

# NCPE's Equal Pay Tool

EPT Launch Conference  
*9th November 2023*

**Matthew Sacco**  
BI Consultant





# Agenda

- 1 – Project Context
- 2 – EPT Analysis
- 3 – Solutions
- 4 - Conclusion

# About



Matthew Sacco  
**Tech. Solutions & BI Consultant**

B.Sc. Computer Engineering  
M.Sc Computer Science  
x5 Peer Reviewed Publications

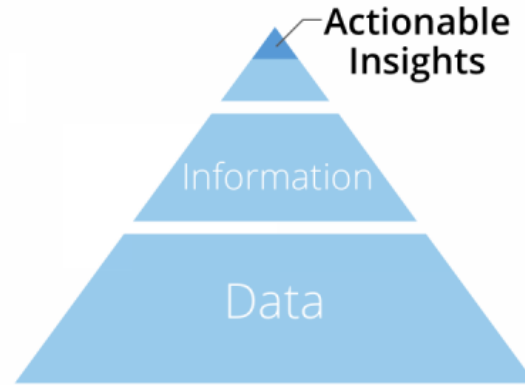
PRINCE2 Project Management  
Microsoft Power BI Data Analyst

5+ years experience



# BI (Business Intelligence)

With Business Intelligence, my aim is to transform raw data into **actionable insights**.



**1**

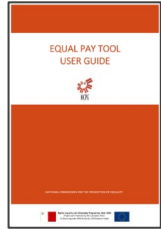
# **Project Context**



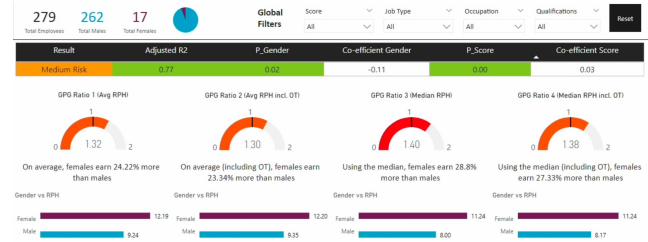
# Timeline



Validation of model



Pilot Data Testing



EPT Analysis Testing

v2 Development (Power BI)

1

2

3

4

5

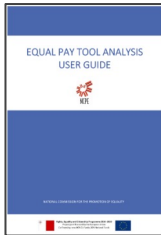
6

7

Research



Development (Excel-based)



v1 Development (Power BI)





## Equal Pay Tool (EPT)

An Equal Pay Tool assesses the degree of inequity in relation to pay across gender for work of the same value within the same organisation, through an **evidence-driven framework**.



# Malta's Equal Pay Tool (EPT)



Tier 3

## *Equal Pay for Work of Equal Value*

Given the data requirements of this method, it is expected that such a method would only be employed for organisations employing **over 50 individuals**.

Tier 2

## *Equal Pay for Equal Work*

Given sufficient data richness, this would allow a **like-for-like comparison** between, say, a male manager and a female manager, both holding tertiary qualifications and with similar experience.

Tier 1

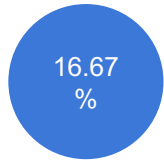
Basic data on employee salary, hours worked, and gender.



1 – Project Context

# Malta's Equal Pay Tool (EPT)

Personal  
Background



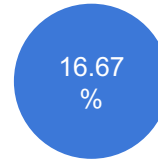
Task Difficulty



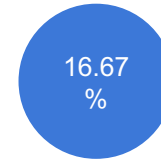
Influence



Interactions



Supervision



Job Risk



Tier 3

## How is work value calculated?

Within the current EPT, work value is calculated based on a JEM - scoring system coming from **6 pillars**.





# Malta's Equal Pay Tool (EPT)

## Example (1) - Personal Background

This measures education and relevant experience required to execute the job

Score	Description
1	No educational tuition Relevant experience less than 3 years
2	Education up to MQF/EQF Level 4 Relevant experience of 3 to 5 years
3	Education up to MQF/EQF Level 6 or job relevant certifications. Relevant experience of 6 to 10 years
4	Education up to MQF/EQF Level 7 or job relevant certifications. Relevant experience of 11 to 14 years.
5	Education up to MQF/EQF Level 8; or MBA, Master degree with specialization, and relevant job technical certifications. Experience: 15 years and over

**2**

# **EPT Analysis**

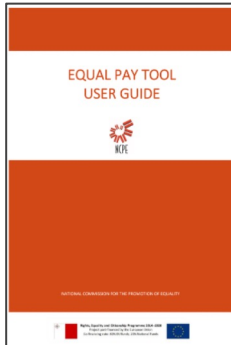


2 – EPT Analysis

# Process Overview

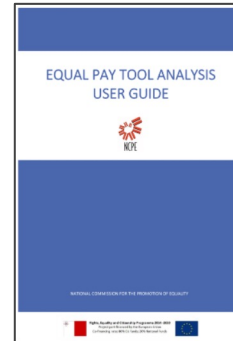
## For Organisations

Equal Pay Tool (EPT)



## For NCPE

Equal Pay Tool Analysis  
(EPT Analysis)






