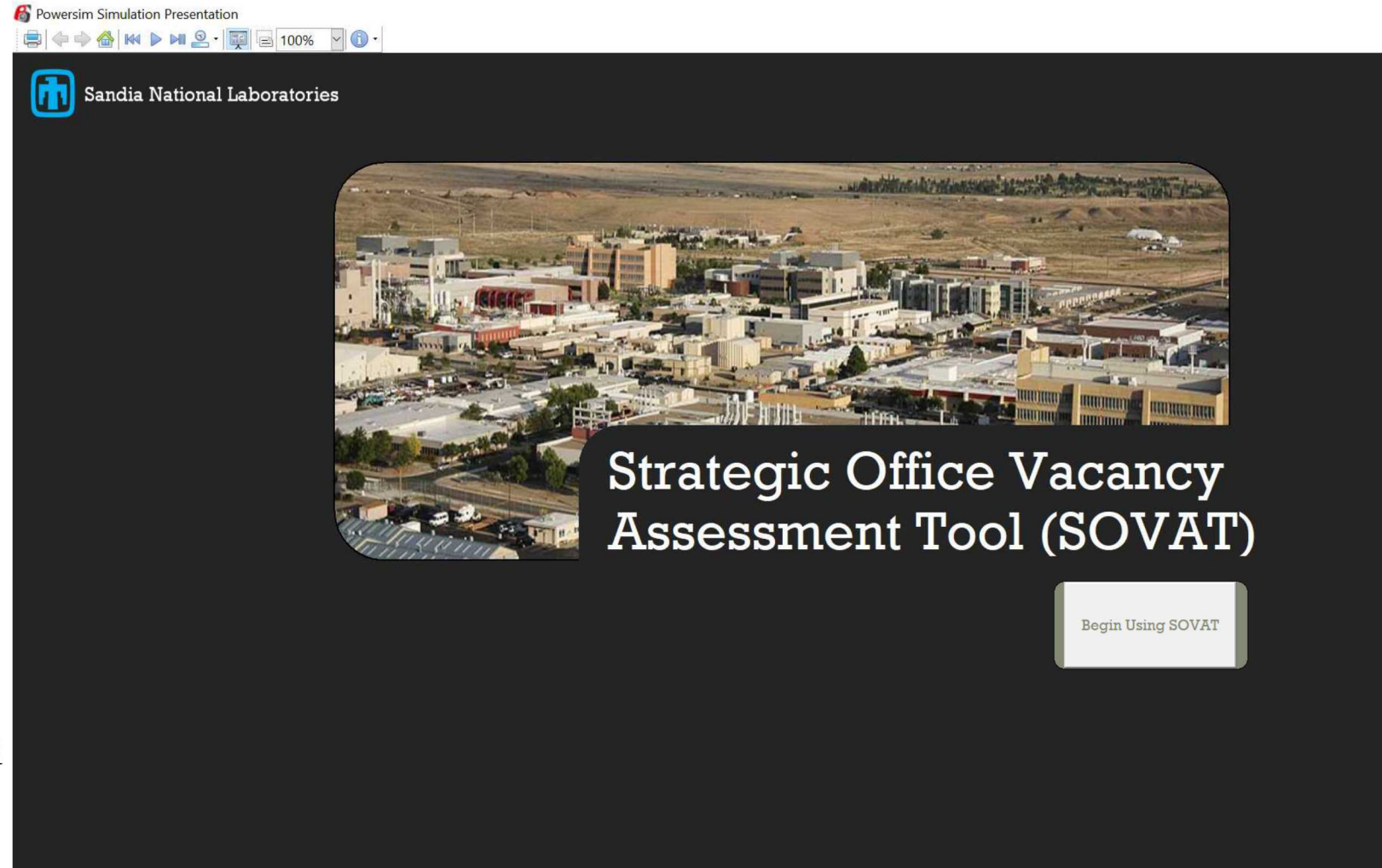
These new employees will require temporary uncleared space as they await their clearances, and will then need to be moved to their permanent locations.

