



Das IEEE Ethics Certification Program for Autonomous and Intelligent Systems (ECPAIS) bei den Wiener Stadtwerken

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The Wiener Stadtwerke group is owned 100% by the City of Vienna



Public transport, parking, mobility services

> 1,000 km rail network with > 1,000 stations



Electricity, gas, district heating

> 30,000 km energy network



> 1 billion passengers per year

> 2 million energy customers

15,000 employees

Prototype: AI Categorization of Customer Requests



> 1.000
e-mails and letters
per day



Automatic assignment
to categories using
machine learning



Response
from human
operator

Ethical Certification Procedure in ECPAIS

IEEE international
panel of 5 experts



Wiener Stadtwerke

| # | Task | Lead |
|---|---|------|
| 1 | Comprehensive explanation of <ul style="list-style-type: none">• Developed system• Goals, scope, constraints etc. of the project• Stakeholders, affected processes and people | WSTW |
| 2 | Risk assessment (→ low risk) | IEEE |
| 3 | Selection of most relevant criteria set (→ accountability) | IEEE |
| 4 | Providing evidence for each of the 43 criteria from the set | WSTW |
| 5 | Assessment of the provided evidence | IEEE |

quite
some
work



Evidence for 43 Criteria

Holistic examination of use case and organization, from technical to governance topics

Examples for more technical criteria,
focusing on the use case / system

Error Analysis

Hyperparameter Tuning

Mitigate False Positives/Alarms

Examples for more governance-related
criteria, focusing on the organization

Adopting a Layered Approach

(Avoid) Inaction, Delay and Indifference

Human Authority & Autonomy

We did it!

Wait, this is just the beginning...

