

# TARONGA CONSERVATION SOCIETY

## Carnivore Team Time & Motion Study

Taronga Zoo Internship | 2025



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# PROJECT OVERVIEW

## CARING FOR THE APEX: INSIDE TARONGA'S CARNIVORE UNIT

### Project Purpose

- To help the Carnivore Team find where their time is going
- To reduce workload stress and improve efficiency
- To suggest improvements that keep animal care strong

### What We Did

- Shadowed keepers work over 12 full shifts
- We tracked time spent on tasks, breaking down each task in the workflow
- We analysed the data using tools like Python, Excel, PowerBi

### Why It Matters

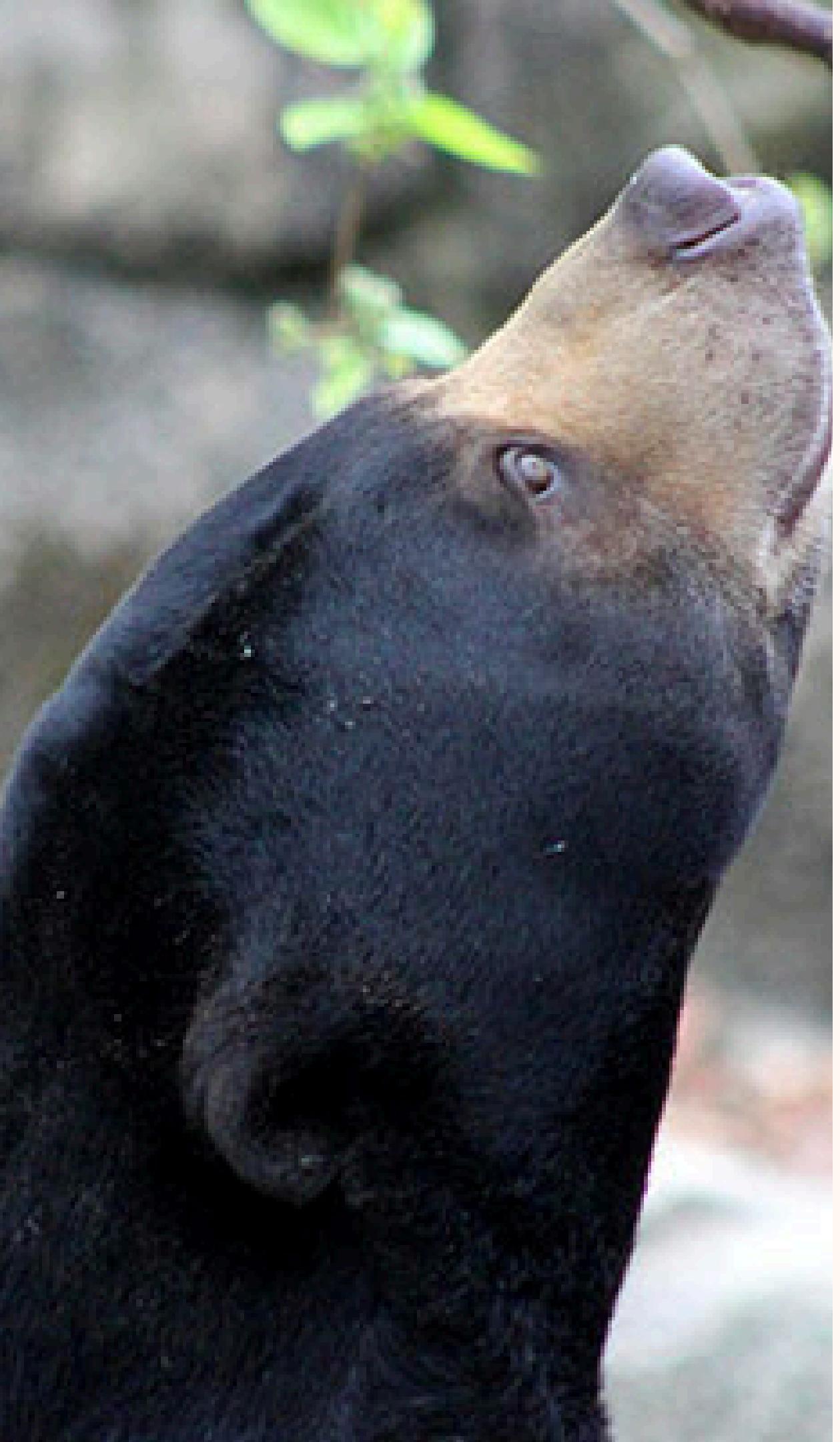
Carnivore species need time-intensive, high-quality care

- Routine tasks (e.g., cleaning, food prep) consume most of the day, which limits time for enrichment, training, and welfare monitoring

Improving efficiency supports:

- Staff well-being
- Animal engagement
- Sustainable, high-standard care





# KEY FINDINGS

## 1. Cleaning Is the Largest Time Drain

Cleaning takes up 23% of keeper time, especially for lions and tigers. Morning cleaning routines are intense and physically demanding.