## 2 – EPT Analysis

# For Organisations






## Equal Pay Tool

**Organisation Registration**

Company Name	<input type="text" value="Test Company A"/>
Address	<input type="text" value="123, Zurrieq"/>
Contact Person Full Name	<input type="text" value="John Doe"/>
Contact Number	<input type="text" value="79999999"/>
E-Mail	<input type="text" value="test@test.com"/>
Year	<input type="text" value="2021"/>
Number of Employees	<input type="text" value="50"/>
Number of Full Time Equivalents	<input type="text" value="50"/>
Sector	<input type="text" value="Construction"/>



Rights, Equality and Citizenship Programme 2014 -2020  
Project part-financed by the European Union  
Co-financing rate: 80% EU funds; 20% National Funds



2 – EPT Analysis

# For Organisations



Score Help - Criteria 1	Personal Background <small>This measures education and relevant experience required to execute the job.</small>					
Score	Description					
1	<ul style="list-style-type: none"><li>• No educational tuition.</li><li>• Relevant experience less than 3 years.</li></ul>					
2	<ul style="list-style-type: none"><li>• Education up to MQF/RFQ Level 4.</li><li>• Relevant experience of 3 to 5 years.</li></ul>					
3	<ul style="list-style-type: none"><li>• Education up to MQF/RFQ Level 6 or job relevant certifications.</li><li>• Relevant experience of 6 to 10 years.</li></ul>					
4	<ul style="list-style-type: none"><li>• Education up to MQF/RFQ Level 7 or job relevant certifications.</li><li>• Relevant experience of 11 to 14 years.</li></ul>					
5	<ul style="list-style-type: none"><li>• Education up to MQF/RFQ Level 8, or MBA, Master degree with specialization, and relevant job technical certifications.</li><li>• Experience 15 years and over.</li></ul>					
Job Type - Occupation	Criteria 1 Personal Background - Score	Criteria 2 Task Difficulty - Score	Criteria 3 Influence - Score	Criteria 4 Interactions - Score	Criteria 5 Supervision - Score	Criteria 6 Job Risk - Score
Professionals, Advertising and Marketing Professional						



## 2 – EPT Analysis

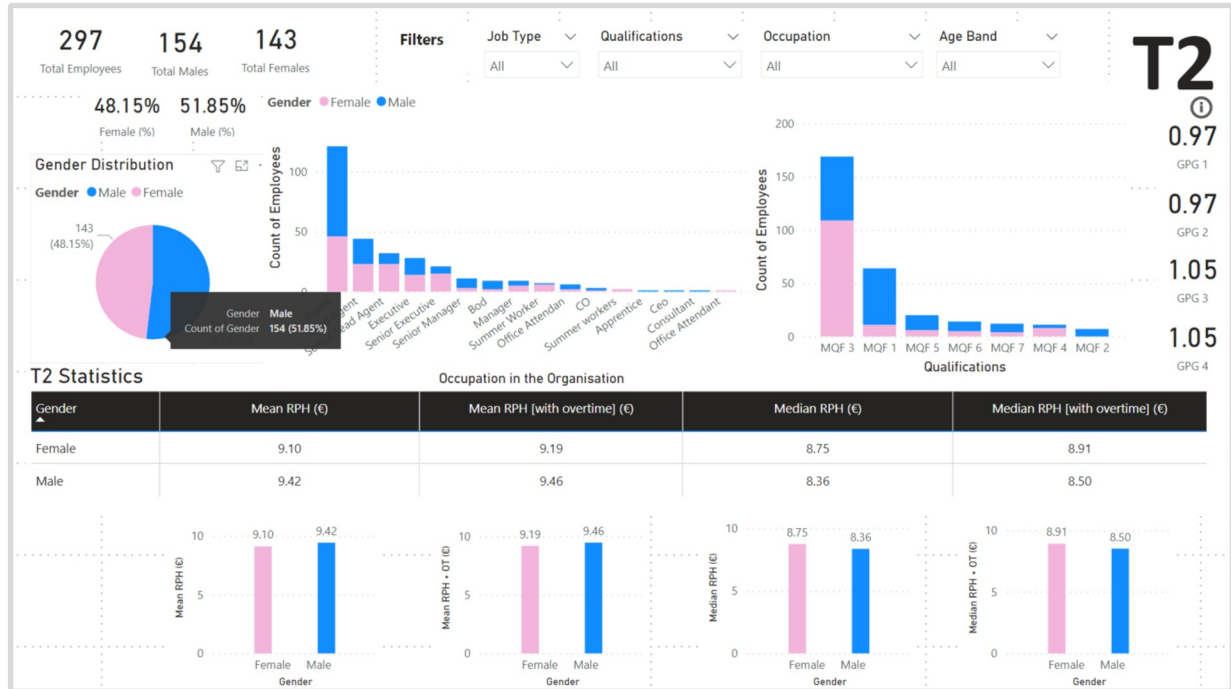
# For NCPE (v1)





