Results of the Police Department Staffing Analysis

SAN FRANCISCO, CALIFORNIA

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Study Objectives

- Create methodologies to identify staffing needs for every position in the department.

  - This comprises around 600 unique assignments in total, organized under more than 140 units.

  - The Airport Bureau is excluded from the analysis.

- Determine current staffing needs and identify gaps in service levels.

- Analysis of organization and operations management in support of the staffing analysis.

- Develop a comprehensive interactive model that the SFPD can use to replicate the analysis in the future.

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Study Objectives

- ◆ The study is based on current inputs and data – the staffing recommendations will evolve as these change.

  - → Data issues in areas such as the Investigations Bureau limit the ability of the study to project staffing needs.

  - → As new data is tracked and quality of case management systems improves, staffing needs in these areas will be refined.

- ◆ The interactive tool provides SFPD with the ability to update the inputs and identify changing staffing needs in the future.

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Study Process

◆ Beginning last February, the project team focused on each bureau sequentially.

◆ Each phase included:

  → Interviews and meetings with supervisors and staff to understand unit functionality, service levels, and staffing issues.

  → Identification of workload metrics and data collection.

  → An interim deliverable that provided a framework for the analysis.

  → A draft analysis of staffing needs that did not include results or recommendations

  → Review and revisions in coordination with the Staffing Task Force and Internal Steering Committee.

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Objectives in Creating Methodologies

- Staffing model designed to analyze needs for 600 positions/ assignments individually.

- The methodologies used must be:

  - Defensible: Valid approaches for determining staffing needs.

  - Replicable: Data is available and calculations are streamlined.

  - Flexible: Methodologies can be customized in the future.

  - Uniform in structure: Common set of language and process.

- To accomplish these goals, the methodology types were grouped into four categories.

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Staffing Methodology Categories

Workload-based
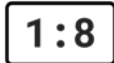
Ratio-based

Fixed coverage

Non-scaling

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Workload-Based Methodology

- ◆ 48% of SFPD personnel are in assignments that have been determined through a workload-based methodology.

- ◆ The analysis compares workload against staff availability.

- ◆ Types of staff determined through this methodology include

  - → Patrol officers

  - → Most investigative units

  - → Records management

  - → Property and evidence

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Components of Unit Workload

- ◆ **Through interviews and data collection, key workload drivers are** identified. Data collected where available.

- ◆ Total workload hours are determined by multiplying:

  - ➔ Number of workload items (e.g., # of cases, calls for service)

  - ➔ Time per item (e.g., time to investigate each case)

- ◆ Administrative time estimate added for many positions to account for miscellaneous work that is not directly measurable:

  - ➔ Meetings, meal breaks, calls, etc.

  - ➔ For patrol officers, this includes time spent writing reports

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Calculating Total Workload

Body Camera Unit: Legal Assistant Staffing

Civil Discovery	# of Civil Discoveries/Yr.	275
	Avg. Time/Civil Discovery	4.0 hours
DPA Non-Routine	# of DPAs (non-routine)/Yr.	59
	Avg. Time/DPA Non-Routine	2.0 hours
DPA Routine	# of DPAs (routine)/Yr.	501
	Avg. Time/DPA Routine	10.0 hours
Inter-Agency	# of Inter-Agency Req./Yr.	250
	Avg. Time/Inter-Agency	14.0 hours
Public Records	# of Public Records Req./Yr.	301
	Avg. Time/Public Records	4.0 hours
	Total Workload	10,929 hours

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Workload and Proactive Time

- Similarly, time is added for many positions to account for proactive time.

- Total 'needs' to staff a position are a combination of the workload elements, administrative time, and (for some positions) proactive time.

- For instance, a position's time could be broken down as such:

60% Workload	20% Admin	20% Proactive

- Which can be translated into the number of hours in a year:

| 1,056 Workload Hours	352 Admin	352 Proactive

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Staff Availability and Capacity

- Unit capacity to handle workload is built up from the on-duty hours of individual staff.

- Out of the total scheduled work hours in a year (2,080), employees may not be on duty for a variety of reasons, including leave, training, etc.

- Net availability represents the number of hours that employees are on duty and able to handle workload:

2,080 Work Hours Per Year

1,760 Net Available Hours

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Staff Capacity vs. Workload

- Similarly, time is added for many positions to account for **proactive time** .

- For an entire unit, a total workload figure is combined from each of these totals.

- It is then compared against total net availability (NA hours per FTE multiplied by # of FTEs).

- This tells us whether the capacity of current staffing is sufficient to handle all workload:

13,228 hours req.

Current Capacity: 8,312 hours
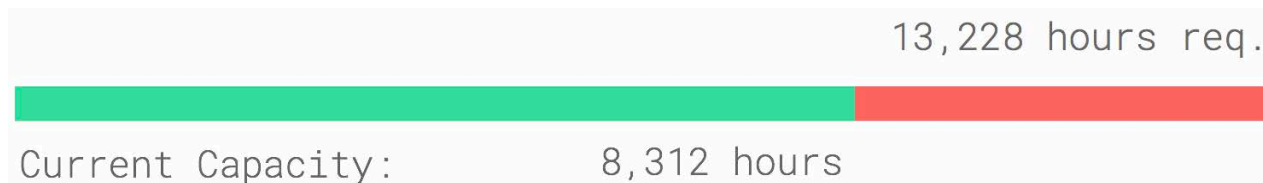
- For example, if there are more hours needed than can be staffed (represented in red), additional staff are needed.