## 2. Feeding and Food Prep Are Time-Intensive

Feeding + prep consumes 17% of total time. Otters need frequent feedings, adding extra trips for keepers.

## 3. Travel Between Exhibits Is a Time Sink

7.7% of time is spent walking, especially to red pandas and lions. Lack of dedicated buggy access increases fatigue and delays.

## 4. Volunteers and Interns Are Underutilized

Only 1.4% of tasks involved volunteer support. Many non-critical jobs could be handled with minimal training.

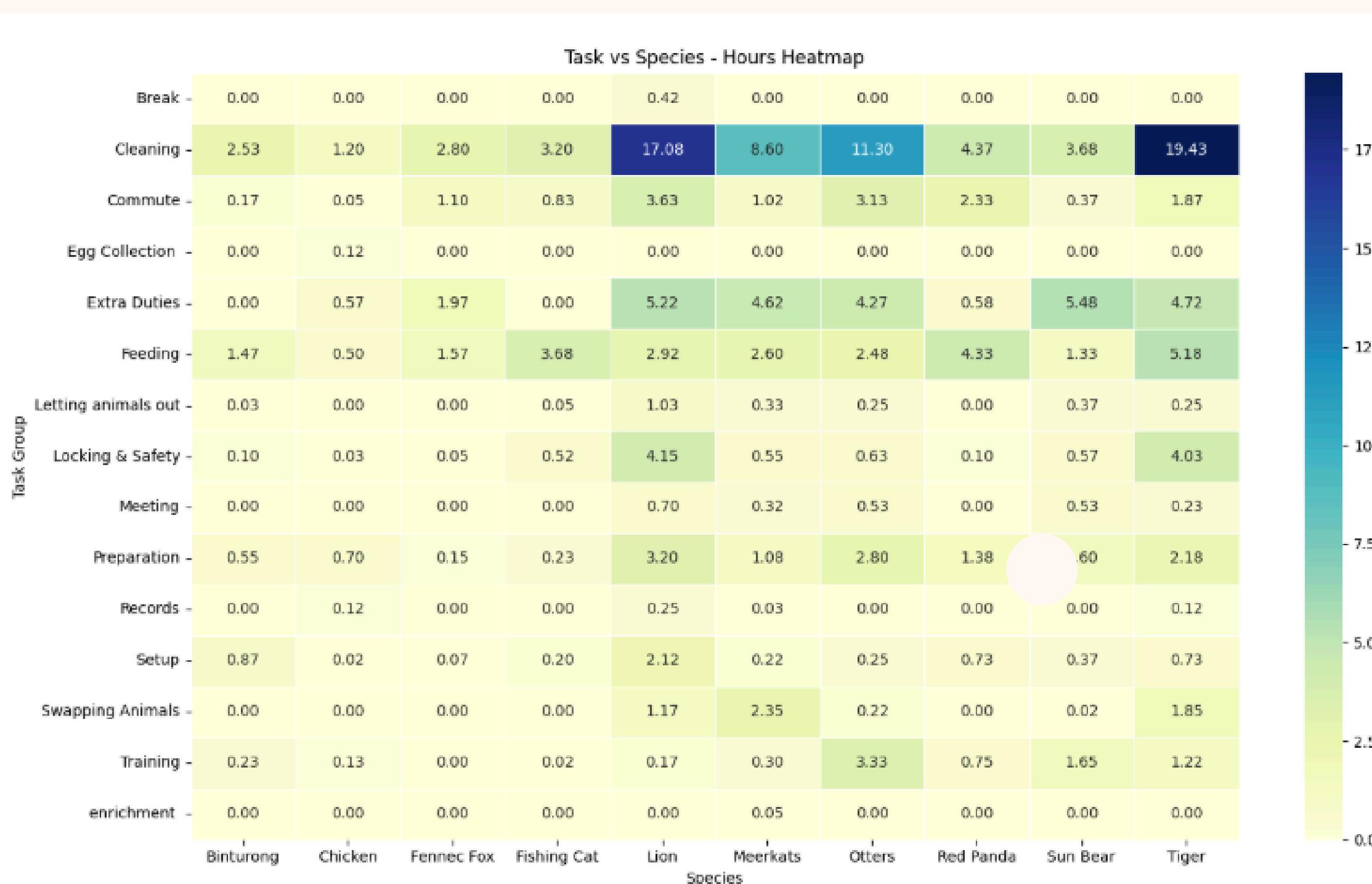
## 5. Meetings and Admin Are Overused

Admin + meetings take 9.8% of time, often overlapping with busy periods. Some could be shortened or replaced with daily stand-ups.