## 2 – EPT Analysis

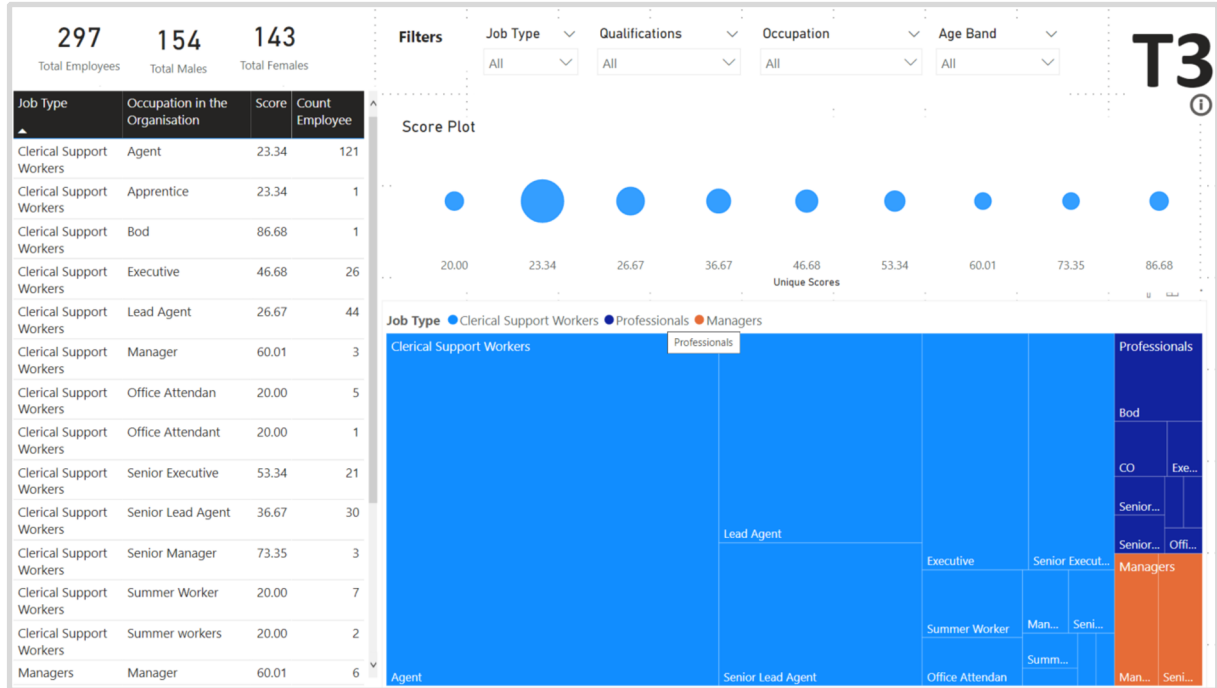
# For NCPE (v1)





