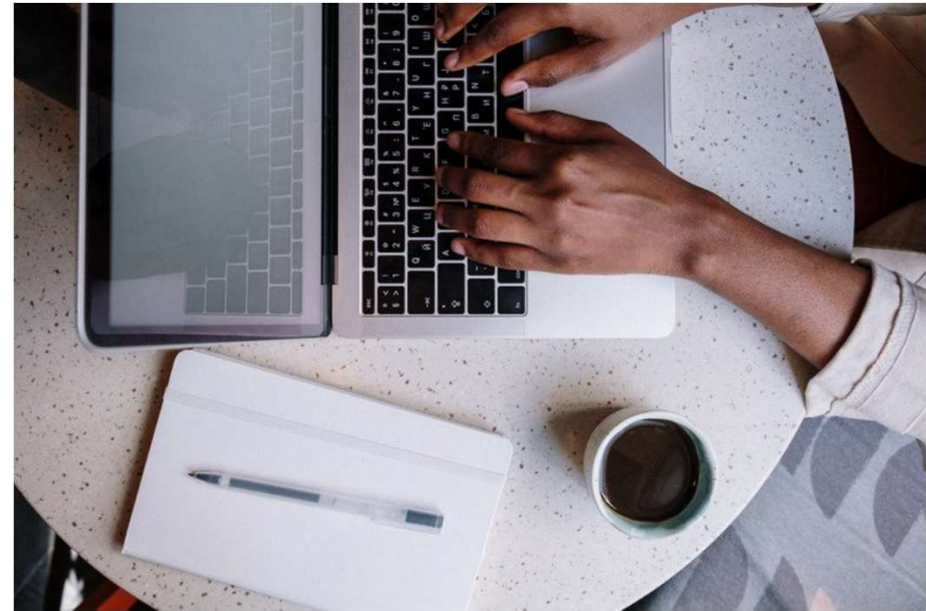


# PALMORIA CAPSTONE

Presented By: Biola  
Date: January 2022





“Equality is not just the right thing to do. It’s smart economics. How can an economy achieve full potential if it ignores, sidelines, or fails to invest in half its population?”

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ROBERT ZOELLICK



# BUSINESS USE CASE

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Palmaria Group, a manufacturing company based in the Nigeria is reviewing key areas within its operations to highlight issues bordering on gender inequality in its 3 regions. The business use case is as follows;

- Gender distribution across the organization distilled across regions and departments.
- Insights on ratings based on gender
- Analysis on the salary structure to identify if a gender gap exists
- Compliance to minimum salary regulations
- Salary and Bonus Payments

# ASSUMPTIONS & METHODOLOGY

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1. There are two data sets provided;
  - ❑ Staff Details comprising employees, location, department, gender and rating
  - ❑ Bonus Rules linking department to bonus information.
2. Data cleaning principles
  - ❑ Employees with null salary and departments respectively have left Palmoria.
  - ❑ Employees with blank gender are classified as “Unknown” gender.
3. Staff ratings traverse from Very Good, Good, Average, Poor, Very Poor to Unrated
4. Gender Gap is defined as the difference in average salary for each gender. This can further be analysed at department level. For purposes of this presentation, only female and male genders are considered for the gender gap analysis. The difference is considered over the maximum average salary per department to determine gender gap percentage.
  - ❑ A difference of less than 2.5% is deemed suitable
  - ❑ A difference of 2.5 - 5% is to be noted
  - ❑ A gap of >5% is deemed worrisome.
5. Microsoft PowerBI is used for data visualization.



# INSIGHTS & ANALYSIS

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Palmoria has a staff strength of 946 spread across three locations primarily; Lagos (250 – 26.4%), Abuja (335 – 35.4%) and Kaduna (361 – 38.1%). In terms of gender distribution, the company has 441 female staff (46.4%), 465 male (49.2%) with 40(4.2%) classified as Unknown.

Overall the average salary for the company is \$73,704 across the twelve (12) departments which is less than the \$90,000 required by the regulation. Males on average earn a salary of \$74,790 while females earn \$72,136 which is a average gender gap of \$2,654 (3.5% gender gap). Staff with unspecified gender earn on average \$78,368. which shows on the whole, they earn more than the other two genders .A further review of this may be needed later.

Out of the 12 departments, only one (1) department has a gender gap which is suitable with two(2) on the threshold and to be noted. Nine(9) departments have a gender gap percentage higher than 5% and thus deemed worrisome.