## 6. Breaks Are Longer Than Scheduled

While lunch is officially 45 minutes, actual break times averaged longer (e.g., up to 60 minutes). Break timing overlaps with peak workload, affecting coverage.

# RECOMMENDATION 1: STRATEGIC KEEPER HIRING



**Action:** Hire full-time or part-time keepers to reduce workload and improve care.

**Why:** Current 12.3 keeper-hours/day causes time pressure, especially during peak periods.

## Recommended Option:

2 part-time/casual keepers = 105 hrs/fortnight  
Best time return and flexible coverage

## Alternative:

1 full-time keeper (9 shifts) = 67.5 hrs/fortnight  
Offers routine consistency

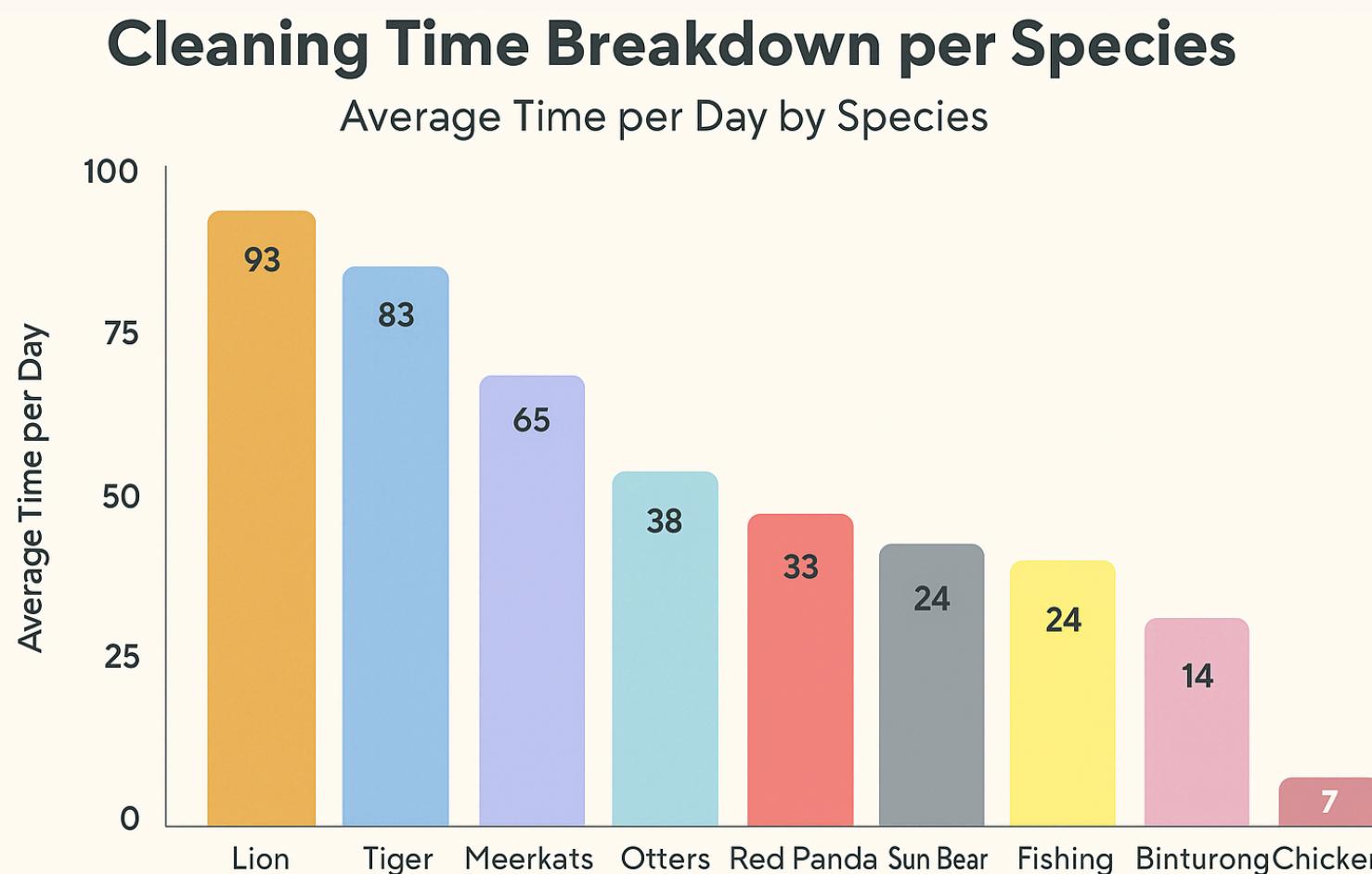
## How:

