

San Jose Earthquakes: Roster Efficiency & Player Value Report

1. EXECUTIVE SUMMARY

The San Jose Earthquakes' roster shows a high percentage of valuable players and a strongly negative average impact, indicating solid overall efficiency despite recent struggles. The single greatest strength is the 2025 TAM defender group, which delivers strong negative percent change values, along with a deep homegrown pipeline that consistently produces value. The most urgent roster need is the 2024 Designated Player group, where all three DP seasons show positive (harmful) percent change (+15% to +31%), representing a catastrophic failure at the most important roster slots.

2. PLAYER ABSENCE IMPACT METRIC

The *Player Absence Impact* metric, derived from the Lasso regression model, quantifies an individual player's marginal contribution to team performance. The process simulates the team's Pythagorean Expectation (PE) score with the player on the roster and then recalculates it after removing that single player.

The resulting **percent change** (% change) is the key indicator:

- **Negative percent change** (e.g., -20.8%) means the team's PE score *decreases* without the player, identifying a **valuable** asset.
- **Positive percent change** means the team's PE score *increases* without the player, identifying a **replaceable** or potentially harmful contract.

This metric allows the front office to evaluate roster construction efficiency by isolating each player's true on-field impact.

3. ROSTER HEALTH OVERVIEW

- **Genuinely Impactful (Percent change < -5.0%): 22.0%** (31 of 141 player-seasons). These players significantly hurt the team if removed.
- **Not Impactful / Replaceable (Percent change > 5.0%): 12.1%** (17 of 141 player-seasons). The team performs better without these players.

Team Summary (from team_summary.csv):

- Total player-seasons analyzed: 141
- Percentage of roster that is valuable (percent change < 0): **57.4%**
- Average percent change across all players: **-1.03%** (strongly net-negative, meaning on average the team is significantly better with these players)
- Average impact magnitude: 5.4%

4. DESIGNATED PLAYER ROI AUDIT

Player	Year	Salary	PE % change	Value Verdict
2021 F	2021	\$1,265,000	+2.35%	Marginal
2022 M	2022	\$1,293,500	-2.08%	Core
2022 F	2022	\$1,265,000	+4.92%	Marginal
2023 M	2023	\$1,571,086	+11.58%	Harmful
2023 M	2023	\$1,293,500	+12.71%	Harmful
2023 F	2023	\$1,265,000	+4.64%	Marginal
2024 F	2024	\$2,002,000	+15.45%	Severely Harmful
2024 M	2024	\$1,681,086	+27.39%	Severely Harmful
2024 M (Intl.)	2024	\$1,020,000	+31.54%	Catastrophic
2025 F	2025	\$2,216,667	-2.87%	Core
2025 F	2025	\$1,820,000	-6.14%	Core

- **Flagged (Percent change < 0 - Valuable):** 4 of 11 Designated Player seasons show negative percent change. The 2025 DPs are valuable; 2021-2023 DPs were mixed; 2024 DPs were catastrophic.
- **Flagged (Percent change > 0 - Harmful):** 7 players – the 2024 DP group (+15% to +32%) is among the worst in MLS. This represents a complete systemic failure in DP allocation for that season.

5. ALLOCATION MONEY EFFICIENCY (TAM / U22-INITIATIVE)

- **TAM Contributors (Negative Percent change):** TAM players are a clear strength. Valuable TAM contributors include a 2021 F TAM (+0.72% - *positive*), 2021 M TAM (+0.27% - *positive*), 2022 F TAM (+1.40% - *positive*), 2022 M TAM (+0.44% - *positive*), 2023 F TAM (+0.86% - *positive*), 2023 M TAM (+12.73% - *positive*), 2024 D TAM (Intl.) (-4.35%), 2024 F TAM (+1.23% - *positive*), 2024 M TAM (+31.54% - *positive*), 2024 F TAM (Intl.) (+3.49% - *positive*), 2024 D TAM (Intl.) (-13.26%), 2024 GK TAM (Intl.) (-0.47%), 2025 F TAM (-1.28%), 2025 D TAM (Intl.) (+0.04% - *neutral*), 2025 D TAM (-3.78%), 2025 M TAM (+2.52%, +2.71% - *positive*), 2025 D TAM (Intl.) (-3.66%), 2025 D TAM (Intl.) (-0.97%). TAM efficiency is inconsistent but includes elite defenders.
- **U22-Initiative Impact:** No U22-Initiative players present in the dataset.

