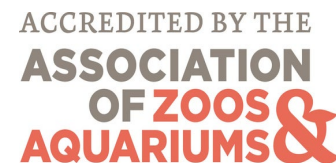


Analytics and Artificial Intelligence @ Your Toronto Zoo

December 1, 2025



TZTD

Toronto Zoo Transformation Division

We drive the physical, digital, environmental and financial transformation of your Toronto Zoo.



Lead **physical** transformation through delivery of a \$300+ million 10-year capital plan and renewed campus plan that sets the standard for modern, accredited zoos of the future



Catalyze **digital** transformation through current and secure systems, data driven decision-making and sustainable technologies that advance conservation and guest experience

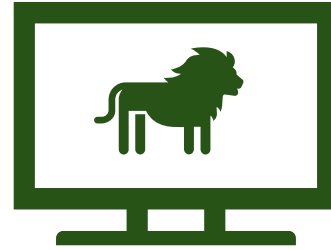


Realize **environmental** transformation reflecting our values as a leading conservation science organization that achieves net zero emissions, waste and water consumption by 2030



Prioritize **financial** transformation through revenue optimization and diversification, conservation-focused investment and spend for impact enabled through modernized and inclusive procurement practices.

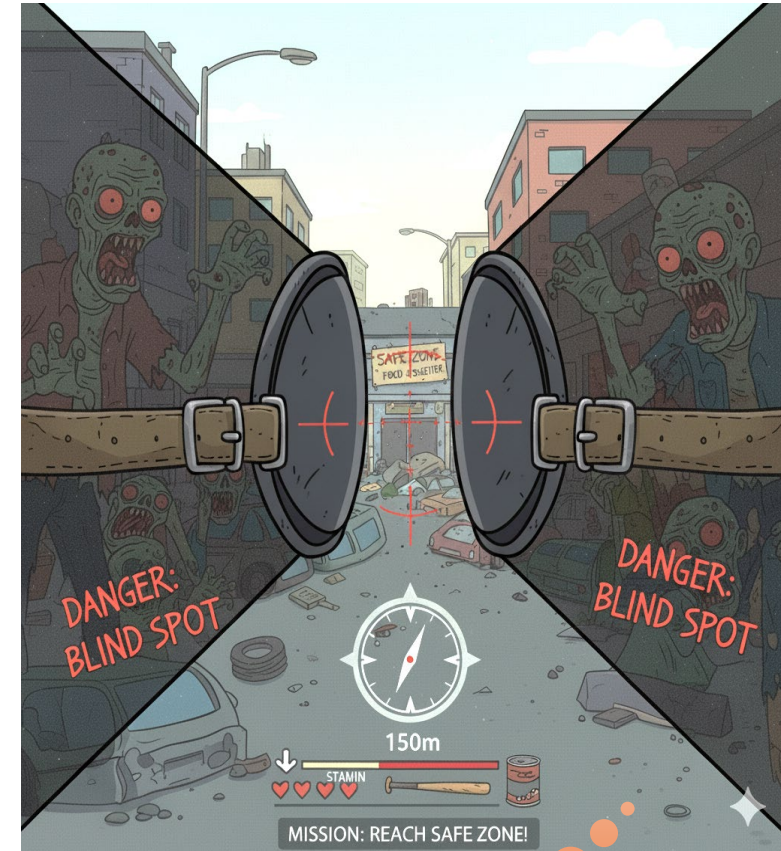
Focus: Digital Transformation



**Analytics and Artificial Intelligence (AI)
@ Your Toronto Zoo**

Data → Insight → Advantage

- TZ is rich in various assets - world-class expertise, singular passion for our mission - but we have not fully leveraged one of our most valuable resources: **our data**
- In the age of Big Data and AI, safeguarding and activating data is now **mission-critical**
- Fully realizing our data's value means being **innovative, proactive**, and a **leader - responsibly and sustainably**
- Data-driven organizations are more **nimble, versatile, effective**, and **resilient**
- The path forward: **Data → Insight → Advantage**



*Would you survive a
zombie apocalypse
with blinkers on?*

The Way Forward

Tailored Strategy

- Core Values & Principles
- Governance & Policies
- Processes & Protocols
- Build/Expand Infrastructure