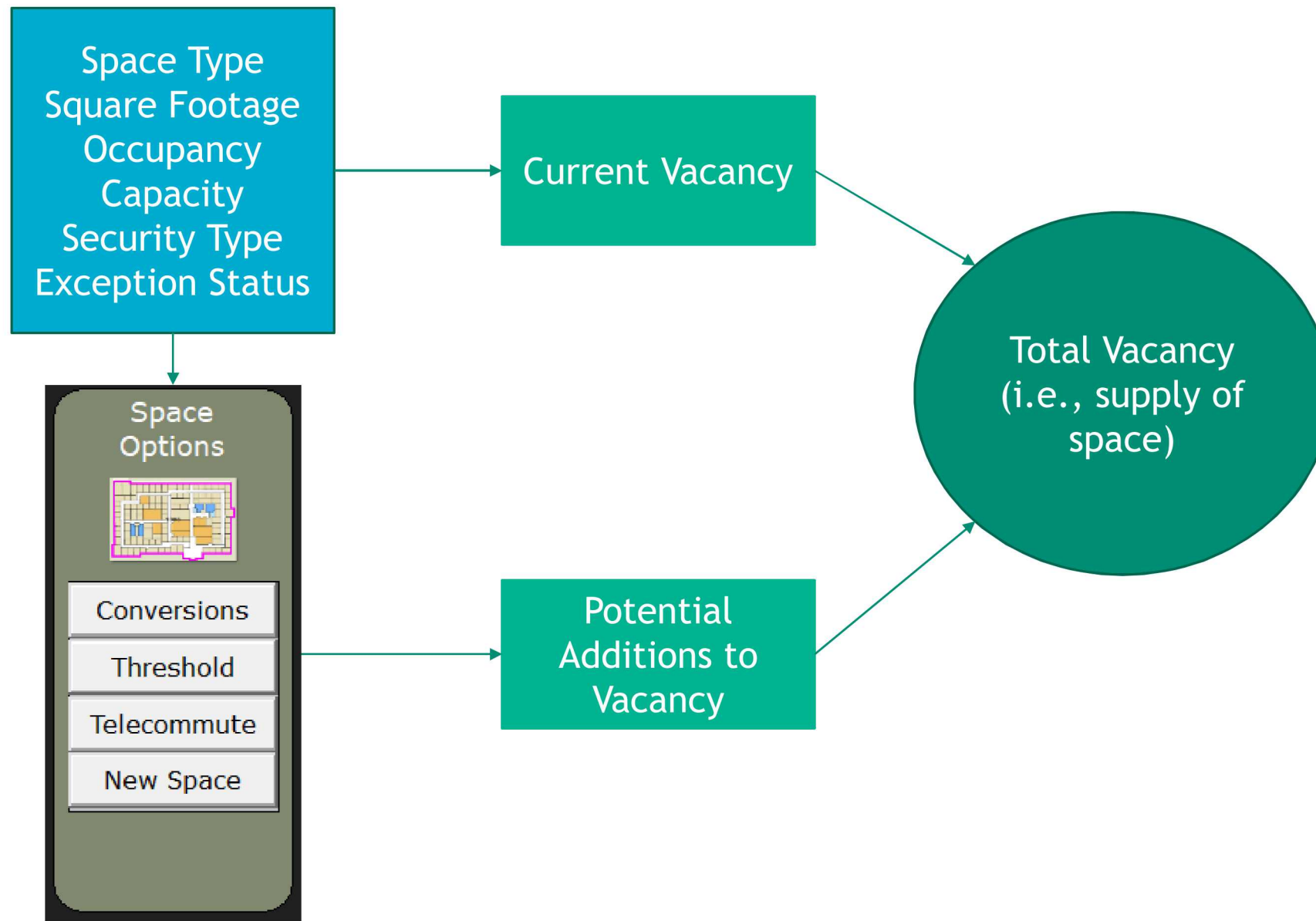
It is the responsibility of the CSM team to determine whether or not Sandia has sufficient space to accommodate these new hires and, if not, what mitigation strategies might be pursued.



SOVAT, the Strategic Office Vacancy Assessment Tool

- Powersim® Studio 10 simulation developed collaboratively with key members of the CSM team;
- Runs at a monthly timestep over a 6-year period;
- Projects **supply of space** by leveraging corporately-maintained dataset with detailed information on the ~20000 spaces that the Sandia workforce occupy and that CSM team is responsible for managing, along with planned space additions ;
- Projects **space demands** using HR data on current actual workforce and projected growth in workforce over the simulation period.