Overall, Palmoria needs to focus on the following;

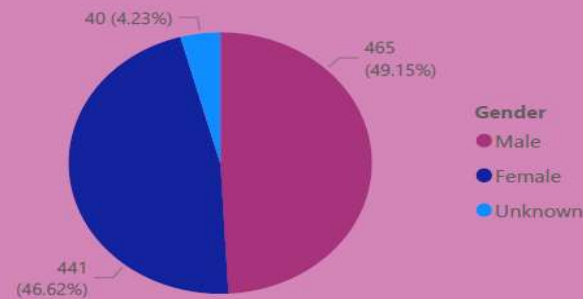
1. Improve minimum salary payments to staff to comply with government regulations.
2. Take concerted measures to reduce the gender gap percentage to less than 5% in the near term and less than than 2.5% in the long term.

# CASE I: GENDER DISTRIBUTION

GENDER DISTRIBUTION per DEPARTMENT

Department	Female	Male	Unknown	Total
Accounting	28	37	2	67
Business Development	41	37	3	81
Engineering	38	36	6	80
Human Resources	41	38	3	82
Legal	34	49	5	88
Marketing	31	33	1	65
Product Management	41	47	1	89
Research and Development	38	31	5	74
Sales	36	40	4	80
Services	42	37	3	82
Support	35	42	4	81
Training	36	38	3	77
<b>Total</b>	<b>441</b>	<b>465</b>	<b>40</b>	<b>946</b>

Gender Distribution

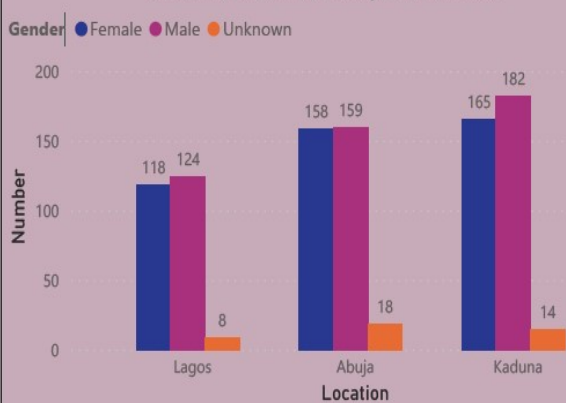


Palmorla has 946 staff across three operational locations.

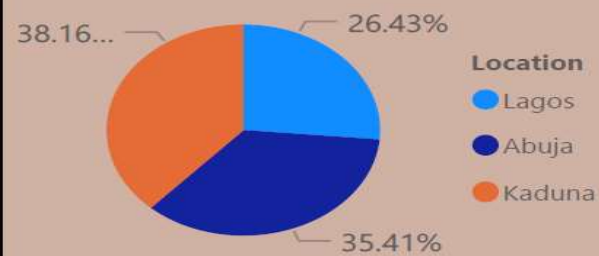
Lagos (250 – 26.4%), Abuja (335 – 35.4%) and Kaduna (361 – 38.1%).

In terms of gender distribution, the company has 441 female staff (46.4%), 465 male (49.2%) with 40 (4.2%) classified as Unknown.