## 2 - EPT Analysis

# For NCPE (v1)

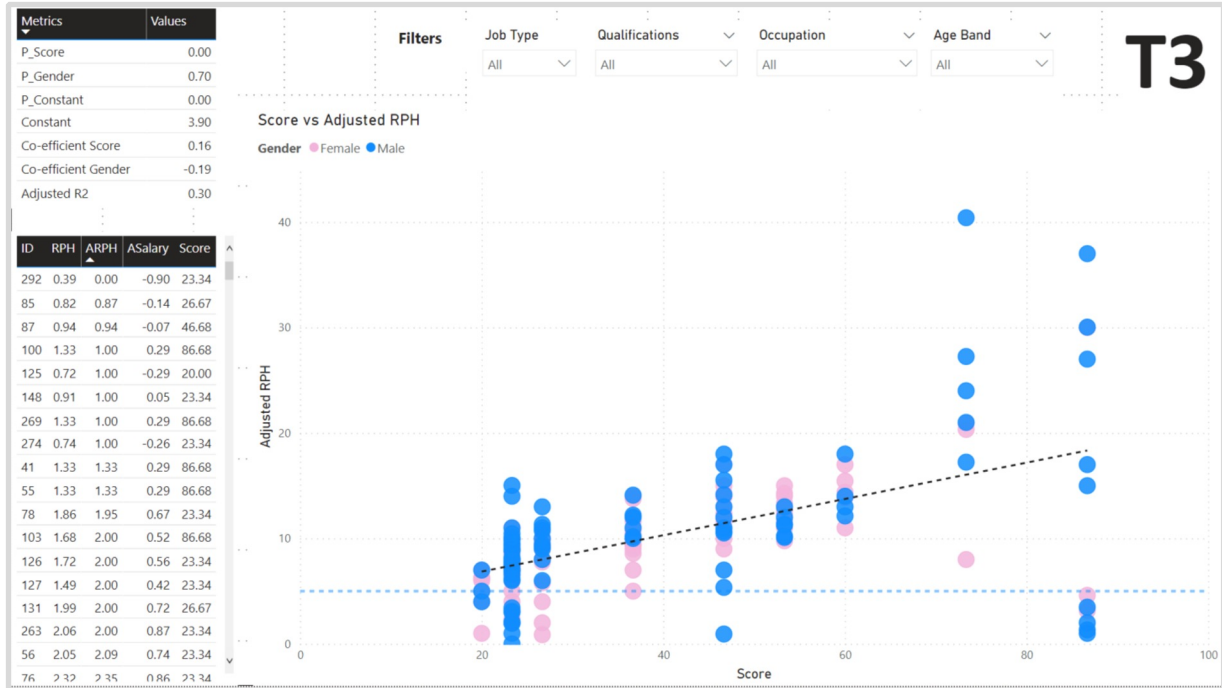






## 2 - EPT Analysis

# For NCPE (v1)



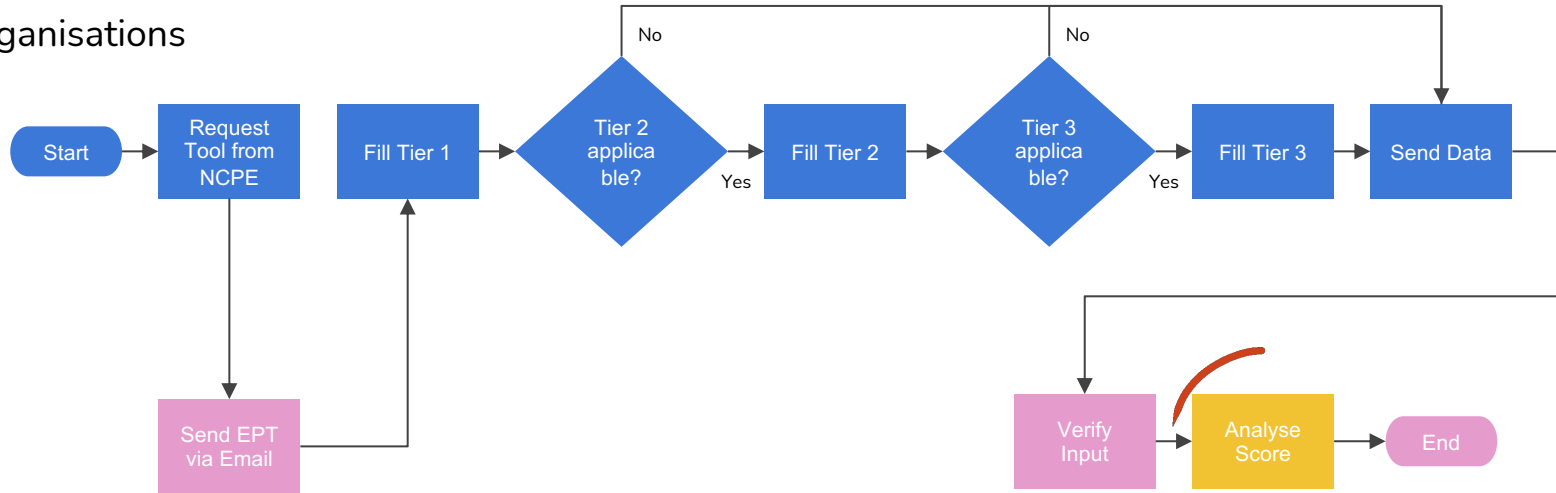
T3



2 - EPT Analysis

# Process Overview

Organisations



NCPE

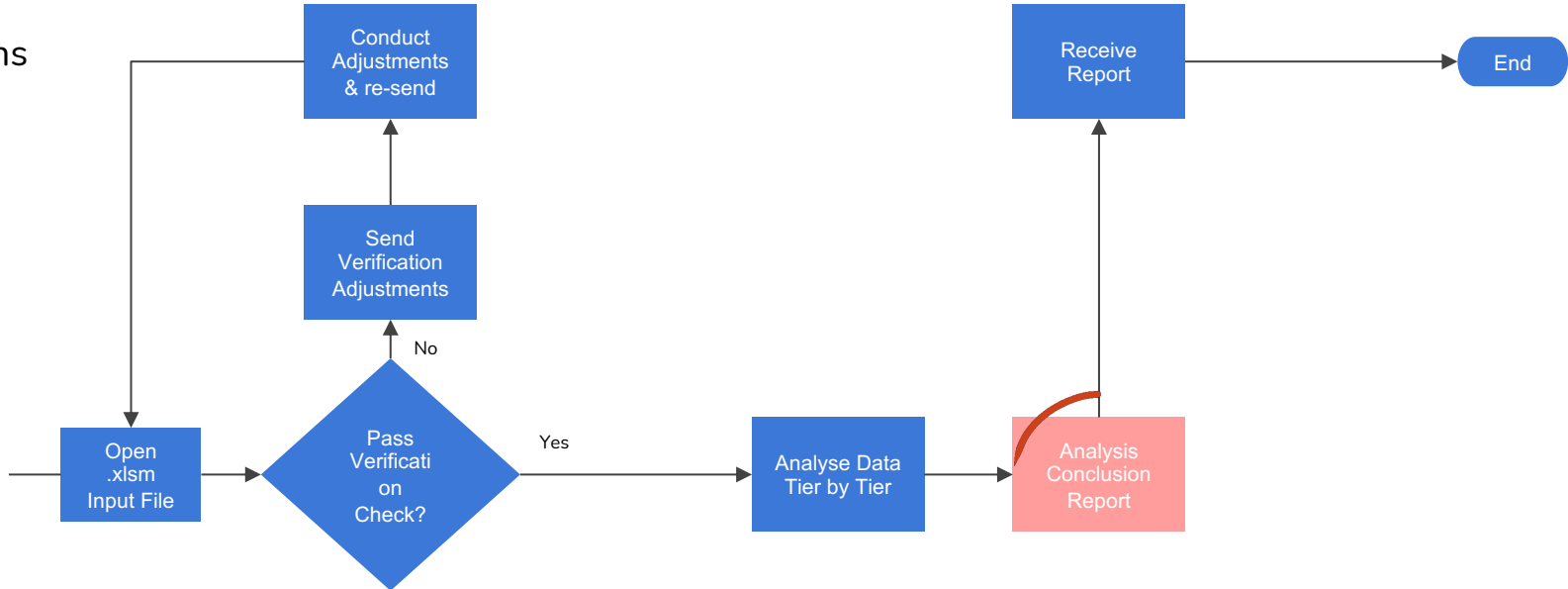


# Process Overview (Detailed)

Analyse Score

Organisations

NCPE





# Challenges

1. There was a GAP in understanding the full picture, especially with specific scenarios of employees
2. No standard metric for concluding assessment
3. The analysis process was scattered (multiple dashboards)
4. Internal Upskilling