User Tips

Space Conversions

2018 2024

		PPA					LA					
CA	Administrative	<input type="checkbox"/>	0 %	1	2019	3.00 mo	<input type="checkbox"/>	0 %	1	2019	3.00 mo	Unit Cost Obscured
	Conference Room	<input type="checkbox"/>	0 %	1	2019	1.00 mo	<input type="checkbox"/>	0 %	1	2019	1.00 mo	
	Lab	<input type="checkbox"/>	0 %	1	2019	12.00 mo	<input type="checkbox"/>	0 %	1	2019	12.00 mo	
	Storage	<input type="checkbox"/>	0 %	1	2019	4.00 mo	<input type="checkbox"/>	0 %	1	2019	4.00 mo	
NM-TA1	Administrative	<input type="checkbox"/>	0 %	1	2019	3.00 mo	<input type="checkbox"/>	0 %	1	2019	3.00 mo	Unit Cost Obscured
	Conference Room	<input type="checkbox"/>	0 %	1	2019	1.00 mo	<input type="checkbox"/>	0 %	1	2019	1.00 mo	
	Lab	<input type="checkbox"/>	0 %	1	2019	12.00 mo	<input type="checkbox"/>	0 %	1	2019	12.00 mo	
	Storage	<input type="checkbox"/>	0 %	1	2019	4.00 mo	<input type="checkbox"/>	0 %	1	2019	4.00 mo	
NM-TA2	Administrative	<input type="checkbox"/>	0 %	1	2019	3.00 mo	<input type="checkbox"/>	0 %	1	2019	3.00 mo	Unit Cost Obscured
	Conference Room	<input type="checkbox"/>	0 %	1	2019	1.00 mo	<input type="checkbox"/>	0 %	1	2019	1.00 mo	
	Lab	<input type="checkbox"/>	0 %	1	2019	12.00 mo	<input type="checkbox"/>	0 %	1	2019	12.00 mo	
	Storage	<input type="checkbox"/>	0 %	1	2019	4.00 mo	<input type="checkbox"/>	0 %	1	2019	4.00 mo	

-All data are notional-

-All data are notional-

Office Space Threshold

2018 2024

Staff Inputs

CA

NM

NM-TA1

NM-TA2

NM-TA3

NM-TA4

NM-TA5

NM-Off Base

	Modify	Sq Ft
CA	<input type="checkbox"/>	70
NM-TA1	<input type="checkbox"/>	70
NM-TA2	<input type="checkbox"/>	70
NM-TA3	<input type="checkbox"/>	70
NM-TA4	<input type="checkbox"/>	70
NM-TA5	<input type="checkbox"/>	70
NM-Off Base	<input type="checkbox"/>	70

Unit Cost
Obscured

Space Outputs

CA

NM

NM-TA1

NM-TA2

NM-TA3

NM-TA4

NM-TA5

NM-Off Base

Seat Additions

Costs

Select buildings to apply modified Office Space Threshold to by checking boxes below. By default, all buildings are included. To view and/or modify office-level details, see spreadsheet.

California	NM-TA1	NM-TA2	NM-TA3	NM-TA4	NM-TA5	NM-Off Base
903 <input checked="" type="checkbox"/>	700 <input checked="" type="checkbox"/>	905 <input checked="" type="checkbox"/>	20358A <input checked="" type="checkbox"/>	960 <input checked="" type="checkbox"/>	6577 <input checked="" type="checkbox"/>	AML <input checked="" type="checkbox"/>
904 <input checked="" type="checkbox"/>	701 <input checked="" type="checkbox"/>	905A <input checked="" type="checkbox"/>	6501 <input checked="" type="checkbox"/>	961 <input checked="" type="checkbox"/>	6578 <input checked="" type="checkbox"/>	CB4100 <input checked="" type="checkbox"/>
905 <input checked="" type="checkbox"/>	702 <input checked="" type="checkbox"/>	905B <input checked="" type="checkbox"/>	6501F <input checked="" type="checkbox"/>	961B <input checked="" type="checkbox"/>	6580 <input checked="" type="checkbox"/>	CERL <input checked="" type="checkbox"/>
906 <input checked="" type="checkbox"/>	703 <input checked="" type="checkbox"/>	905C <input checked="" type="checkbox"/>	6502 <input checked="" type="checkbox"/>	961C <input checked="" type="checkbox"/>	6581 <input checked="" type="checkbox"/>	CGSC <input checked="" type="checkbox"/>
910 <input checked="" type="checkbox"/>	704 <input checked="" type="checkbox"/>	905D <input checked="" type="checkbox"/>	6504B <input checked="" type="checkbox"/>	961D <input checked="" type="checkbox"/>	6582 <input checked="" type="checkbox"/>	CGSC <input checked="" type="checkbox"/>