Prioritize early mornings/weekends  
Cross-train for routine tasks  
Review after 1 month to assess impact

## Benefits:

Reduces staff strain  
Improves animal care quality  
Enhances task coverage and flexibility

# RECOMMENDATION 2: INTEGRATE VOLUNTEERS & INTERNS



**Action:** Train and involve volunteers/interns in daily routine tasks.

**Why:** Reduces keeper workload and boosts efficiency using underutilized support.

**How:**

- Create 3–4 day training plan (safety, hygiene, tasks)
- Provide a task guide/checklist
- Assign to non-animal tasks:
  - Morning setup & enrichment prep
  - Enclosure upkeep & cleaning
  - Animal observation (e.g., sun bears)
  - Diet kitchen & laundry

**Benefits:**

- Keeps maintenance on track
- Frees up keepers for complex care
- Builds future skilled staff
- Fosters a collaborative culture

# RECOMMENDATION 3: CENTRALIZE FOOD PREPARATION

## Action:

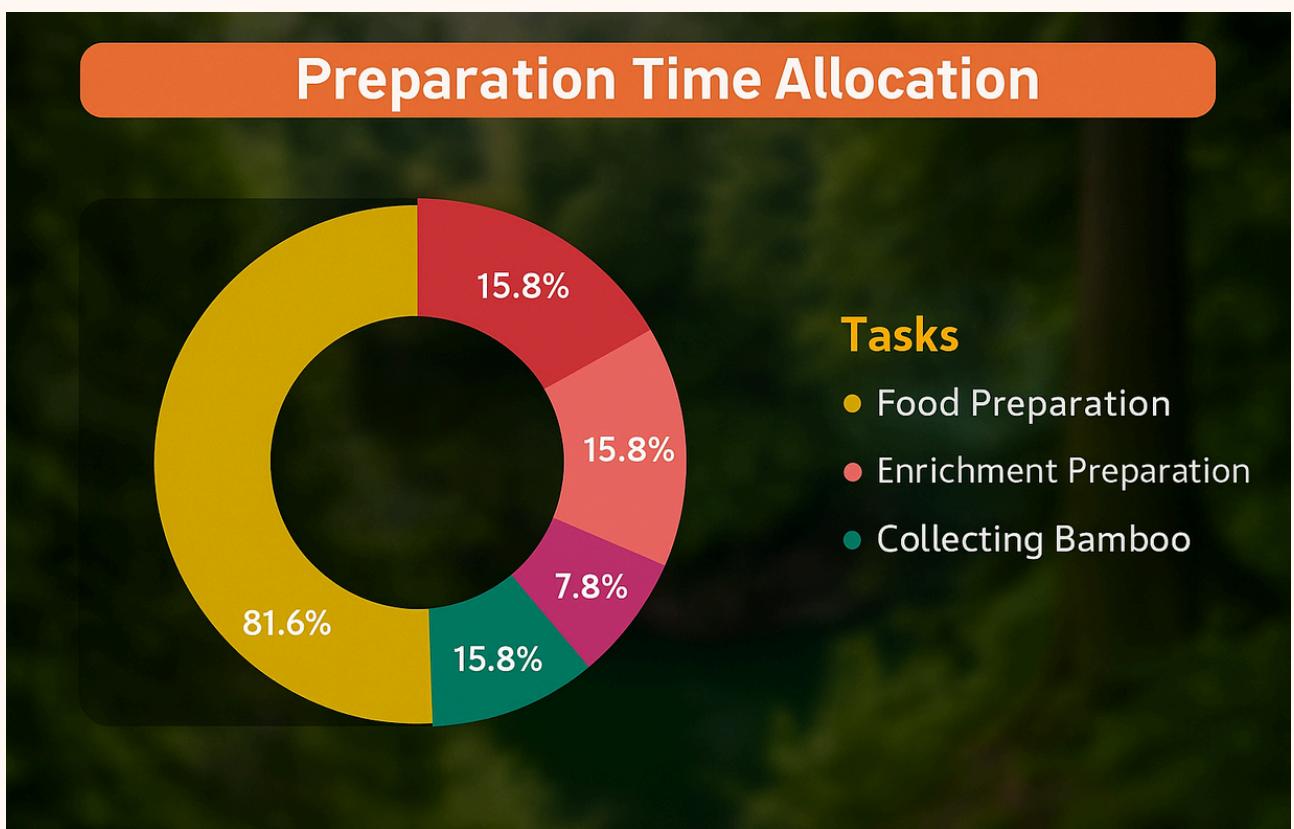
Shift food prep (cutting, portioning) to a central kitchen or trained volunteer.