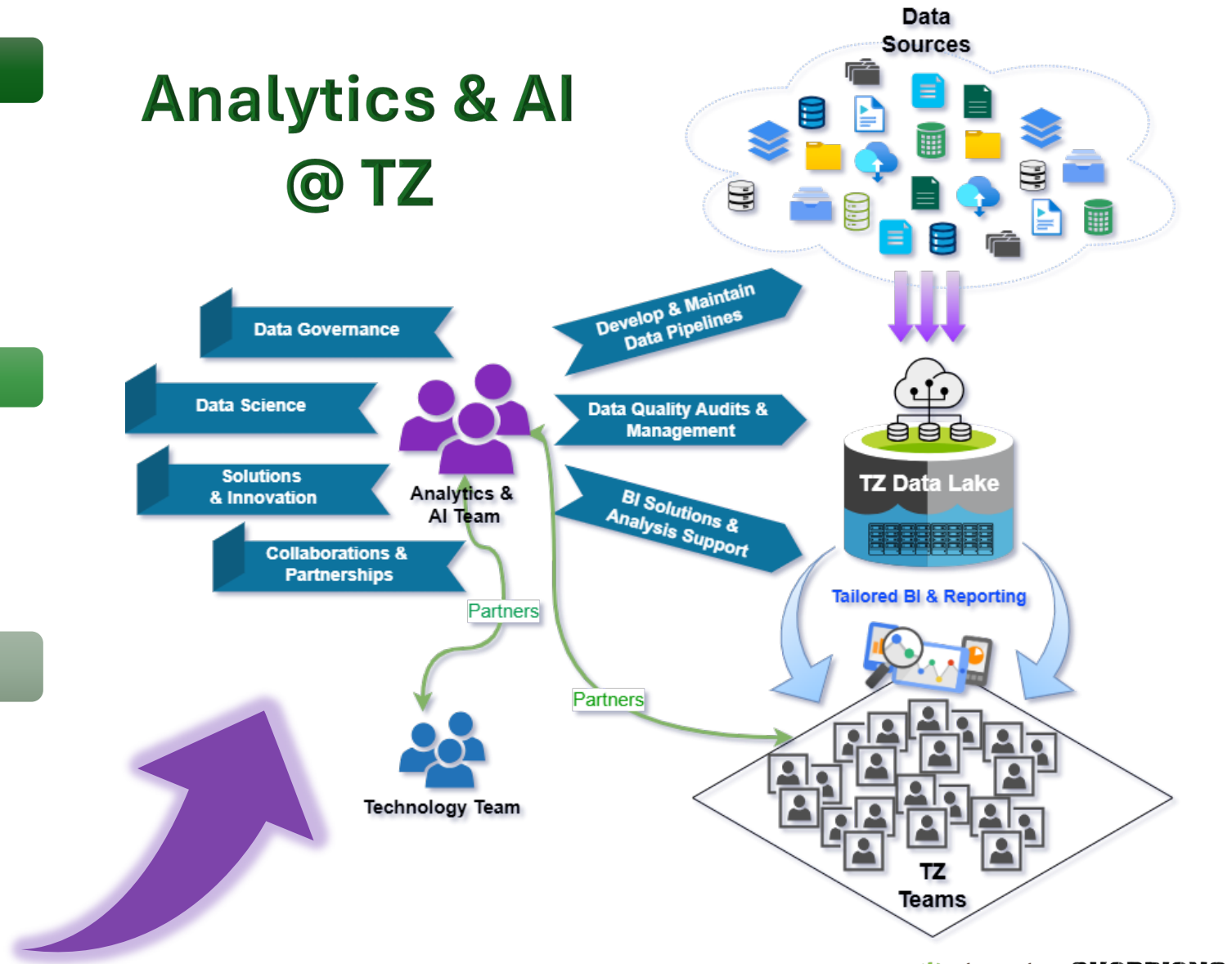
Operational Supports

- Access to data
- Access to tools
- Refine/improve business processes
- Expert support

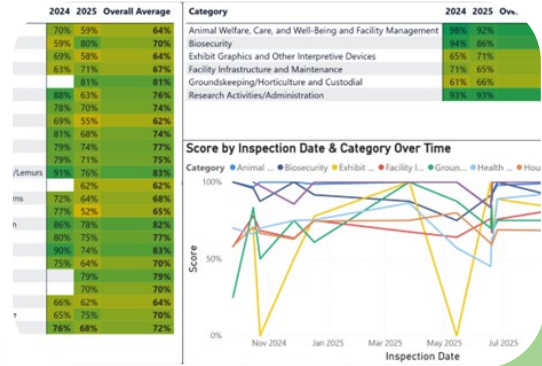
Culture & Competencies

- Data Literacy
- Cross- & Multi-Skilling
- Iterative & Sustainable Innovation
- Community Engagement & “Citizen Data Science”