Space Options

Conversions

Threshold

Telecommute

New Space

Staff Outputs

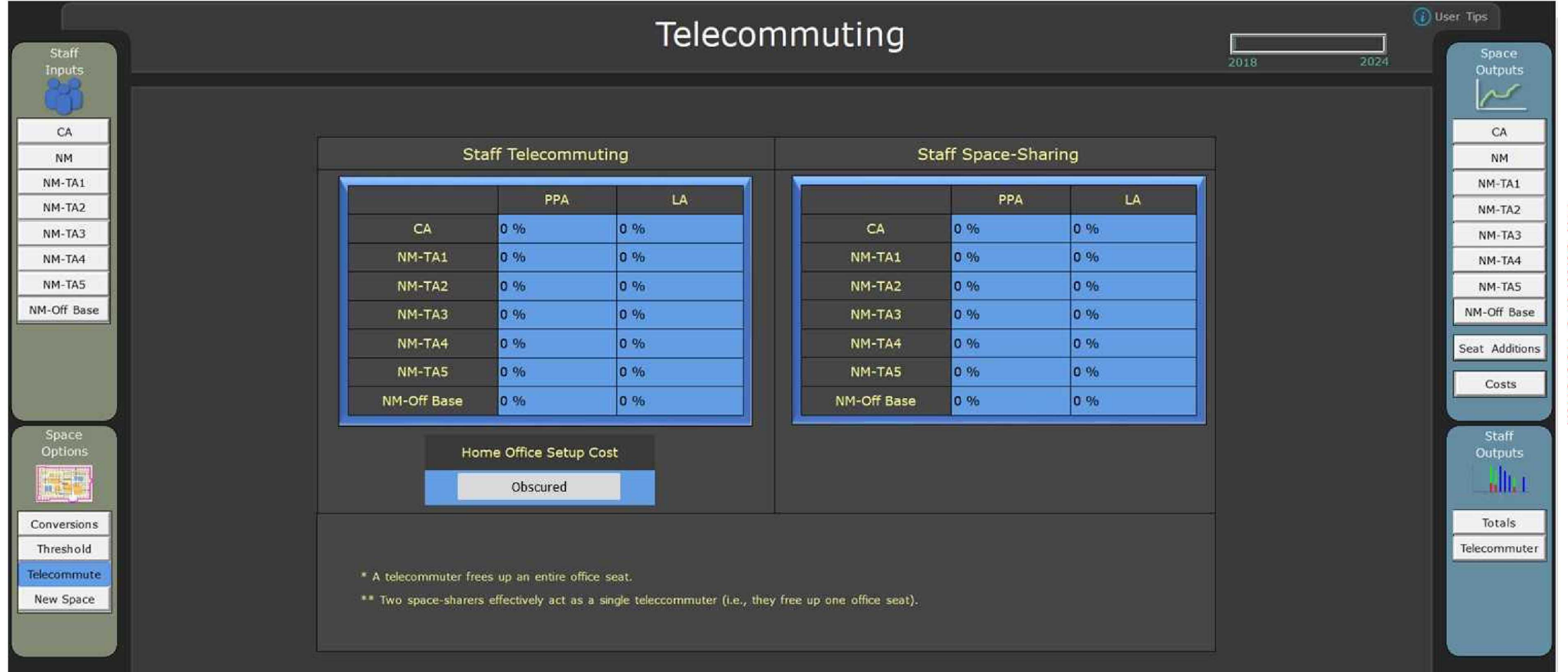
Totals

Telecommuter

-All data are notional-

-All data are notional-

9 Supply of Space



 User Tips

New Space

Staff Inputs



- CA
- NM
- NM-TA1
- NM-TA2
- NM-TA3
- NM-TA4
- NM-TA5
- NM-Off Base

Space Options



- Conversions
- Threshold
- Telecommute
- New Space**

	Acquisition 1	Acquisition 2	Acquisition 3	Acquisition 4	Acquisition 5	Acquisition 6
Type	None	None	None	None	None	None
# of Seats	0	0	0	0	0	0
% of space that is offices	0 %	0 %	0 %	0 %	0 %	0 %
% PPA	0 %	0 %	0 %	0 %	0 %	0 %
% LA	100 %	100 %	100 %	100 %	100 %	100 %
Start Date (Month/Year)	1 / 2019	1 / 2019	1 / 2019	1 / 2019	1 / 2019	1 / 2019
Duration (months)	0 mo	0 mo	0 mo	0 mo	0 mo	0 mo
 Cost (\$/sq-ft)	\$0 per ft ²	\$0 per ft ²	\$0 per ft ²	\$0 per ft ²	\$0 per ft ²	\$0 per ft ²
 LA Cost Multiplier (-)	0.00	0.00	0.00	0.00	0.00	0.00
 Tenant Improvement Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0
Life of Acquisition (yr)	20 yr	20 yr	20 yr	20 yr	20 yr	20 yr
 Total Annual Cost (\$K/yr)	\$0 per yr	\$0 per yr	\$0 per yr	\$0 per yr	\$0 per yr	\$0 per yr
Total Cost (\$M)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total size of new space (sq-ft)	0 ft ²	0 ft ²	0 ft ²	0 ft ²	0 ft ²	0 ft ²

Space Outputs



- CA
- NM
- NM-TA1
- NM-TA2
- NM-TA3
- NM-TA4
- NM-TA5
- NM-Off Base
- Seat Additions
- Costs