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1:8 Ratio-Based Methodologies

- ◆ Used when staffing needs for a position are tied to something else – a variable, number of staff, etc.

- ◆ There are a few core categories of ratio-based positions:

  - → Span of control: Supervisors whose staffing needs are tied to the number of direct reports

  - → Support: Staffing needs scale to number of positions they support (e.g., administrative assistants)

  - → Other Variables: Any type of quantitative comparison to staffing needs, such as minimum instructor-to-student ratios, environmental factors like the number of Part I crimes, number of vacancies in the department, etc.

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1:8 Examples of Ratio-Based Staffing

- ◆ Span of Control

  - → All supervisors, including sergeants and civilian managers

- ◆ Support:

  - → Human Resources

  - → Administrative support positions

- ◆ Other Variables:

  - → School Resource Officers (scale to number of high schools and student body populations)

  - → Alcohol Licensing Unit (scale to number of alcohol permits)

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Fixed Coverage

- Functions where a certain number of hours of coverage must be met, such as:

  - K9

  - SWAT

  - Station keepers

- Number of posts to staff, hours/day, days/week, and shift length determine requirements.

- Staffing calculated based on these factors using net availability per staff.

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Non-Scaling Methodologies

- All positions that do not fall into another category.

- There are two main sub-categories of non-scaling positions:
    - Unique positions: Chief of Police, bureau executives, etc.
    - Selective positions: Strategic or elective decision made to staff a function.

- Selectively staffed positions can often involve a priority for the department to expand the functionality of a unit beyond its current scope.
    - For instance, adding analysts to the Budget Unit to produce more proactive budgetary reporting.

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Identifying a Position's Methodology

Interviews and Data Collection → Identify Potential Workload Drivers → Is the position workload scalable?

YES → Use Workload-Based Methodology

NO →

Is coverage determine at a certain number of hours?	Use Fixed Coverage Methodology
Does the position support or supervise other staff?	Use Ratio-Based Methodology
Do staffing needs scale in relation to something else?	Use Ratio-Based Methodology
None of the above	Use Non-Scaling Methodology

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Field Operations Bureau

Investigations Bureau

Special Operations Bureau

Administration Bureau

Strategic Management Bureau

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Field Operations: Patrol

- Sector patrol comprises over 691 officers, and responds to all community-generated calls for service.

    - Almost all (>95%) officers deploy as two-person cars.

    - In 2018, patrol responded to 300,822 community-generated calls for service.

- Computer-aided dispatch data was used to construct a workload-based methodology.

- Proactive time target of 30% used as benchmark of effective patrol service.

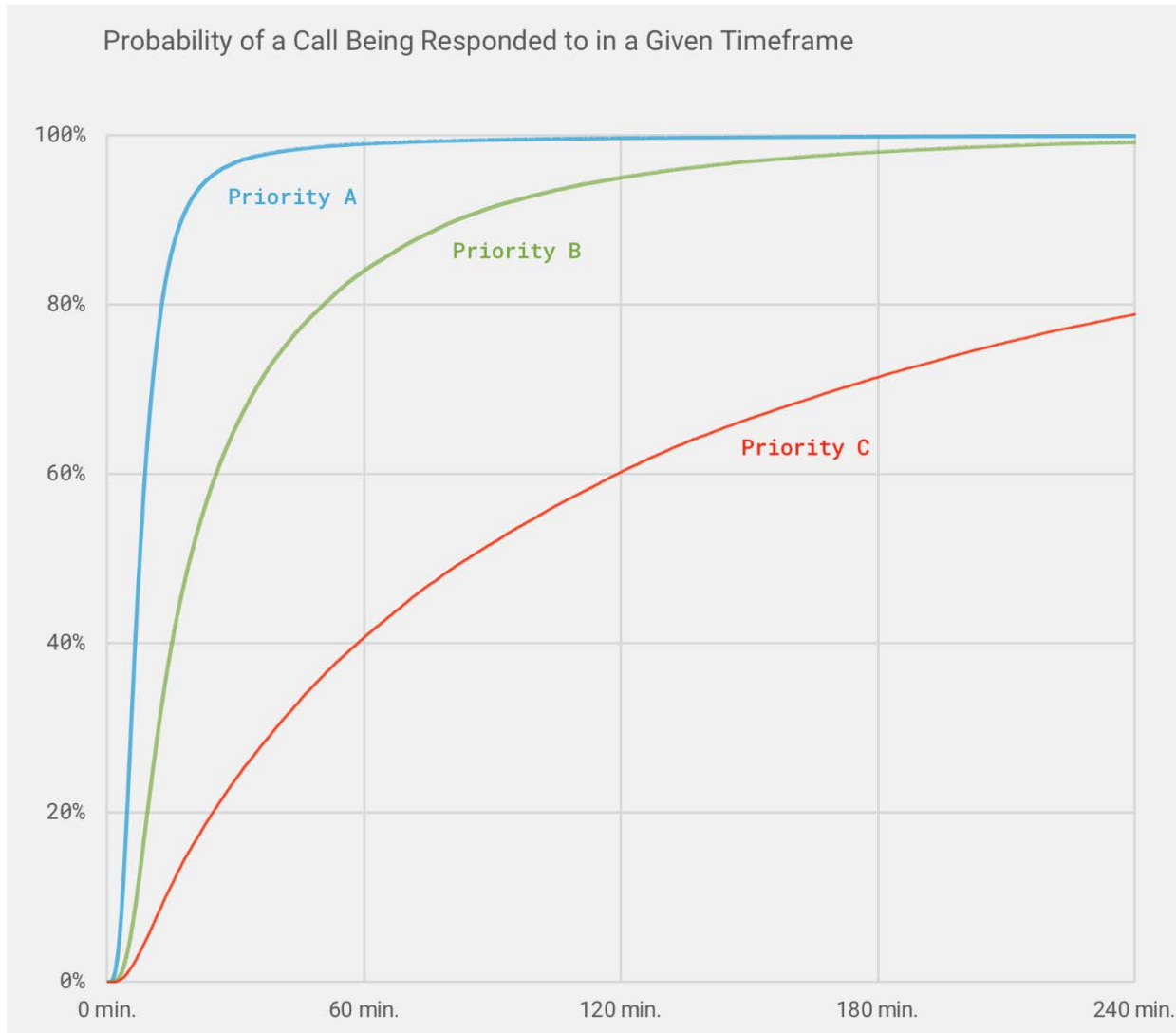- This is reflected in response times, particularly for low-priority calls for service.