GENDER DISTRIBUTION per LOCATION



Employee Breakdown per Location



Total Employee - Palmoria

946

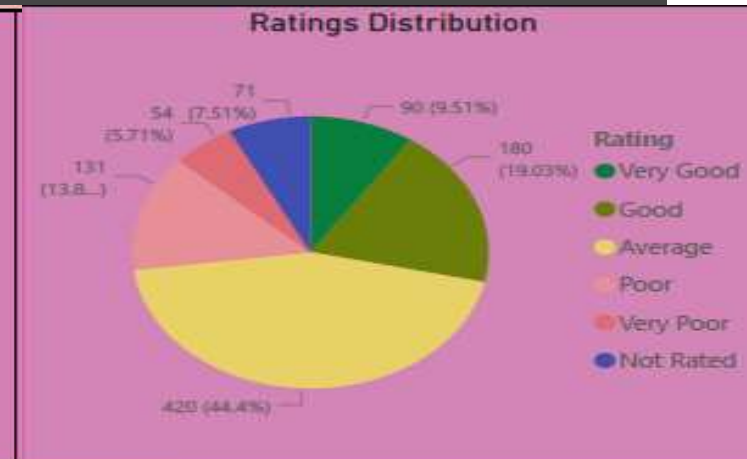
Employee Breakdown per Location

Kaduna  
361  
Abuja  
335  
Lagos  
250



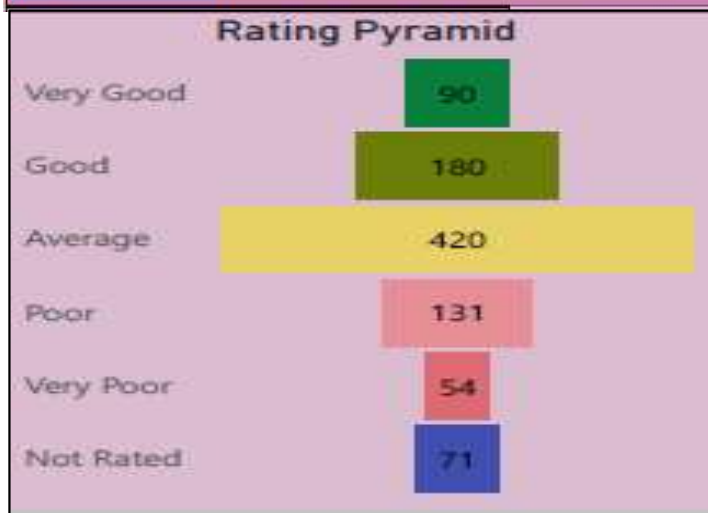
# CASE II: RATINGS DISTRIBUTION

Department	Very Good	Good	Average	Poor	Very Poor	Not Rated	Total
Accounting	7	15	27	14	1	3	67
Business Development	7	16	36	13	2	7	81
Engineering	10	20	31	13	2	4	80
Human Resources	6	13	43	8	7	5	82
Legal	9	12	39	13	5	10	88
Marketing	5	18	25	8	7	2	65
Product Management	5	15	44	12	6	7	89
Research and Development	9	14	30	10	6	5	74
Sales	3	19	40	11	4	3	80
Services	8	14	34	9	8	9	82
Support	14	4	46	8	2	7	81
Training	7	20	25	12	4	9	77
<b>Total</b>	<b>90</b>	<b>180</b>	<b>420</b>	<b>131</b>	<b>54</b>	<b>71</b>	<b>946</b>

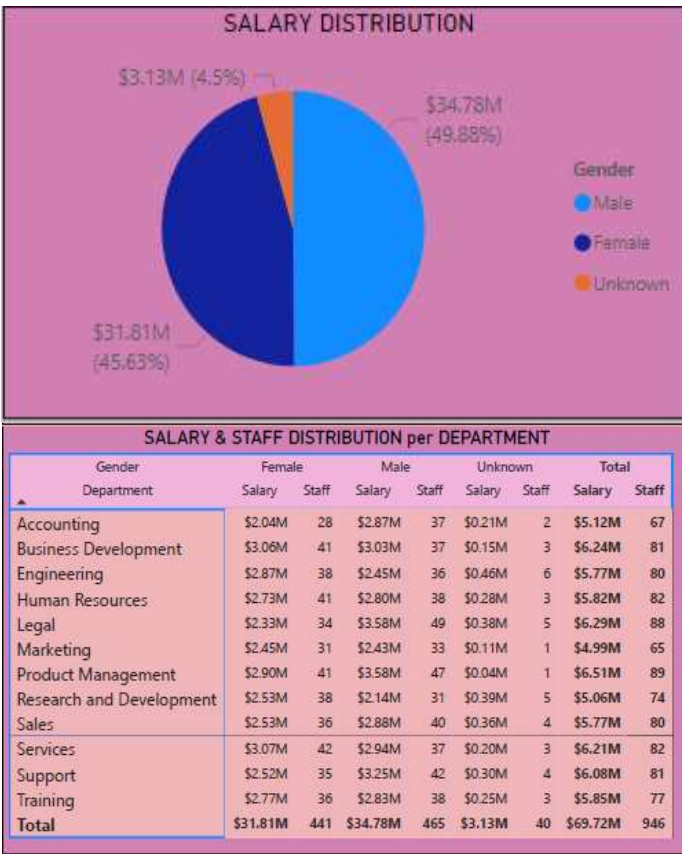


Considering the ratings distribution for Palmoria staff, this follows a concave shape with the highest and unrated staff at the bottom of the shape (9.5% and 7.5% respectively).

The average rated staff form a bulge at the middle of the shape with 420 staff (44%). This pattern is almost consistent across the three locations: Lagos, Abuja and Kaduna.