Staff Outputs

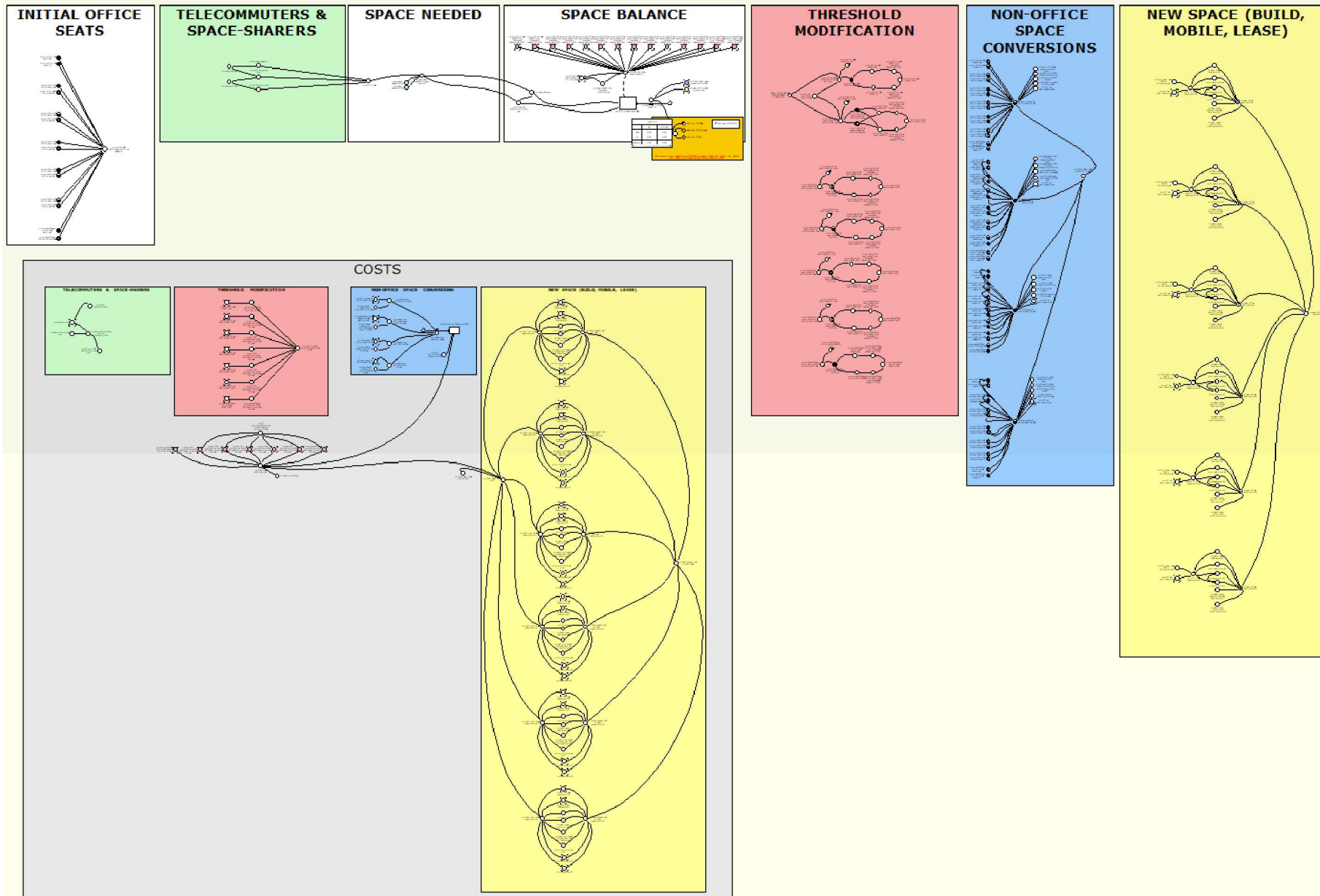


- Totals
- Telecommuter

-All data are notional-

-All data are notional-

Supply of Space



Demand for Space

Space Type
Square Footage
Occupancy
Capacity
Security Type
Exception Status

Total Demand
for Office
Space

User Input Growth

Staff Inputs | NM-TA1

Check the box for the staff addition method you wish to use. Then, enter the relevant details for that option.

Option 1
Add staff annually with a fixed number of new hires.
to add: 400
% Desired in LA: 83 %
Control % in LA: 83 %

Option 2
Add staff annually with a fixed percentage of the current staff.
to add: 0
% Desired in LA: 83 %
Control % in LA: 83 %

	FY19	FY20	FY21	FY22	FY23	FY24
Option 1	400	0	0	0	0	0
Option 2	0	0	0	0	0	0

Existing Staff Assumptions

Assumption	Value
% Incoming Staff with Clearance	25 %
Average Clearance Time (mos)	12 mos

Student Inputs

Assumption	Value
Number of Students	300 People
% of Students with Clearance	50 %
Monthly Students Arrive	5
Duration of Student Employment	4

Staff Inputs | NM-TA1

2018 2024

User Tips

- Enter staff additions for all of NM.
 Enter staff additions by each NM tech area.

SELECT ONE
OPTION ONLY

Option 1

Add staff annually
and distribute
monthly based on
historic 5-year
average

to add
% Desired in LA
Current % in LA

FY19	FY20	FY21	FY22	FY23	FY24	-	-	-	-
600	0	0	0	0					
83 %	83 %	83 %	83 %	83 %	83 %				

Option 2