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Field Operations: Patrol

- Currently, only 21% of officer time is uncommitted/proactive.

- The low proactive time %s at most times of the day show that there are not enough resources to handle incoming workload:

Time	# Units	S	M	T	W	Th	F	Sa	Overall
2am–6am	63.1	49%	58%	57%	58%	60%	56%	49%	55%
6am–10am	84.8	58%	48%	48%	43%	45%	45%	55%	55%
10am–2pm	69.0	29%	20%	19%	15%	12%	19%	25%	20%
2pm–6pm	63.3	6%	3%	5%	-9%	3%	0%	8%	3%
6pm–10pm	73.5	8%	0%	5%	-5%	2%	-4%	2%	11%
10pm–2am	120.8	54%	63%	64%	60%	59%	55%	50%	58%
Overall	79.1	39%	39%	39%	34%	36%	34%	37%	21%

- These levels are exceptionally low, and represent a critical staffing issue.

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Patrol Response Time Issues

Probability of a Call Being Responded to in a Given Timeframe

Priority A

Priority B

Priority C

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Field Operations: Patrol Findings

- In order to bring patrol proactivity to 30% and address the response time issue, 825 officers should be allocated to patrol.

- This is 134 officers above the current level.

- Officers must also fulfill station keeper duties, which mandates 30 hours of coverage for each of the 10 stations.

  - This amounts to the equivalent of about 65 full-time officer FTEs.

  - To prevent patrol resources from being drawn further, that many positions would need to be added, in absence of changes to coverage or scheduling.

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Patrol Service Levels by District

◆ Additionally, patrol service levels are highly unequal throughout the city.

	Priority C Median Response Time	% Proactivity
Bayview	99 min.	26%
Central	52 min.	18%
Ingleside	98 min.	29%
Mission	171 min.	9%
Northern	100 min.	18%
Park	42 min.	43%
Richmond	38 min.	47%
Southern	142 min.	22%
Taraval	37 min.	32%
Tenderloin	70 min.	-7%

◆ A workload-based methodology should be used to equitably allocate patrol resources.

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Field Operations: Foot Beats

- ◆ Foot beat officers work proactively and provide direct interface with local community groups and businesses.

    - ➔ Contacts can be made at a greater rate on foot.

    - ➔ Adept at establishing presence and visibility.

- ◆ Foot beats are particularly effective when the area is:

    - ➔ Walkable

    - ➔ Recognizable focal point of a community

    - ➔ Has call for service and/or crime density

    - ➔ High commercial, recreation, and/or tourism activity

- ◆ A quantitative model was created around pedestrian activity.
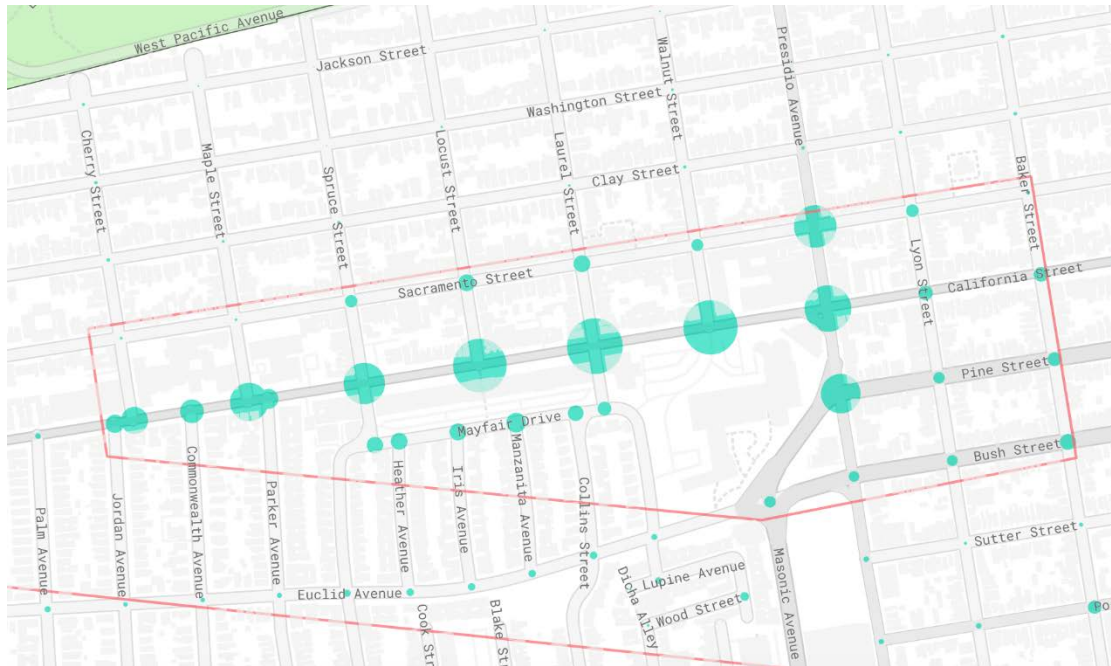
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Visualizing Pedestrian Activity