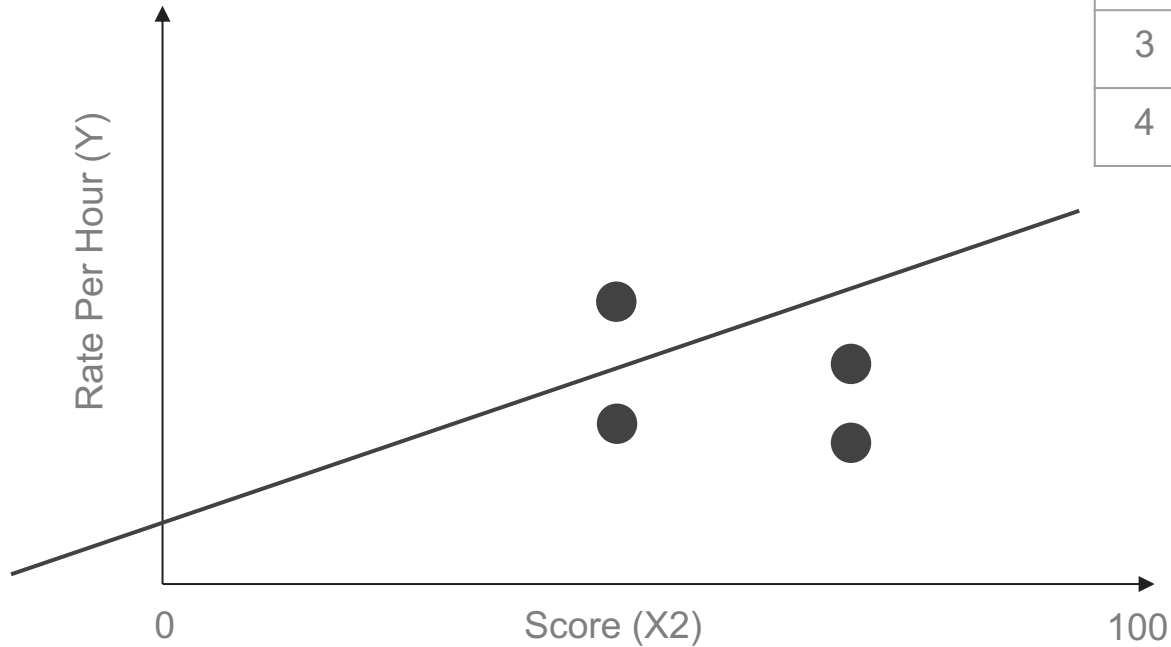
# 3 Solutions



3 - Solutions

# Tier 3 Analysis

E. No.	Gender (X1)	Score (X2)	Rate Per Hour (Y)
1	M	50	10
2	F	50	18
3	M	75	15
4	F	75	9

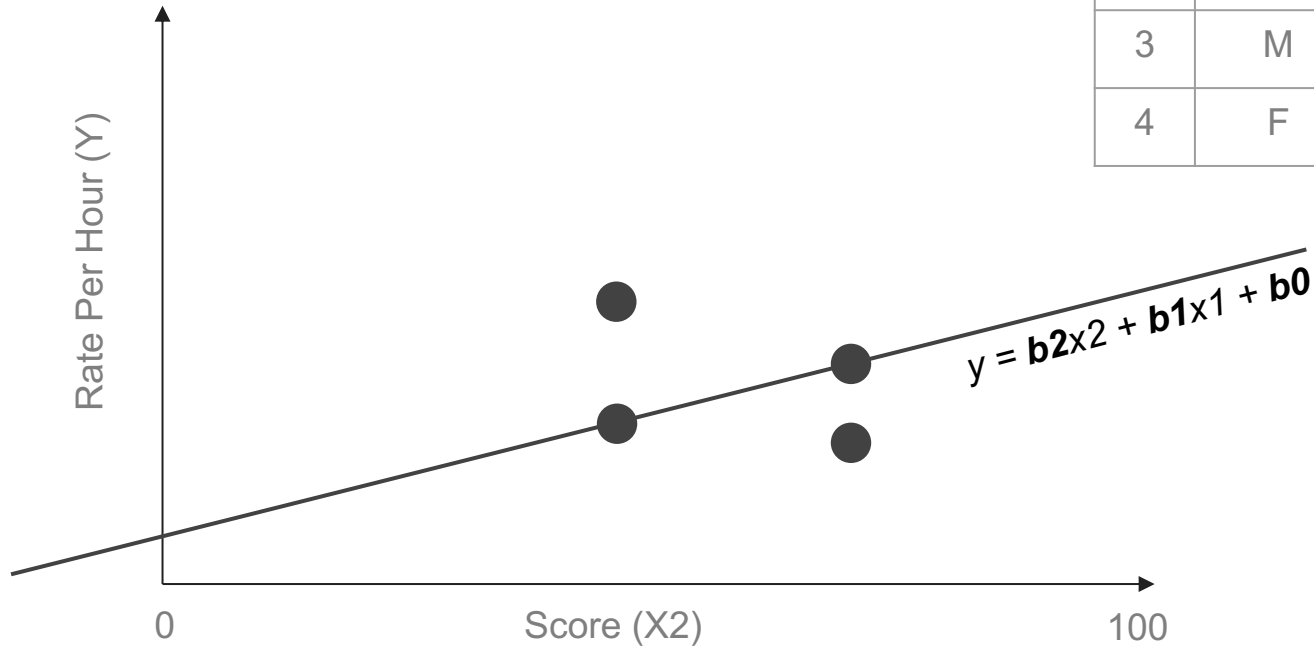




3 - Solutions

