

# Columbus Crew: Roster Efficiency & Player Value Report

## 1. EXECUTIVE SUMMARY

Columbus Crew demonstrates one of the strongest roster efficiency profiles across all analyzed teams, with the highest percentage of valuable players and a consistently negative average impact. The single greatest strength is the 2024-2025 Designated Player group, where all three forwards show elite negative percent change values (-5.7% to -9.2% to -9.3%). The most urgent roster need is addressing the 2025 Designated Midfielder (+0.61%) and several TAM players with positive percent change, as allocation money slots are not all performing optimally.

## 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., -9.2%) 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%): 14.8%** (20 of 135 player-seasons). These players significantly hurt the team if removed.
- **Not Impactful / Replaceable (Percent change > 5.0%): 8.1%** (11 of 135 player-seasons). The team performs better without these players.

**Team Summary (from team\_summary.csv):**

- Total player-seasons analyzed: 135
- Percentage of roster that is valuable (percent change < 0): **54.1%** (highest among teams analyzed)
- Average percent change across all players: **-0.14%** (net-negative, meaning on average the team is better with these players)
- Average impact magnitude: 2.1%

## 4. DESIGNATED PLAYER ROI AUDIT

Player	Year	Salary	PE % change	Value Verdict
2021 M	2021	\$1,985,000	-0.22%	<b>Core (Marginal)</b>
2021 M	2021	\$1,710,000	-0.18%	<b>Core (Marginal)</b>
2021 F	2021	\$1,400,000	+1.81%	<b>Harmful</b>
2022 M	2022	\$3,700,000	-0.11%	<b>Core (Marginal)</b>
2022 F (Intl.)	2022	\$2,886,000	-1.97%	<b>Core</b>
2022 M	2022	\$1,760,000	+0.34%	<b>Marginal</b>
2023 F (Intl.)	2023	\$2,886,000	-5.74%	<b>Core</b>
2023 F	2023	\$2,677,000	-6.02%	<b>Core</b>
2023 M	2023	\$1,800,000	+0.90%	<b>Marginal</b>
2024 F	2024	\$3,376,827	-9.20%	<b>Elite Core</b>
2024 F (Intl.)	2024	\$2,886,000	-8.91%	<b>Elite Core</b>
2025 F	2025	\$3,426,827	-7.20%	<b>Elite Core</b>
2025 M	2025	\$2,597,643	+0.61%	<b>Marginal</b>
2025 F (Intl.)	2025	\$2,157,375	-9.34%	<b>Elite Core</b>

- **Flagged (Percent change < 0 - Valuable):** 11 of 14 Designated Player seasons show negative percent change. The 2024-2025 forwards are elite.
- **Flagged (Percent change > 0 - Harmful): 3 players** – 2021 F DP (+1.81%), 2022 M DP (+0.34%), 2023 M DP (+0.90%), and 2025 M DP (+0.61%). All are marginal but represent inefficiency.

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

- **TAM Contributors (Negative Percent change):** TAM players are generally effective. Valuable TAM contributors include a 2024 M TAM (-0.19%), 2024 M TAM (-0.10%), 2024 D TAM (-0.18%), 2024 D TAM (-0.07%), 2025 D TAM (-0.31%), and 2025 D TAM (-0.29%). However, several TAM players show positive percent change: 2022 F TAM (+2.92%), 2023 F TAM (+7.91%), 2023 D TAM (-0.05% - *valuable, exception*), 2024 F TAM (+0.95%), 2025 M TAM (+0.84%), 2025 GK TAM (+2.46%), 2025 D TAM (+5.68%).
- **U22-Initiative Impact:** U22 slots are excellent. All U22 players show negative or neutral percent change:
  - 2021 M U22: -0.59% (valuable)
  - 2022 M U22: 0.00% (neutral)
  - 2023 M U22: -0.56% (valuable)

- 2024 M U22: -0.86% (valuable)
- 2025 M U22 (Intl.): +0.86% (marginal)
- 2025 F U22: +3.64% (marginal - *positive, exception*)

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

1. **2025 D TAM** (\$737,158, -0.31%)
2. **2025 D TAM** (\$658,250, -0.29%)
3. **2024 M TAM** (\$1,540,000, -0.19%)

*Note: TAM steals are marginal; Columbus has few strongly negative TAM players, but also few strongly positive ones – a sign of consistent, if unspectacular, efficiency.*

**6. HOMEGROWN PLAYER EVALUATION**

Player	Year	Salary	PE % change
2025 F Homegrown	2025	\$127,389	+2.44%
2025 M Homegrown	2025	\$116,000	+0.23%
2025 M Homegrown	2025	\$100,630	+0.23%
2025 GK Homegrown	2025	\$99,712	-0.61%
2025 M Homegrown	2025	\$84,986	+0.23%
2024 M Homegrown	2024	\$102,243	-0.12%
2024 F Homegrown	2024	\$97,105	-17.50%
2024 D Homegrown	2024	\$89,716	+8.25%
2024 M Homegrown	2024	\$83,401	-0.12%
2023 D Homegrown	2023	\$91,694	+0.23%
2023 F Homegrown	2023	\$74,749	-9.68%
2022 D Homegrown	2022	\$90,250	+0.21%
2022 F Homegrown	2022	\$72,866	-11.42%