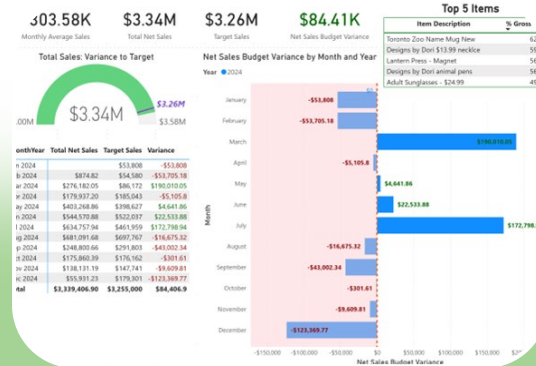
Analytics & AI @ TZ



Applied Analytics & AI



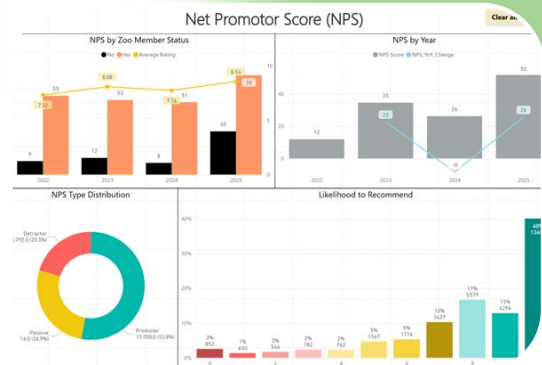
Monitoring & Improving Performance



Identifying Gaps & Opportunities



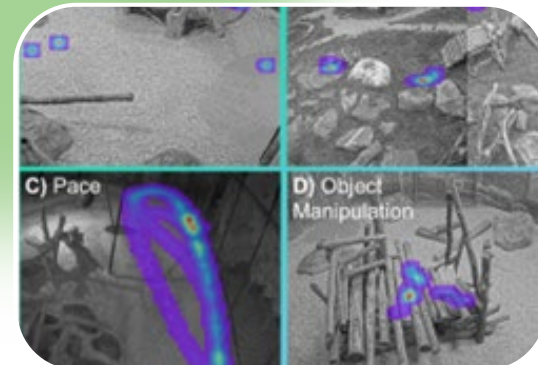
Modelling & Simulations



Understanding & Enhancing Guest Experience



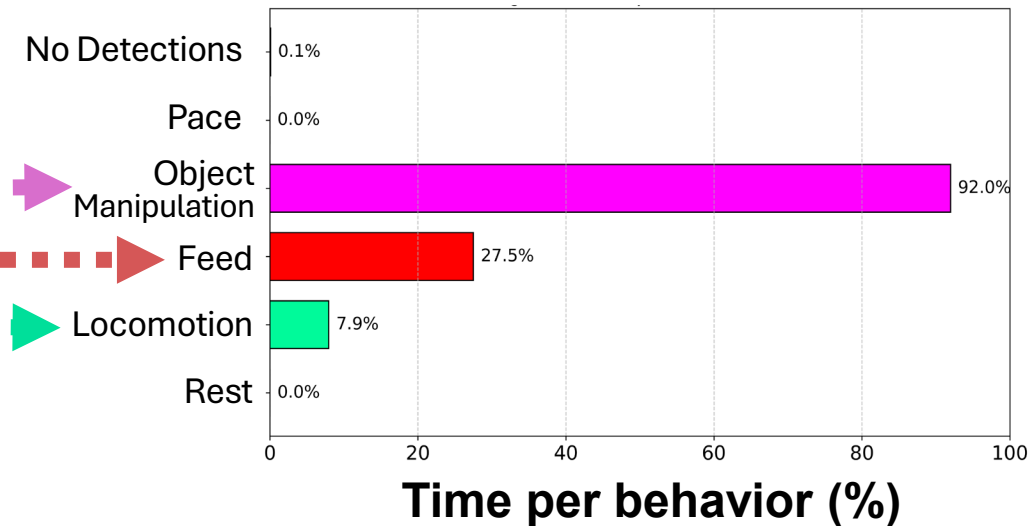
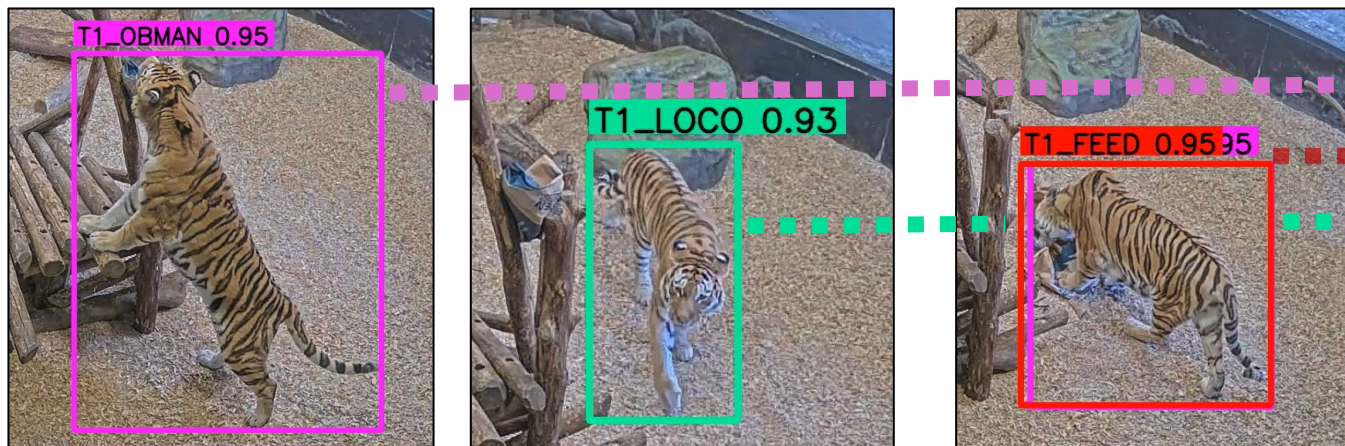
Supplementing Staff Availability & Capabilities