# Tier 3 Analysis

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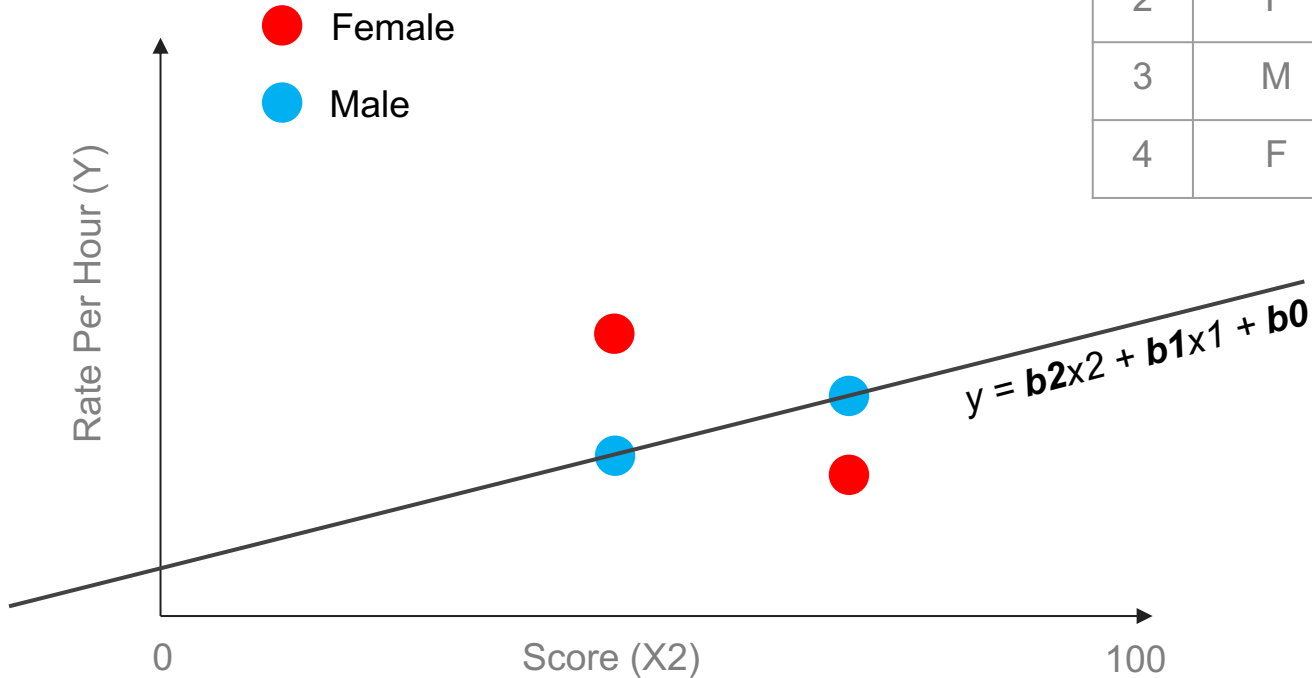




3 - Solutions

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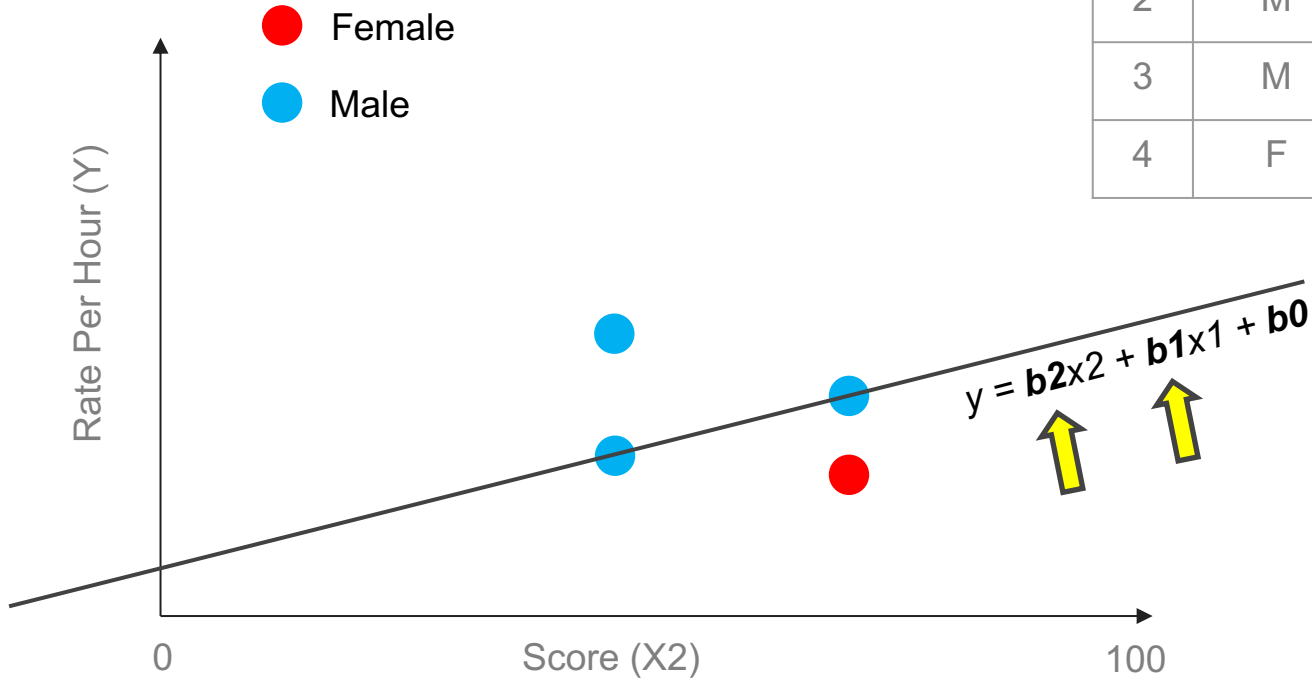