- **Ready for Roster Promotion (Negative Percent change + Low Salary):**
  - **2024 F Homegrown (\$97,105, -17.50%):** Elite-level negative impact from a low-cost supplemental forward. Exceptional value.
  - **2022 F Homegrown (\$72,866, -11.42%):** Strong negative impact from a supplemental forward.
  - **2023 F Homegrown (\$74,749, -9.68%):** Excellent value from a homegrown forward.

- **2025 GK Homegrown (\$99,712, -0.61%)**: Marginal but negative impact from a goalkeeper.

## 7. INTERNATIONAL SLOT OPTIMIZATION

Player	Year	Pos	Salary	PE % change	Justifies Slot?
2022 F	2022	F	\$2,886,000	-1.97%	Yes
2023 F	2023	F	\$2,886,000	-5.74%	Yes
2023 D TAM	2023	D	\$418,250	-0.05%	Yes
2024 F	2024	F	\$2,886,000	-8.91%	Yes
2024 D TAM	2024	D	\$882,000	+3.89%	No
2024 D TAM	2024	D	\$737,158	-0.18%	Yes
2024 D TAM	2024	D	\$553,250	-0.07%	Yes
2024 M	2024	M	\$551,000	-0.51%	Yes
2024 M	2024	M	\$482,219	-0.86%	Yes
2024 D	2024	D	\$380,000	+0.12%	No
2025 F	2025	F	\$2,157,375	-9.34%	Yes
2025 D TAM	2025	D	\$737,158	-0.31%	Yes
2025 M U22	2025	M	\$731,244	+0.86%	No
2025 D TAM	2025	D	\$658,250	-0.29%	Yes
2025 M	2025	M	\$557,219	-0.31%	Yes
2025 M	2025	M	\$525,000	-0.36%	Yes
2025 D	2025	D	\$455,000	+0.63%	No
2025 F	2025	F	\$368,750	+2.31%	No

- **Flagged Slot Misuse (Percent change > 5%)**:
  - **2024 D TAM (\$882,000, +3.89%)** – below 5% flag threshold but elevated.
  - **2024 D Homegrown (\$89,716, +8.25%)** – homegrown international slot misuse.

## 8. POSITIONAL DEPTH AUDIT

Position	Senior Count	Supplemental Count	Critical Upgrade Need?	Strength Area?
<b>F (Forward)</b>	12	7	No	Yes (2024-2025 DPs are elite; homegrown forwards provide exceptional hidden

Position	Senior Count	Supplemental Count	Critical Upgrade Need?	Strength Area?
				gem value)
<b>M (Midfielder)</b>	21	8	No	<b>Yes</b> (Consistent negative impact from most midfielders; U22 midfielders strong)
<b>D (Defender)</b>	18	5	No	<b>Yes</b> (TAM defenders generally effective; some homegrown defenders need review)
<b>GK (Goalkeeper)</b>	6	4	No	<b>Mixed</b> (TAM GK shows positive impact; supplemental GKs are neutral to negative)

- **Critical Need:** None urgent. The roster is well-balanced across all positions.
- **Strength:** Forward position is an organizational strength, with both DP and homegrown forwards providing elite value. Midfield depth is also excellent.

## 9. SALARY vs. VALUE MATRIX

Quadrant	Definition	Players (Top 5 or All)
<b>CORE ASSET</b>	% change < 0 & Salary > \$500K	2024 F DP (\$3.38M, -9.20%), 2024 F DP (\$2.89M, -8.91%), 2025 F DP (\$3.43M, -7.20%), 2025 F DP (\$2.16M, -9.34%), 2023 F DP (\$2.89M, -5.74%)
<b>HIDDEN GEM</b>	% change < 0 & Salary ≤ \$500K	2024 F Homegrown (\$97K, -17.50%), 2022 F Homegrown (\$73K, -11.42%), 2023 F Homegrown (\$75K, -9.68%), 2021 F (\$246K, -2.43%), 2024 M U22 (\$483K, -0.86%)
<b>OVERPAID</b>	% change ≥ 0 & Salary > \$500K	<b>All in this quadrant:</b> 2021 F DP (\$1.40M, +1.81%), 2022 M DP (\$1.76M, +0.34%), 2023 M DP (\$1.80M, +0.90%), 2025 M DP