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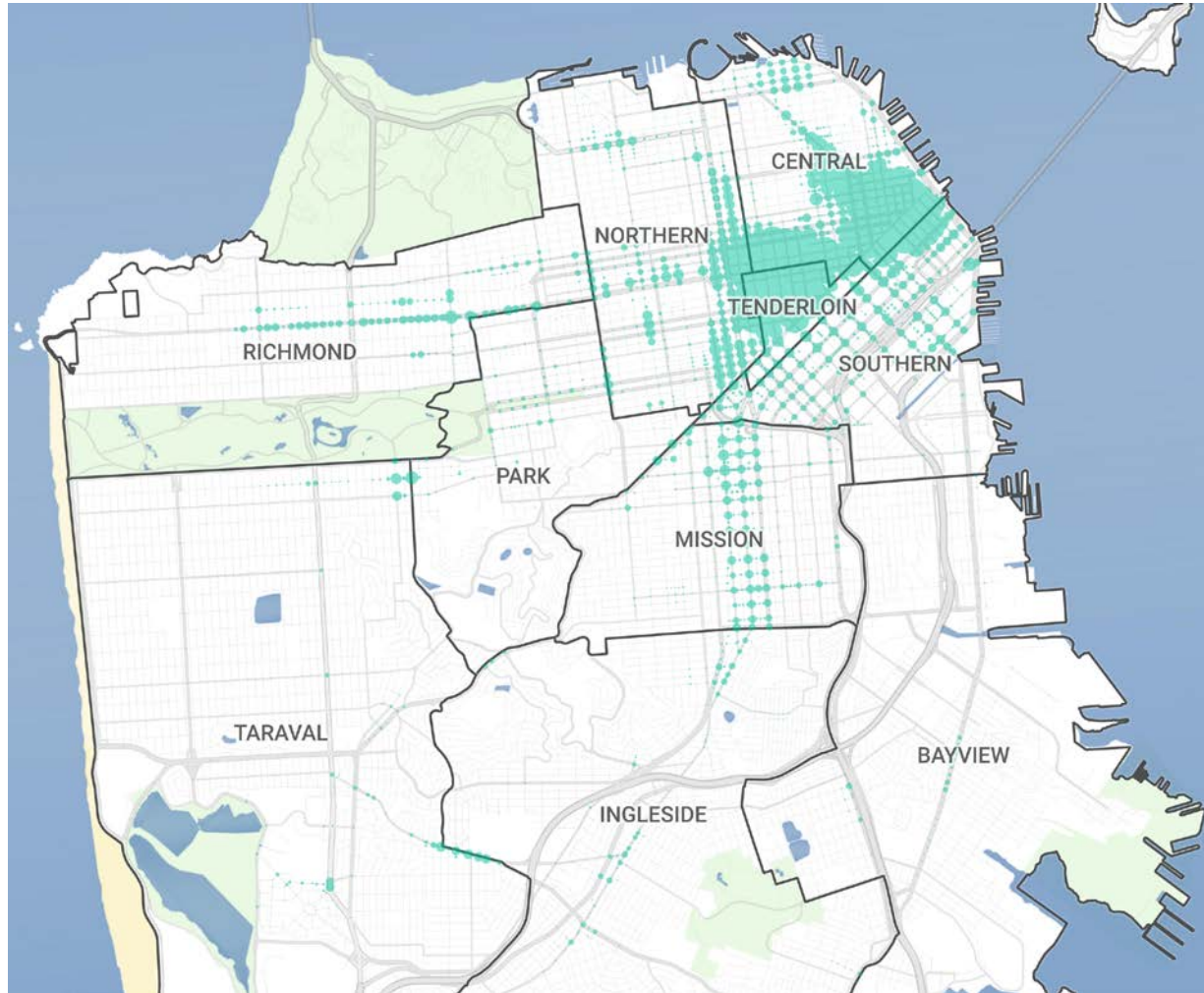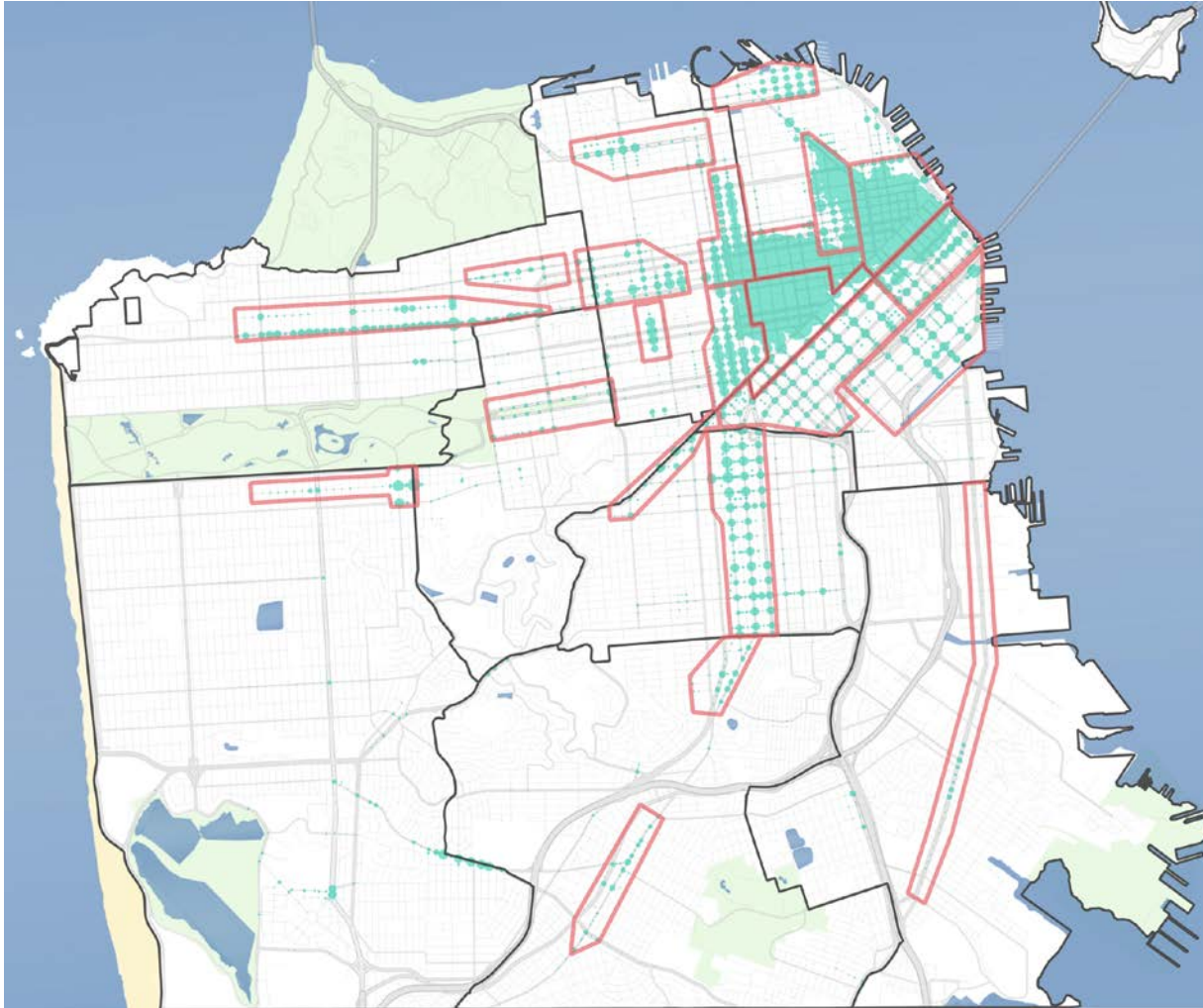
Process of Creating Foot Beats

◆ **Consecutive intersections with high pedestrian activity were used to establish boundaries:**

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Preliminary Foot Beat Zones

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Foot Beat Zones and Crime Hotspots