# CASE III: SALARY DISTRIBUTION



Palmoria makes a total payment of \$69.72m (excluding bonuses) to its staff with male staff earning \$34.78m(49.9%), females \$31.81m( 45.6%) and staff classified as unknown gender taking in 3.13m(4.5%). This translates to an average salary payment of \$73,704 paid to staff.

Considering the total salaries paid to staff, males on average across the company earn \$74,790 while female staff earn \$72,136 thus a difference of \$2,654 across the company. The staff with unknown gender earn \$78,368. More analysis may be needed on this specific group to ascertain why their gender is unknown.

On the face of the average salaries, there is a gender gap of \$2,654 however a further analysis is needed to review the departmental distribution for the twelve(12) departments. The average salary per gender per department shows that 9 departments have a gender gap percentage greater than 5% which means that this is worrisome as this is higher than the 5% threshold. These departments are *Accounting, Business Development, Engineering, Human Resources, Legal, Marketing, Product Management, Services* and *Support* departments respectively. Males earn more in seven (7) departments highlighted *red*. It is instructive to note that females on average earn more in the *Engineering* and *Marketing* departments (highlighted *blue* above).

The *R & D* and *Training* departments are to be observed to ensure that they do not go above the threshold while *Sales* is in compliance.

## Location

If the locations are analyzed, Lagos male & female staff earn \$76,681 & \$74,163 respectively with a location gap of \$2,517, Abuja male & female staff earn \$70,452 & \$73,246 respectively with a location gap of \$2,794 and Kaduna male & female staff earn \$72,298 & \$74,850 respectively with a location gap of \$2,552 all with male staff earning higher on average.



# CASE III: SALARY DISTRIBUTION (contd)



**SALARY AVERAGES PER DEPARTMENT & GENDER**

Department	Female	Male	Unknown	Total
Accounting	\$72,939	\$77,530	\$102,560	\$76,359
Business Development	\$74,628	\$82,016	\$49,957	\$77,089
Engineering	\$75,422	\$67,917	\$76,690	\$72,140
Human Resources	\$66,579	\$73,796	\$94,283	\$70,937
Legal	\$68,507	\$72,998	\$76,774	\$71,477
Marketing	\$79,108	\$73,702	\$105,870	\$76,775
Product Management	\$70,773	\$76,101	\$36,480	\$73,201
Research and Development	\$66,604	\$69,063	\$78,614	\$68,445
Sales	\$70,407	\$72,040	\$89,125	\$72,159
Services	\$73,075	\$79,456	\$67,067	\$75,735
Support	\$72,030	\$77,415	\$76,225	\$75,029
Training	\$77,082	\$74,343	\$84,943	\$76,037
<b>Total</b>	<b>\$72,136</b>	<b>\$74,790</b>	<b>\$78,368</b>	<b>\$73,704</b>

**SALARY AVERAGE PER LOCATION AND GENDER**

Gender	Female	Male	Unknown	Gender Gap
Location	Average Salary	Average Salary	Average Salary	
Lagos	\$ 74,163	\$ 76,681	\$ 86,860	\$ 2,517
Abuja	\$ 70,452	\$ 73,246	\$ 74,379	\$ 2,794
Kaduna	\$ 72,298	\$ 74,850	\$ 78,643	\$ 2,552
	<b>\$ 72,136</b>	<b>\$ 74,790</b>	<b>\$ 78,368</b>	<b>\$ 2,654</b>

**SALARY AVERAGES PER DEPARTMENT & GENDER**

Department	Average Salary Overall	Dept_Average( Male)	Dept_Average( Female)	Gender_Gap (M/F per Dept)	Dept_Average( Unknown)	Gender_Gap%
Accounting	\$76,359	\$77,530	\$72,939	\$4,591	\$102,560	5.9%
Business Development	\$77,089	\$82,016	\$74,628	\$7,389	\$49,957	9.0%
Engineering	\$72,140	\$67,917	\$75,422	(\$7,505)	\$76,690	-10.0%
Human Resources	\$70,937	\$73,796	\$66,579	\$7,217	\$94,283	9.8%
Legal	\$71,477	\$72,998	\$68,507	\$4,491	\$76,774	6.2%
Marketing	\$76,775	\$73,702	\$79,108	(\$5,406)	\$105,870	-6.8%
Product Management	\$73,201	\$76,101	\$70,773	\$5,328	\$36,480	7.0%
Research and Development	\$68,445	\$69,063	\$66,604	\$2,459	\$78,614	3.6%
Sales	\$72,159	\$72,040	\$70,407	\$1,633	\$89,125	2.3%
Services	\$75,735	\$79,456	\$73,075	\$6,381	\$67,067	8.0%
Support	\$75,029	\$77,415	\$72,030	\$5,385	\$76,225	7.0%
Training	\$76,037	\$74,343	\$77,082	(\$2,739)	\$84,943	-3.6%
<b>Overall Average</b>	<b>\$73,704</b>	<b>\$74,790</b>	<b>\$72,136</b>	<b>\$2,654</b>	<b>\$78,368</b>	<b>3.5%</b>