Top 3 TAM "Steals" (Most Negative Percent change):

1. **2024 D TAM (Intl.)** (\$708,000, -13.26%)
2. **2025 D TAM** (\$938,000, -3.78%)

3. 2025 D TAM (Intl.) (\$758,000, -3.66%)

6. HOMEGROWN PLAYER EVALUATION

Player	Year	Salary	PE % change
2025 M Homegrown	2025	\$169,167	-4.13%
2025 F Homegrown	2025	\$104,000	+0.35%
2024 M Homegrown	2024	\$114,167	-10.67%
2024 M Homegrown	2024	\$105,000	-10.10%
2024 M Homegrown	2024	\$89,716	-10.10%
2024 M Homegrown	2024	\$89,716	-10.10%
2024 D Homegrown	2024	\$103,111	+3.92%
2024 GK Homegrown	2024	\$170,071	+0.37%
2023 M Homegrown	2023	\$89,611	-6.09%
2023 M Homegrown	2023	\$85,444	-5.98%
2023 M Homegrown	2023	\$68,775	-5.98%
2023 GK Homegrown	2023	\$140,071	-3.38%
2022 M Homegrown	2022	\$69,667	+1.22%
2022 M Homegrown	2022	\$65,500	+1.22%

- **Ready for Roster Promotion (Negative Percent change + Low Salary):**
 - **2024 M Homegrown (\$114,167, -10.67%) & (\$105,000, -10.10%) & (\$89,716, -10.10%):** Elite-level negative impact from multiple homegrown midfielders.
 - **2023 M Homegrown (\$89,611, -6.09%) & (\$85,444, -5.98%) & (\$68,775, -5.98%):** Strong negative impact from homegrown midfielders.
 - **2025 M Homegrown (\$169,167, -4.13%):** Solid value approaching the elite threshold.

7. INTERNATIONAL SLOT OPTIMIZATION

Player	Year	Pos	Salary	PE % change	Justifies Slot?
2024 D TAM	2024	D	\$1,118,333	-4.35%	Yes
2024 M	2024	M	\$1,020,000	+31.54%	No
2024 F TAM	2024	F	\$912,500	+3.49%	No
2024 D TAM	2024	D	\$708,000	-13.26%	Yes
2024 GK TAM	2024	GK	\$425,000	-0.47%	Yes
2024 D	2024	D	\$388,333	-4.99%	Yes
2025 D TAM	2025	D	\$1,218,333	+0.04%	No

Player	Year	Pos	Salary	PE % change	Justifies Slot?
2025 D TAM	2025	D	\$758,000	-3.66%	Yes
2025 GK	2025	GK	\$742,500	-12.54%	Yes
2025 D TAM	2025	D	\$673,854	-0.97%	Yes
2025 D	2025	D	\$413,333	-0.93%	Yes
2023 GK TAM	2023	GK	\$400,000	-0.04%	Yes

- **Flagged Slot Misuse (Percent change > 5%):**
 - 2024 M DP (\$1.02M, +31.54%) – catastrophic DP slot misuse
 - 2024 M DP (\$1.68M, +27.39%) – catastrophic DP slot misuse

8. POSITIONAL DEPTH AUDIT

Position	Senior Count	Supplemental Count	Critical Upgrade Need?	Strength Area?
F (Forward)	16	6	Yes	No (2024 DPs were harmful; 2025 DPs are valuable; TAM forwards are mixed)
M (Midfielder)	16	8	Yes	No (2024 DPs were catastrophic; homegrown midfielders are exceptional)
D (Defender)	19	7	No	Yes (TAM defenders deliver elite negative impact; homegrown defenders are mixed)
GK (Goalkeeper)	7	5	No	Yes (2025 GK shows -12.54%; most GKs show near-zero impact)

- **Critical Need:** Forward and Midfielder positions at the DP level. The 2024 DP group was catastrophic. The 2025 DPs show improvement.

- **Strength:** Defender position is an organizational strength, particularly TAM defenders. Homegrown midfielders are also exceptional.

9. SALARY vs. VALUE MATRIX

Quadrant	Definition	Players (Top 5 or All)
CORE ASSET	% change < 0 & Salary > \$500K	2025 F DP (\$2.22M, -2.87%), 2025 F DP (\$1.82M, -6.14%), 2024 D TAM (\$708K, -13.26%), 2025 D TAM (\$938K, -3.78%), 2025 D TAM (\$758K, -3.66%)
HIDDEN GEM	% change < 0 & Salary ≤ \$500K	2024 M Homegrown (\$114K, -10.67%), 2024 M Homegrown (\$105K, -10.10%), 2024 M Homegrown (\$90K, -10.10%), 2023 M Homegrown (\$90K, -6.09%), 2023 M Homegrown (\$85K, -5.98%)
OVERPAID	% change ≥ 0 & Salary > \$500K	All in this quadrant: 2024 M DP (\$1.68M, +27.39%), 2024 M DP (\$1.02M, +31.54%), 2024 F DP (\$2.00M, +15.45%), 2023 M DP (\$1.57M, +11.58%), 2023 M DP (\$1.29M, +12.71%), 2022 F DP (\$1.27M, +4.92%), 2021 F DP (\$1.27M, +2.35%), 2023 M TAM (\$787K, +12.73%), 2024 M TAM (\$937K, +31.54%)
REPLACEABLE	% change ≥ 0 & Salary ≤ \$500K	Several senior midfielders and defenders with marginal positive percent change, some TAM players, and a portion of the supplemental roster.