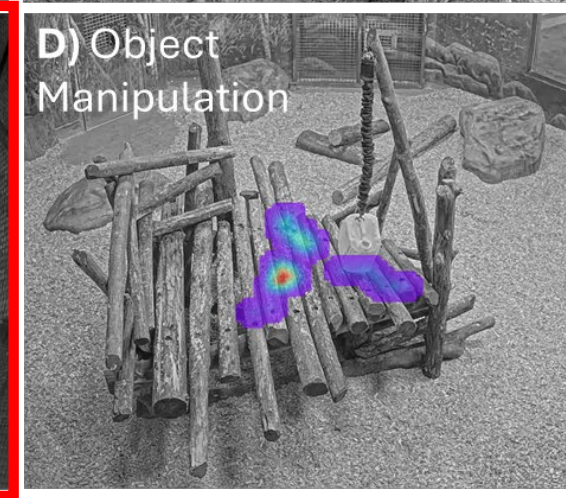
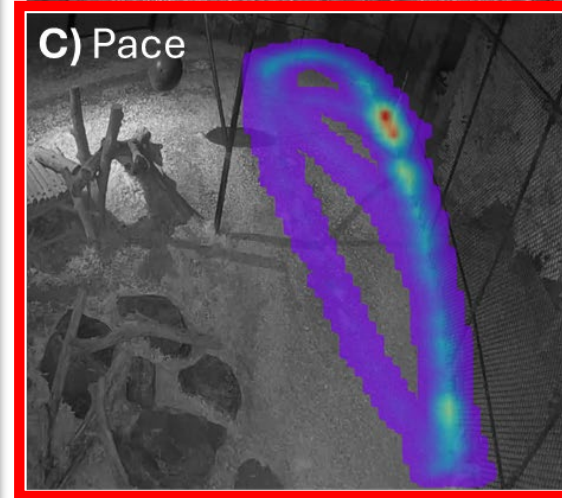
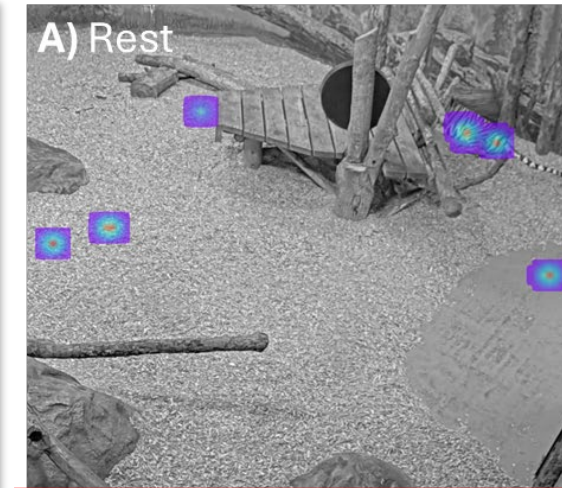