**Num of Departments - Palmoria**

**12**

**Legend by Gender Status**

Compliant (Green) Noted (Yellow) Issues (Red)

Gender-Gap Compliant Department(s)	Departments with a Noted Gap	Gender Gap Issues
<b>1</b>	<b>2</b>	<b>9</b>

# CASE IV: SALARY REGULATIONS



Looking at the salary band distribution in ranges of \$10,000 and comparing to the minimum regulation of \$90,000; there are 654 staff earning below \$90,000.

This comprises 315 females, 313 females and 26 unknown gender earning less than \$90,000 respectively.

There are 126 females, 152 females and 14 unknown gender earning more than \$90,000 respectively.

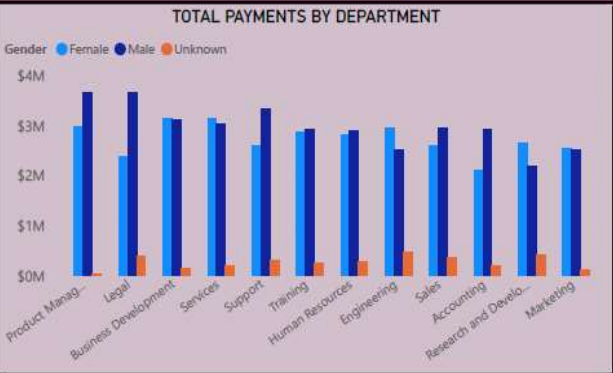
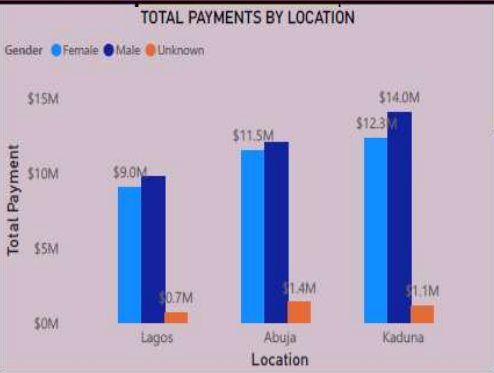
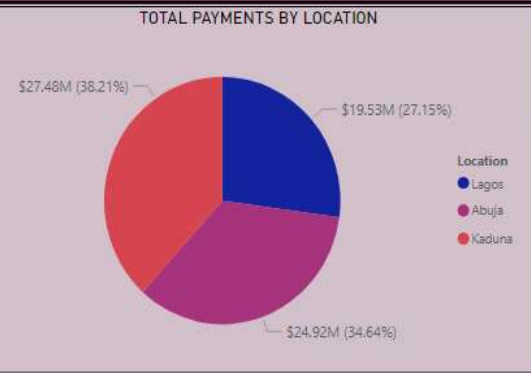
When this data is analyzed per location; Lagos staff has 166 staff earning below \$90,000 with 84 staff earning above \$90,000 respectively.

Abuja staff has 238 staff earning below \$90,000 with 97 staff earning above \$90,000 respectively.

Kaduna staff has 361 staff earning below \$90,000 with 111 staff earning above \$90,000 respectively.