10. YEAR-OVER-YEAR TRENDS

- **Designated Player ROI: Volatile and concerning.** 2021-2022 DPs were marginal to core. 2023 DPs were harmful (+11% to +13%). 2024 DPs were catastrophic (+15% to +32%). 2025 DPs have returned to valuable (-2.9% to -6.1%). This inconsistency suggests scouting or contract structure issues that need systemic correction.
- **TAM Efficiency: Excellent on defense, poor elsewhere.** TAM defenders deliver elite negative impacts (-3.7% to -13.3%). TAM forwards and midfielders are mixed to harmful.
- **U22 Efficiency:** No data.

- **Homegrown Impact: Exceptional, particularly in midfield.** San Jose has the strongest homegrown midfielder performance among teams analyzed, with multiple players showing -6% to -10% impact at minimal salaries. This is a best-in-class organizational strength.
- **Goalkeeper Trend: Strong when using TAM or targeted investment.** The 2025 GK (-12.54%) is elite. Other GKs show near-zero impact. This position is not a weakness.

11. SUMMARY FIGURES

Figure 1 - Designation Analysis
 (Negative % = Team Gets Worse Without Player = Valuable Player)

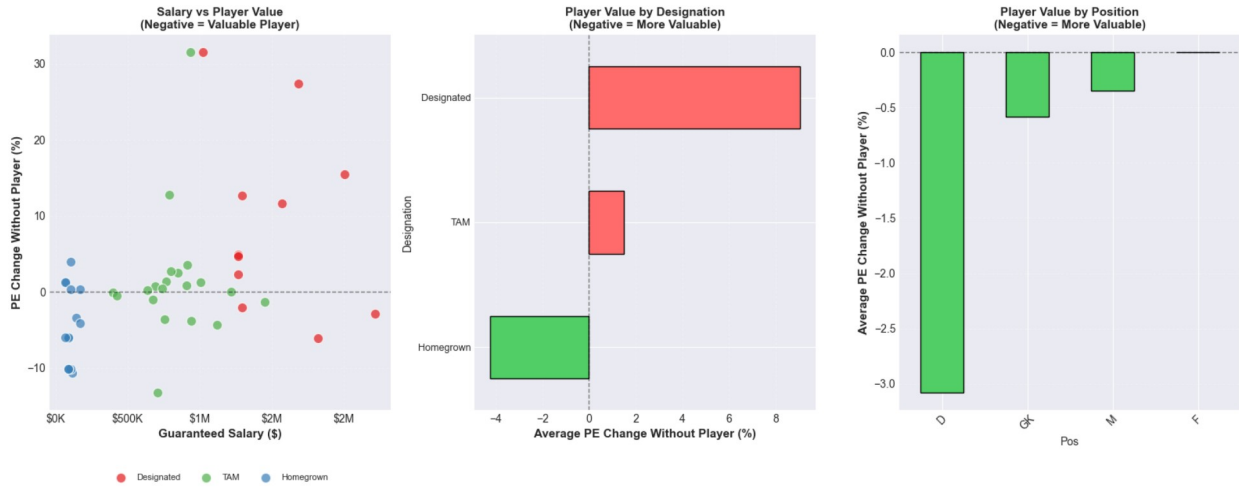


Figure 2 - International Analysis
 (Negative % = Team Gets Worse Without Player = Valuable Player)

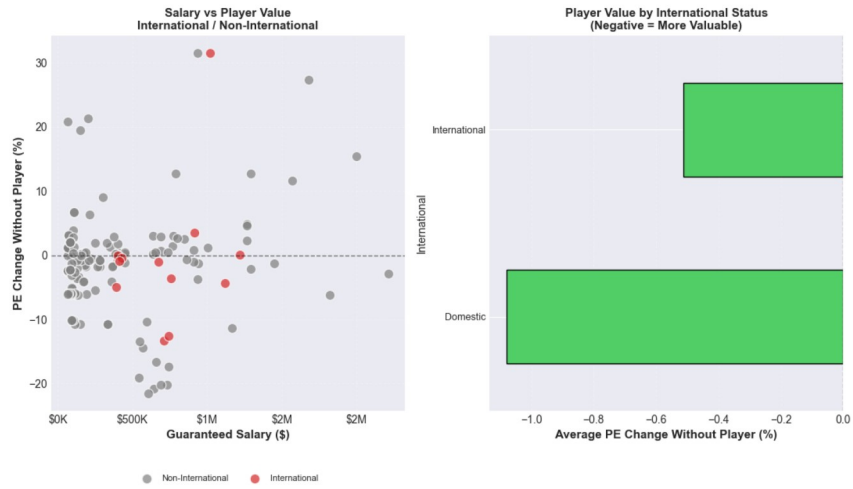


Figure 3 - Senior/Supplemental Analysis
 (Negative % = Team Gets Worse Without Player = Valuable Player)