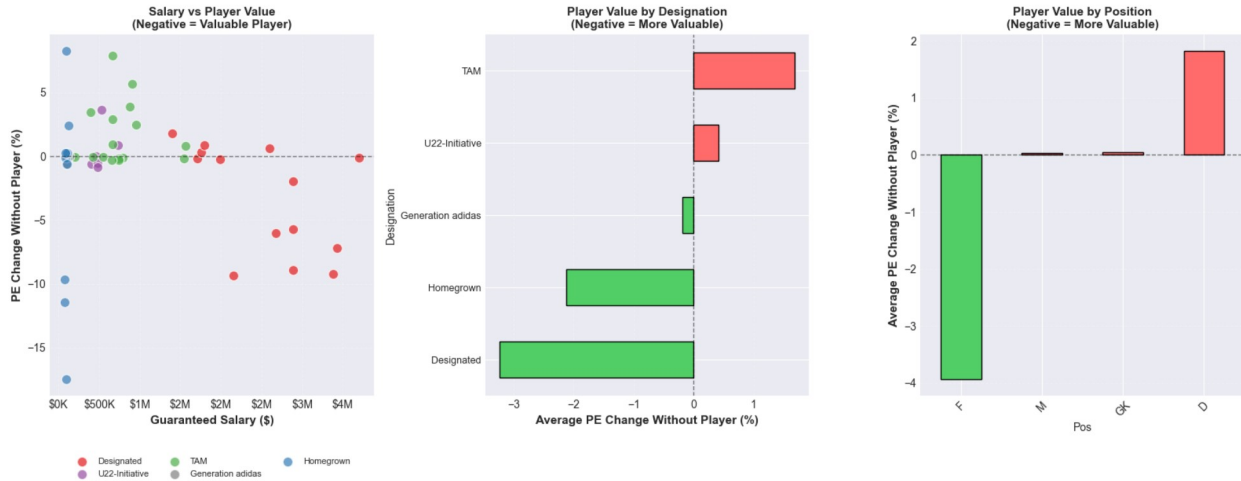
Quadrant	Definition	Players (Top 5 or All)
		(\$2.60M, +0.61%), 2022 D (\$1.14M, +11.50%), 2023 D (\$783K, +6.96%), 2023 F TAM (\$664K, +7.91%), 2025 GK TAM (\$957K, +2.46%), 2025 D TAM (\$902K, +5.68%)
<b>REPLACEABLE</b>	% change $\geq 0$ & Salary $\leq$ \$500K	Several senior defenders with marginal positive percent change, some TAM players, and a number of supplemental players with positive change.

## 10. YEAR-OVER-YEAR TRENDS

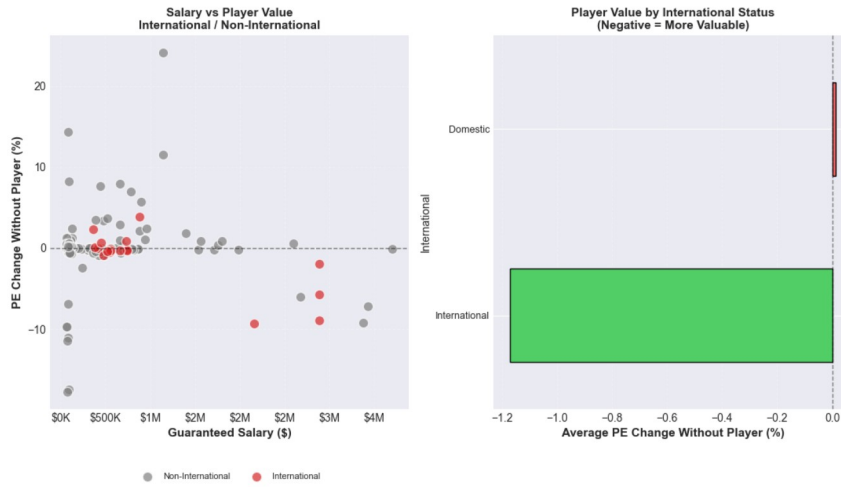
- **Designated Player ROI: Excellent and improving.** 2021-2022 DPs were marginal (near zero). 2023 DPs showed strong negative impact (-5.7% to -6.0%). 2024-2025 DPs are elite (-7.2% to -9.3%). The only weakness is the 2025 M DP (+0.61%), which is marginal.
- **TAM Efficiency: Consistent but unspectacular.** TAM players generally show small-magnitude negative or positive impacts, rarely exceeding  $\pm 3\%$ . This suggests Columbus uses TAM slots for steady contributors rather than high-variance players.
- **U22 Efficiency: Excellent.** All U22 players show negative or neutral percent change. This is a clear organizational strength.
- **Homegrown Impact: Excellent, particularly at forward.** Columbus has an exceptional track record of homegrown forwards providing elite negative impact (-9% to -17%). Homegrown midfielders and defenders are more marginal.
- **Goalkeeper Trend: Mixed.** The 2025 GK TAM (+2.46%) is inefficient. Supplemental GKs show neutral to negative impact, which is acceptable for depth.

# 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)