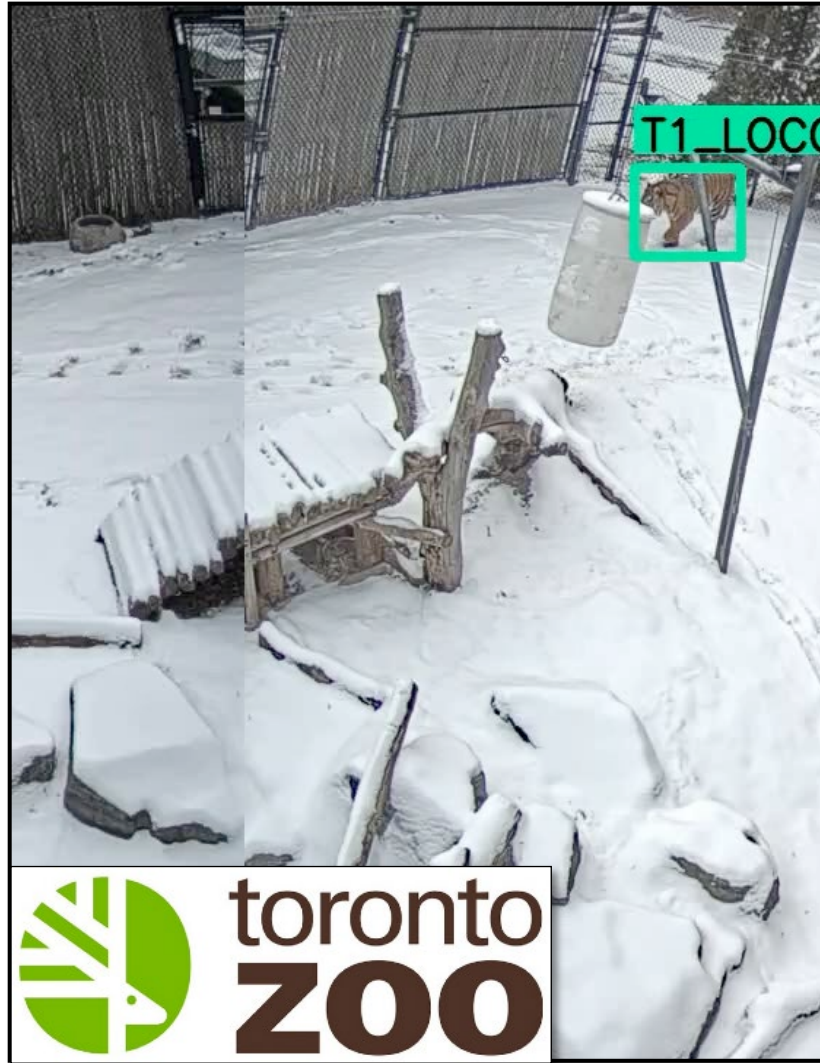
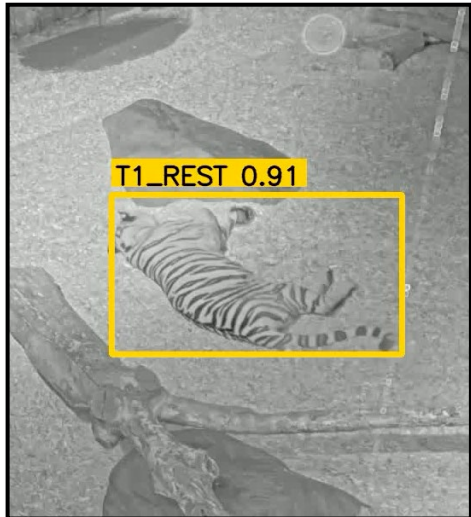
AI-driven Automation & Advanced Workflows