3 - Solutions

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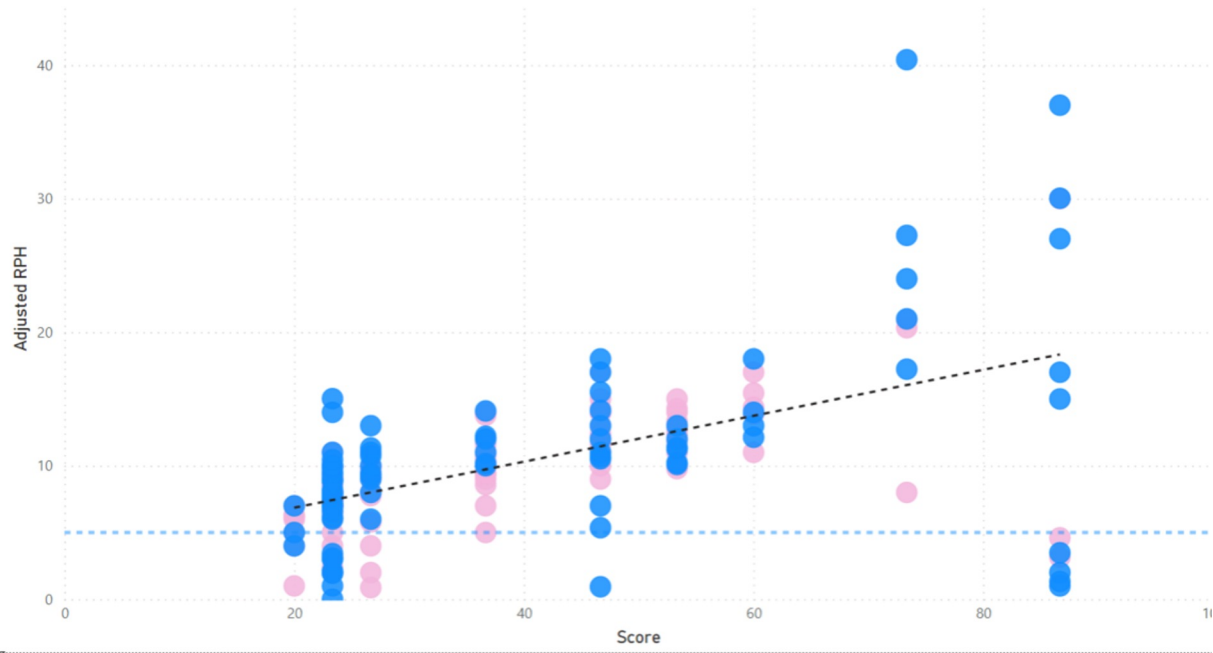




3 - Solutions

# Practical Visualisations

**Challenge 1** : GAP in understanding the full picture





# Practical Visualisations

**Challenge 1** : GAP in understanding the full picture

Data visualisation gives us a clear idea of what the information means by giving it visual context through maps or graphs. This **makes the data more natural for the human mind** to comprehend and therefore makes it easier to identify trends, patterns, and outliers within large data sets.