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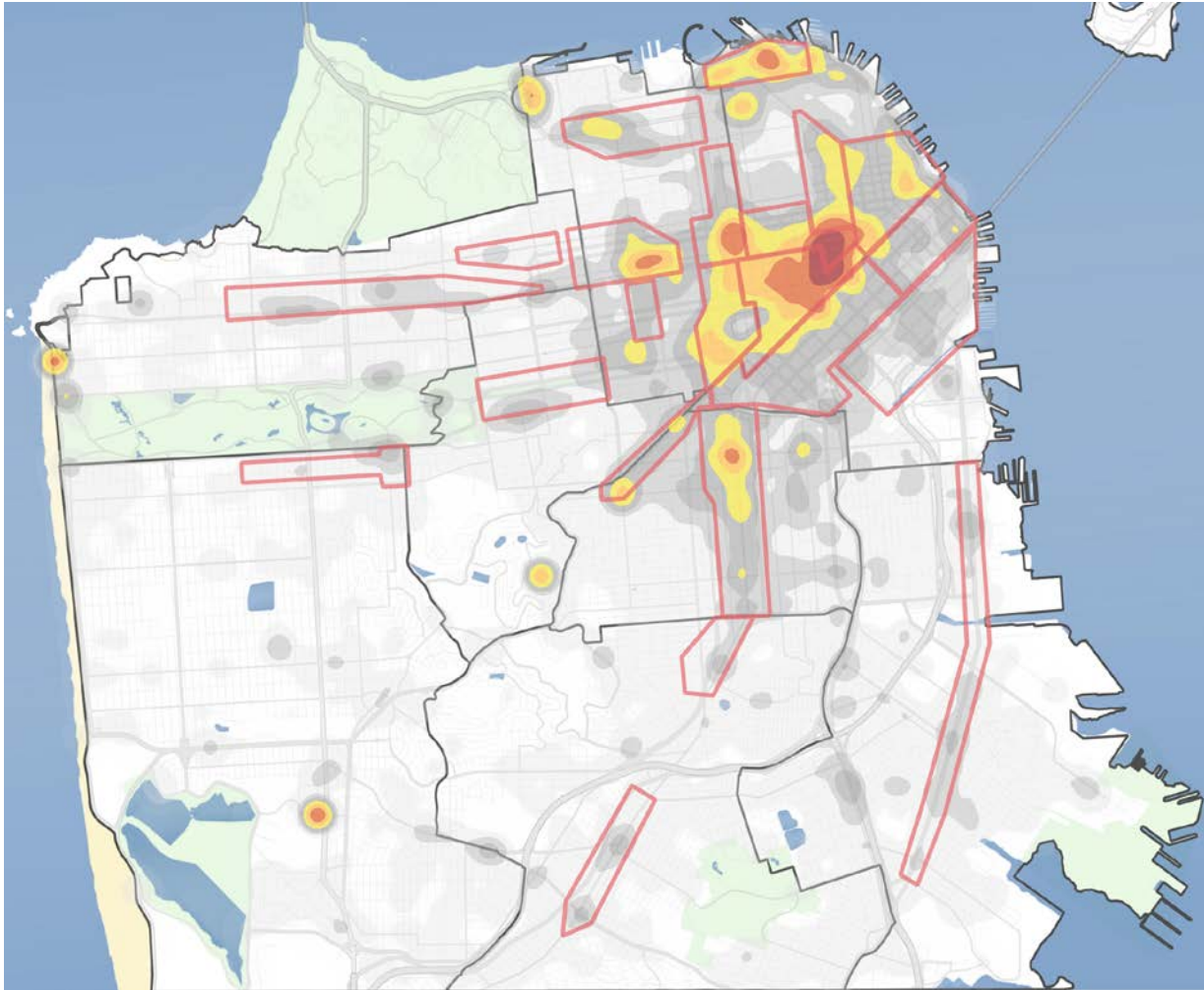
Field Operations: Foot Beats

- The model assigns officers to the zones using pedestrian count ratios.

  - Adjustments are made for certain zones such as the Financial District.

- It is designed as a data-driven 'starting point' in the process, identifying initial zones.

- Commander discretion and review, input from local leaders and organizations, and community outreach remain essential to the process.

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Field Ops: Other Recommendations

- Certain types of specialized field units that are organized at the district level should be combined to form more generalized teams.

  - This includes district-level homeless officers and plain clothes teams.

  - Combination of workload and ratio-based methodologies used.

- Expand crisis intervention team (CIT) training to better respond to calls involving those experiencing mental health crisis.

- Centralize organization of school resource officers, given that their work revolves around the schools, rather than the districts.

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Field Operations Analysis

Bureau	Curr. FTEs	Rec. FTEs	+/-
Foot Beat/Bike	125	126	+1
Patrol	870	1,059	+189
SRO & Community Enagement	32	31	−1
Admin./Command/Support	153	174	+21
Specialized/Proactive	191	206	+15
Total	1,371	1,596	+225
Sworn	1,286	1,493	+207
Civilian	85	103	+18

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Special Operations Bureau

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Investigations Bureau and SIT

- For many investigative units, cases are the center of their workload.

- Workload-based methodologies are used in these cases.

  - Additional administrative time figure added.

  - Some units have proactive time figures as well.

- Caseloads are determined from SFPD data.

- Time spent per case developed using estimates that break down investigations into time figures.

  - Detailed time breakdowns have been constructed for each major type of case (e.g., robbery, sex assault, homicide).

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Estimating Time Per Case

Common Evidence/Interviews	Approx. Time	% of Time Completed
Crash scene material/ evidence	2 hours	5%
Crash scene processing/ reconstruction	8 hours	100%
Video	2 hours	40%
Vehicles, electronic records, physical location	10 hours	100%
Victim statement	1 hour	100%
Witnesses statement	1 hour	100%
Suspect	2 hours	50%
Total	**23.5 hours (avg.)**	

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Investigations Findings

◆ **Several units require additional staff to meet work demands,** including SIT teams, which also need additional civilian support.

◆ The workload-based analysis shows that, for many investigative units, capacity is more than sufficient.