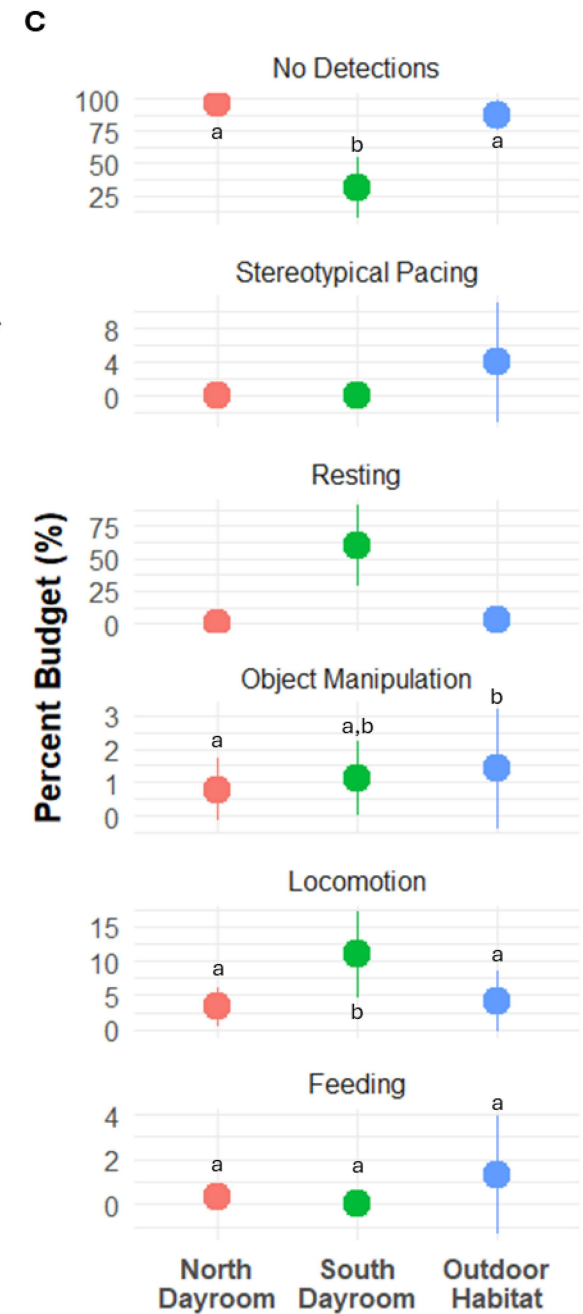
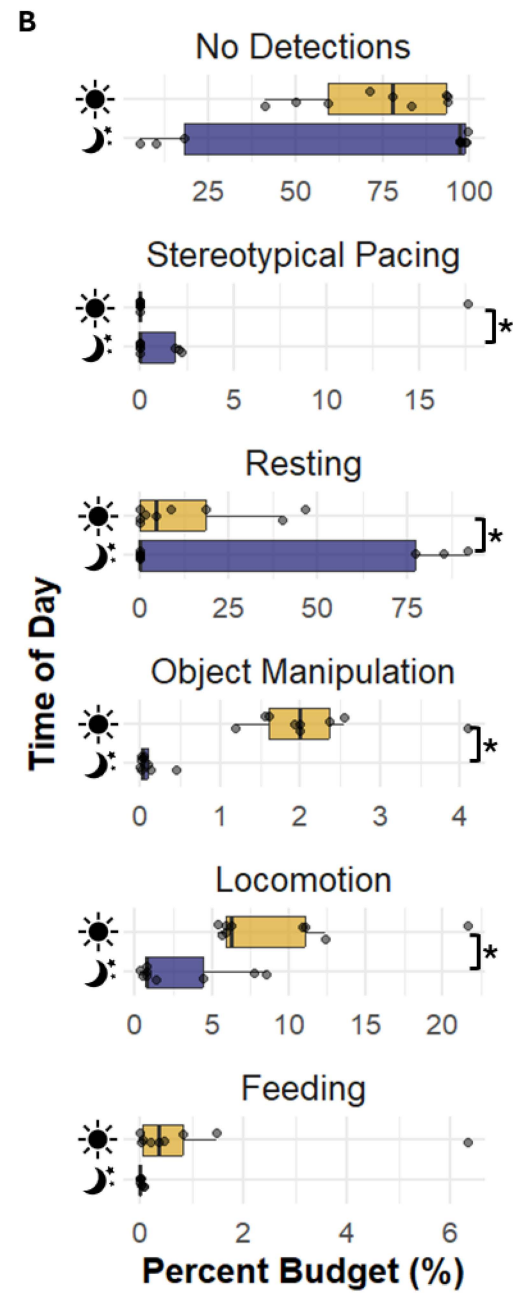
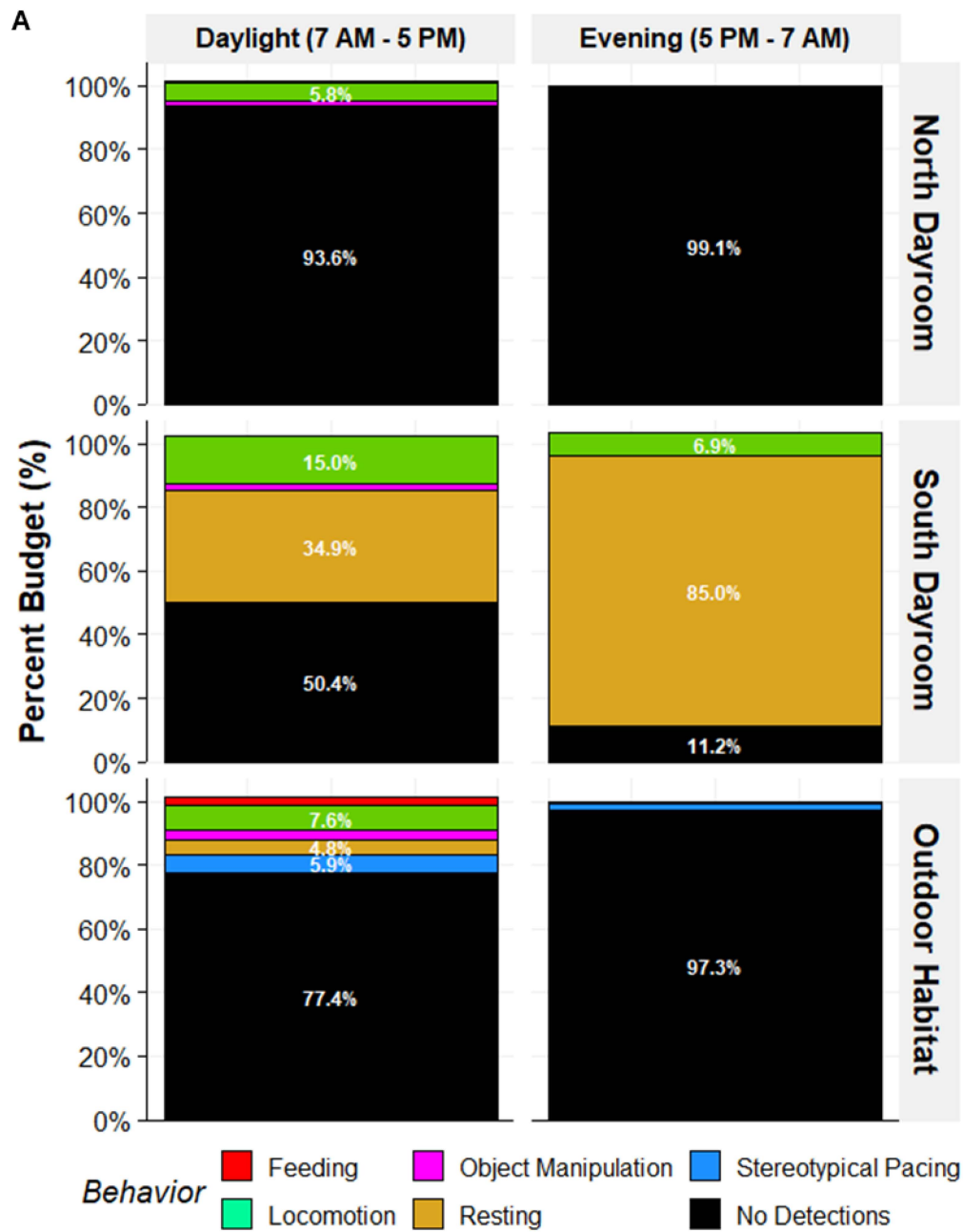
Automated monitoring tools can provide detailed reports of activity budget for *pre-recorded footage* and *live CCTV streams*.