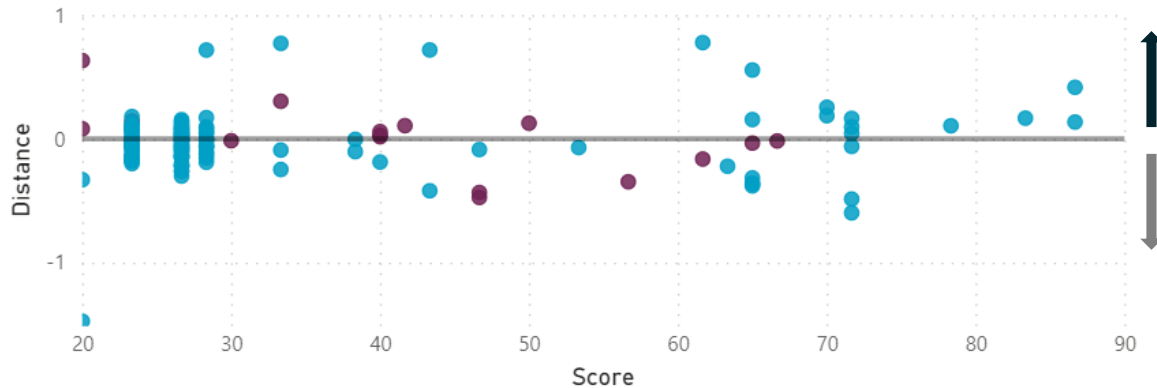
3 - Solutions

# Practical Visualisations

**Challenge 1** : GAP in understanding the full picture

Gender, Score and Distance

Gender ● Female ● Male



rate per hour is  
**much more**  
affected by  
their score &  
gender

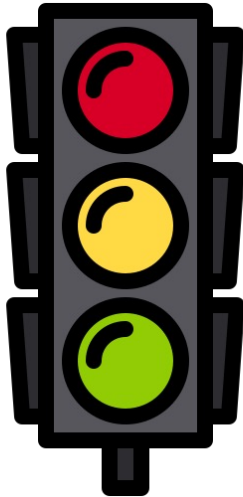
*rate per hour is  
less affected by  
their score &  
gender*



# Standard & Automated Metrics

**Challenge 2** : *No standard metric for concluding assessment*

RISK CATEGORIES



Gender coefficient statistically significantly exceeds the tolerance threshold of **+/-5%** (both tests: significance = yes/1).

Gender coefficient is statistically significantly different from zero, but not statistically significantly larger than the tolerance threshold of a **+/-5%** difference in wages

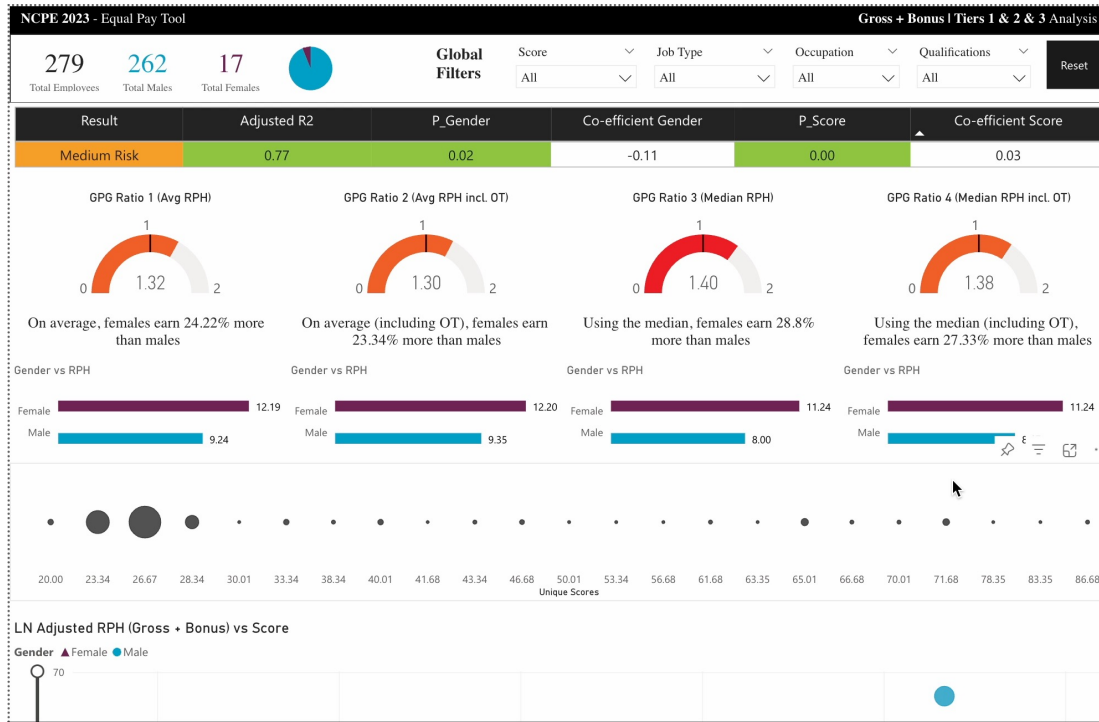
NO statistically significant unexplained wage difference between women and men.



### 3 - Solutions

# Dashboard / Report Design

**Challenge 3:** The analysis process was scattered (multiple dashboards)





3 - Solutions

# Training

## Challenge 4 : Internal Upskilling

- ✓ Active Learning
- ✓ **Immediate Application**
- ✓ Building Confidence
- ✓ Custom Learning
- ✓ Collaboration and Knowledge Sharing
- ✓ Retention and Recall



# 4

# Conclusion





4 - Conclusion

# Malta's EPT Tool



- ✓ A robust and well developed tool, on par with leading EU countries when it comes to Gender Pay Gap initiatives.



4 - Conclusion

## BI in HR / for equality

### Equality from the start > Hiring

BI tools can be used to analyse the diversity of applicant pools, in comparison to current employees. This can help in creating more inclusive and fair hiring practices.



### Legal Compliance

HR can use BI tools to ensure that the organisation is complying with all relevant laws and regulations related to equality and non-discrimination.



# Thank you for your attention

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BI Consultant

Special thanks to  
Mark Bugeja, Dr Jean-Paul Ebejer, Dr Dylan Seychell





# Contact Details



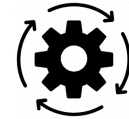
Data  
Strategy



Fast  
Prototyping



Dashboard  
Design



Automated  
Reporting



Training

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