◆ There are opportunities to centralize most work related to rebookings, enabling investigators to focus more time on cases.

◆ Reorganize 'the Pit' and Special Victims Unit by creating new specialized investigative units.

◆ Address deficiencies in investigative case management by acquiring and implementing case management software.

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Investigations Analysis – Bureau

Bureau	Curr. FTEs	Rec. FTEs	+/-
CGIC	5	5	+0
Forensic Services Division	96	104	+8
General Crimes	44	46	+2
Major Crimes	68	64	-4
Special Investigations Division	31	32	+1
Special Victims	62	60	-2
Admin.	5	5	+0
Total	311	316	+5
Sworn	202	201	-1
Civilian	109	115	+6

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Station Investigative Teams (SIT)

Bureau	Curr. FTEs	Rec. FTEs	+/-
Investigator	33	34	+1
Supervisor	10	10	+0
Support Staff	17	23	+6
Total	60	67	+7
Sworn	56	57	+1
Civilian	4	10	+6

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Special Operations Findings

◆ **SWAT and EOD staffing are both proportional to the number of** teams, as each team requires a set number of personnel to be fully functional.

◆ K9 units are currently in different parts of the organization – these should be centralized.

◆ Department Operations Center (DOC) can be refocused as a real-time crime center, which will require some civilianization.

◆ Traffic Enforcement is a workload-based unit, but its staffing needs depend on objectives set for proactive enforcement.

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Special Operations : SFMTA

- ◆ SFMTA has fewer sworn staff assigned than similarly-moded transit agencies :

Agency	Value
Minneapolis (MetroTransit)	14.3
Sacramento (SacRT)	10.6
Santa Clara (VTA)	9.4
New Jersey (NJTransit)	9.2
Philadelphia (SEPTA)	7.5
King County (WA) Metro	6.5
San Francisco (SFMTA)	0.8

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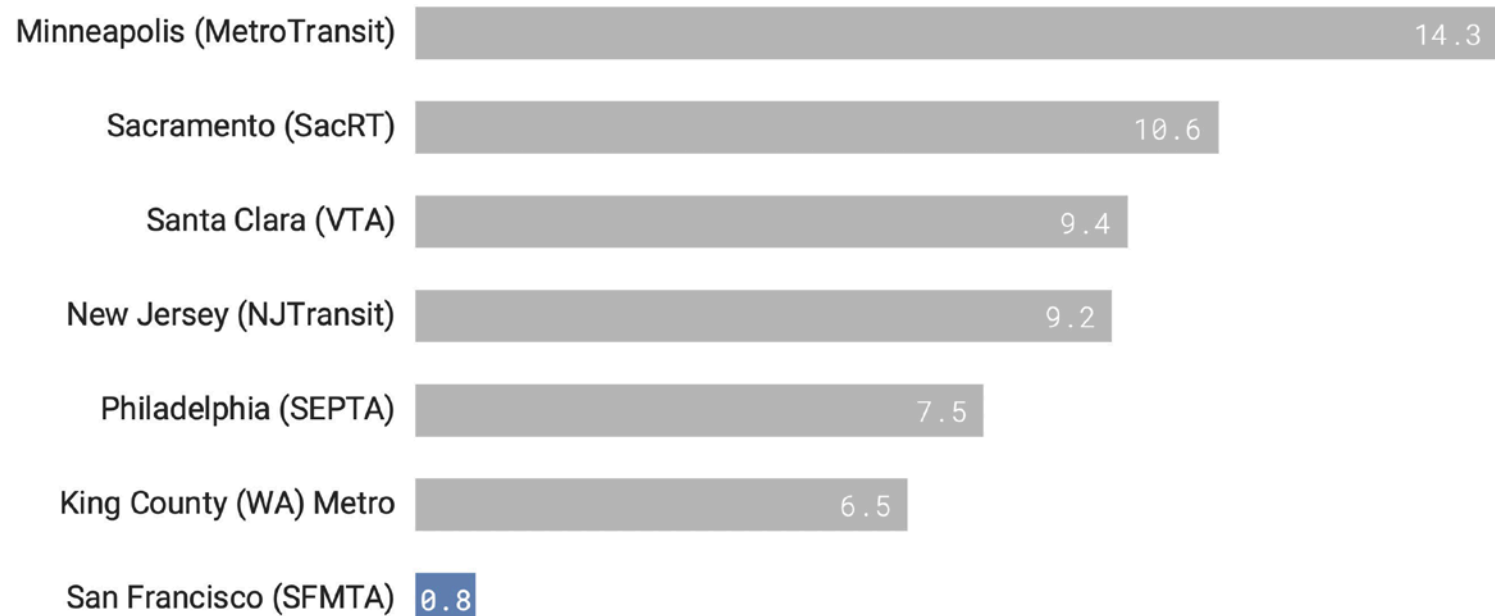
Special Operations Staffing Analysis

Bureau	Curr. FTEs	Rec. FTEs	+/-
Administration	2	2	+0
Homeland Security Unit	49	49	+0
Municipal Transportation Agency	24	69	+45
Tactical Company	86	99	+13
Traffic Company	53	55	+2
Urban Area Security Initiative	3	3	+0
Total	217	277	+60
Sworn	204	263	+59
Civilian	13	14	+1

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Administration Bureau Findings

◆ **Workload**-based methodologies are used in several areas, each of which shows the need for minor staffing additions:

  → Backgrounds (Transition away from PT retired staff)

  → CISU (Core records management functions)

  → Property Control (Front Counter)

◆ In Property Control, acquiring and implementing a barcoding system for evidence is a critical need.