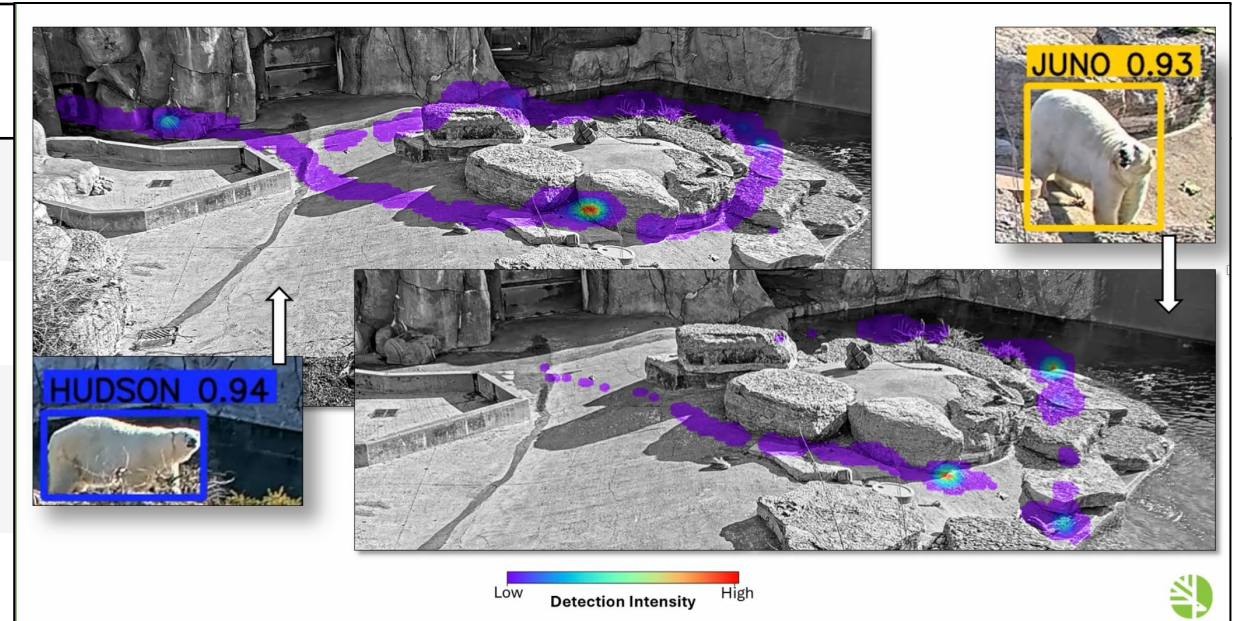
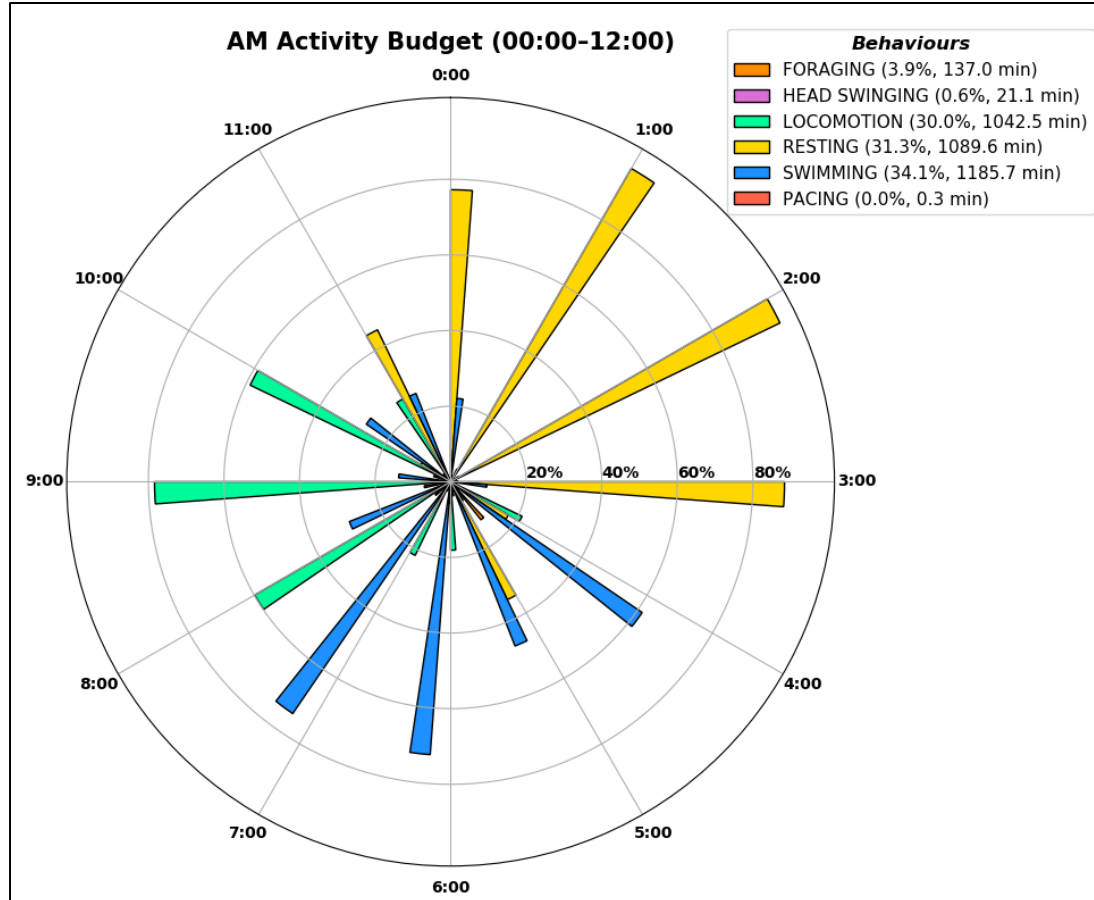
Space use heatmaps are a simple yet effective tool to identify areas of the habitat that are preferred or under-utilized.



Low  High
Detection Intensity



ZooAI Functionalities



X



X

Purcell et al., 2025

X



Rohnoh et al., 2022

**Stereotypy
classification**

Polar bear



Current TZ work



Thank you!