Add staff annually
and divide equally
over the 12 months
of the year.

to add
% Desired in LA
Current % in LA

FY19	FY20	FY21	FY22	FY23	FY24	-	-	-	-
0	0	0	0	0					
83 %	83 %	83 %	83 %	83 %	83 %				

Incoming Staff Assumptions

% Incoming Staff with Clearance	25 %
Average Clearance Time (mo)	12 mo

Existing Staff Assumptions

Annual Attrition (%)	8 %
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Student Inputs

Number of Students	300 People
% of Students with Clearance	50 %
Month Students Arrive	5
Duration of Student Employment	4

Students arrive as a pulse on day 1 of the arrival month specified here. Students depart as a pulse on the last day of the month, as determined by the duration specified here.

Staff
Inputs

CA

NM

NM-TA1

NM-TA2

NM-TA3

NM-TA4

NM-TA5

NM-Off Base

Space
Options

Conversions

Threshold

Telecommute

New Space

Space
Outputs

CA

NM

NM-TA1

NM-TA2

NM-TA3

NM-TA4

NM-TA5

NM-Off Base

Seat Additions

Costs

Staff
Outputs

Totals

Telecommuter

-All data are notional-

-All data are notional-

Current and Future SOVAT Application

Used to inform a 5-year real estate plan, including strategies to deal with FY19 workforce growth.

Used to generate high-level results for education and socialization of real estate plan to senior-level management.

By end of FY19, entire CSM team will be trained in the use and interpretation of results of SOVAT.

QUESTIONS and/or SUGGESTIONS?