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Administration Bureau Findings

◆ **Ratio**-based methodologies used in many areas to approximate various requirements and support provided to the department:

➔ Basic Recruit Course (academy) staffing needs based on CA POST instructor ratios and class sizes.

➔ Vehicle Maintenance Officers based on number of stations (1 per FTE), as well as number of unsupported vehicles (130 per FTE).

◆ Units that can become workload-based once additional data is tracked and collected include:

➔ Court Liaison (subpoenas)

➔ Medical Liaison

➔ Staffing and Deployment

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Administration Staffing Analysis

Bureau	Curr. FTEs	Rec. FTEs	+/-
Crime Information Services Unit	42	40	−2
Fleet and Facilities	29	38	+9
Property Control	27	27	+0
Staff Services	52	57	+5
Training Division	50	53	+3
Admin.	4	4	+0
Total	203	218	+15
Sworn	96	96	+0
Civilian	106	121	+15

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Field Operations Bureau

Investigations Bureau

Special Operations Bureau

Administration Bureau

Strategic Management Bureau

Chief of Staff and Office of the Chief

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Strategic Management Findings

◆ **Positions are non**-scalable and ratio-based.

◆ Budget Unit capabilities should be expanded, which will require an additional position.

◆ Technology Department staffing was analyzed as a one-time assessment of needs and current capabilities.

   ➔ Currently non-scaling, but can become workload-based.

   ➔ Identified staffing needs in a number of areas.

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Strategic Management Analysis

Bureau	Curr. FTEs	Rec. FTEs	+/-
Administration	2	2	+0
Fiscal Division	17	18	+1
Professional Standards	22	24	+2
Technology Division	44	61	+17
Total	85	105	+20
Sworn	19	19	+0
Civilian	66	86	+20

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Field Operations Bureau

Investigations Bureau

Special Operations Bureau

Administration Bureau

Strategic Management Bureau

Chief of Staff and Office of the Chief

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Chief of Staff / Office of the Chief

- **Internal Affairs staffing calculations use a workload -based methodology.**

  - Similar to other investigative units, estimates have been developed for time spent per case by the type of IA investigation (e.g., officer-involved shooting, criminal, administrative).

- Legal Unit, which handles PRA requests (including SB 1421), has rapidly evolved with increasing workload resulting from SB 1421.

  - Unit workload and backlogs should be monitored carefully, and adjustments should be made proactively as needed.

- No recommendations in Office of the Chief.

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Chief of Staff Analysis

Bureau	Curr. FTEs	Rec. FTEs	+/-
Office of Risk Management	67	68	+1
Policy and Public Affairs	1	3	+2
Strategic Communications	9	9	+0
Admin.	1	1	+0
Total	78	81	+3
Sworn	44	43	−1
Civilian	34	38	+4

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Office of the Chief Analysis

Bureau	Curr. FTEs	Rec. FTEs	+/-
Chief's Office	8	8	+0
Sworn	4	4	+0
Civilian	4	4	+0

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Summary of Analysis Results: Sworn

Bureau	Curr. FTEs	Rec. FTEs	+/- From Curr.	Budgeted Equivalent*	+/- From Budget
Field Operations	1,286	1,493	+207		
Field Operations (SIT)	56	57	+1		
Investigations	202	201	-1		
Special Operations	204	263	+59		
Administration	96	96	+0		
Strategic Management	19	19	+0		
Chief of Staff	44	43	-1		
Chief's Office	4	4	+0		
Total	**1,911**	**2,176**	**+265**	**2,099**	**+77**

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Summary of Analysis Results: Civilian

Bureau	Curr. FTEs	Rec. FTEs	+/- From Curr.	Current Budget	+/- From Budget
Field Operations	85	103	+18		
Field Operations (SIT)	4	10	+6		
Investigations	109	115	+6		
Special Operations	13	14	+1		
Administration	107	122	+15		
Strategic Management	68	88	+20		
Chief of Staff	34	38	+4		
Chief's Office	4	4	+0		
Total	**422**	**492**	**+70**	**431**	**+61**

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Overall Findings and Conclusions

◆ Quantitative methodologies have been developed for 84% of personnel, providing a data-driven approach to resource allocation.

◆ Resource issues are the most severe in patrol, both on an overall basis, as well as how service levels vary by district.

➔ The positions recommended in patrol account for two-thirds of all staffing recommendations.

➔ Equalizing service levels among the districts can be completed without adding staff.

◆ Significant opportunities to reorganize investigations and implement case management software.

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Overall Findings and Conclusions

◆ Additionally, there are a number of opportunities to civilianize positions in support and administrative functions.

◆ A barcoding and evidence management system can mitigate risk, increase staff capacity, and augment efforts to purge inventory.

◆ Workload tracking and data collections should be prioritized so that the interactive model can identify staffing needs as they evolve.

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