# CASE V: BONUS AND TOTAL PAYMENTS

SALARY & BONUS PAYMENTS DISTRIBUTION per DEPARTMENT AND LOCATION												
Location	Lagos			Abuja			Kaduna			Total		
Department	Salary	Bonus Paid	Total Payment	Salary	Bonus Paid	Total Payment	Salary	Bonus Paid	Total Payment	Salary	Bonus Paid	Total Payment
Accounting	\$1,215,430	\$34,282	\$1,249,712	\$2,024,940	\$69,199	\$2,094,139	\$1,875,650	\$53,373	\$1,929,023	\$5,116,020	\$156,854	\$5,272,874
Business Development	\$2,167,170	\$58,895	\$2,226,065	\$1,494,850	\$40,463	\$1,535,313	\$2,582,200	\$92,967	\$2,675,167	\$6,244,220	\$192,325	\$6,436,545
Engineering	\$1,911,140	\$61,931	\$1,973,071	\$2,008,580	\$62,988	\$2,071,568	\$1,851,470	\$70,815	\$1,922,285	\$5,771,190	\$195,734	\$5,966,924
Human Resources	\$964,500	\$27,560	\$992,060	\$2,252,560	\$77,338	\$2,329,898	\$2,599,770	\$69,376	\$2,669,146	\$5,816,830	\$174,274	\$5,991,104
Legal	\$1,559,400	\$27,053	\$1,586,453	\$2,340,950	\$83,899	\$2,424,849	\$2,389,650	\$54,475	\$2,444,125	\$6,290,000	\$165,426	\$6,455,426
Marketing	\$1,527,410	\$65,629	\$1,593,039	\$1,512,810	\$52,385	\$1,565,195	\$1,950,150	\$72,955	\$2,023,105	\$4,990,370	\$190,969	\$5,181,339
Product Management	\$1,806,590	\$40,710	\$1,847,300	\$2,836,250	\$84,404	\$2,920,654	\$1,872,080	\$52,052	\$1,924,132	\$6,514,920	\$177,166	\$6,692,086
Research and Development	\$1,543,110	\$54,845	\$1,597,955	\$1,825,310	\$84,502	\$1,909,812	\$1,696,540	\$50,159	\$1,746,699	\$5,064,960	\$189,506	\$5,254,466
Sales	\$1,323,760	\$35,882	\$1,359,642	\$2,035,590	\$57,854	\$2,093,444	\$2,413,380	\$65,879	\$2,479,259	\$5,772,730	\$159,614	\$5,932,344
Services	\$1,916,880	\$68,157	\$1,985,037	\$1,778,580	\$52,542	\$1,831,122	\$2,514,790	\$62,188	\$2,576,978	\$6,210,250	\$182,886	\$6,393,136
Support	\$1,333,770	\$37,121	\$1,370,891	\$2,490,230	\$81,492	\$2,571,722	\$2,253,360	\$73,633	\$2,326,993	\$6,077,360	\$192,247	\$6,269,607
Training	\$1,685,410	\$60,158	\$1,745,568	\$1,515,630	\$54,080	\$1,569,710	\$2,653,780	\$108,041	\$2,761,821	\$5,854,820	\$222,279	\$6,077,099
Location Totals	\$18,954,570	\$572,223	\$19,526,793	\$24,116,280	\$801,144	\$24,917,424	\$26,652,820	\$825,912	\$27,478,732	\$69,723,670	\$2,199,279	\$71,922,949



## Bonus

Palmoria paid \$2.2m to their staff as bonuses with Lagos staff taking \$572k, Abuja \$801k with Kaduna staff being compensated with \$826k respectively.

## Total Payments

Total Payments to staff including bonuses is therefore \$71.9m.

Lagos staff are being remunerated to a total of \$19.5m (27.1%), Abuja staff a total of \$24.9m (34.6%) and Kaduna with a total of \$27.5m (38.2%)



# RECOMMENDATIONS

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There are nine (9) departments with a gender gap percentage above 5% and two (2) additional ones for further assessment.

Palmoria Management to put an action plan to correct the gender gap. This could include

- Creation of a management training program to ensure a pipeline of talent exists.
- Institution of Mentoring and coaching to encourage staff retention.
- Setting up of work-life programs and flexible work patterns to ensure staff retention.

Majority of Staff are being paid below \$90,000 salary.

- Palmoria Management should review the government regulation to identify the specific applicable requirements and timelines to ensure compliance with the government regulation.

There were negative press headlines on the gender issue.

- Palmoria Management should consider creating a public relations department to ensure there is a focus on the public image of the company. An alternative is to engage a public relations consultancy agent to articulate the company's brand strategy and help manage the press.

# REFERENCES

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1. Palmoria Staff Employee Details
2. Palmoria Bonus Rules

# THANKS!

**Any questions?**

You can find me at

- GitHub: [dataBio](#)
- ✉: [carrmiha@gmail.com](mailto:carrmiha@gmail.com)





# CREDITS

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Special thanks to all the people who made and released these awesome resources for free:

- ▣ Presentation template by [SlidesCarnival](#)
- ▣ Photographs by [Unsplash](#)