## Why:

Saves ~17 keeper hours over 2 months (2 hrs/week) for enrichment or training.

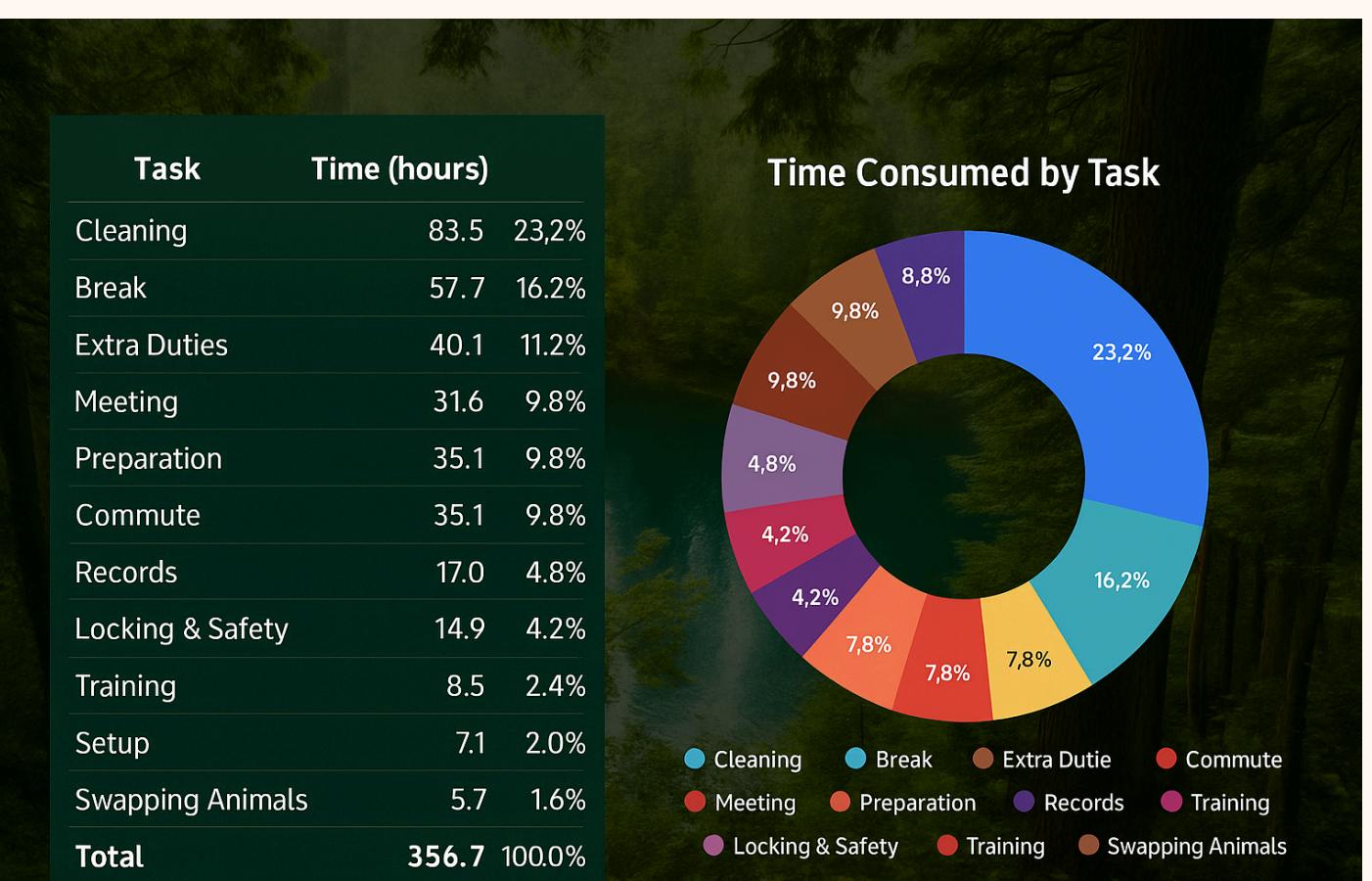
## How:

Start with a “diet prep” volunteer on busy mornings (e.g., Oakland & Como Zoos)

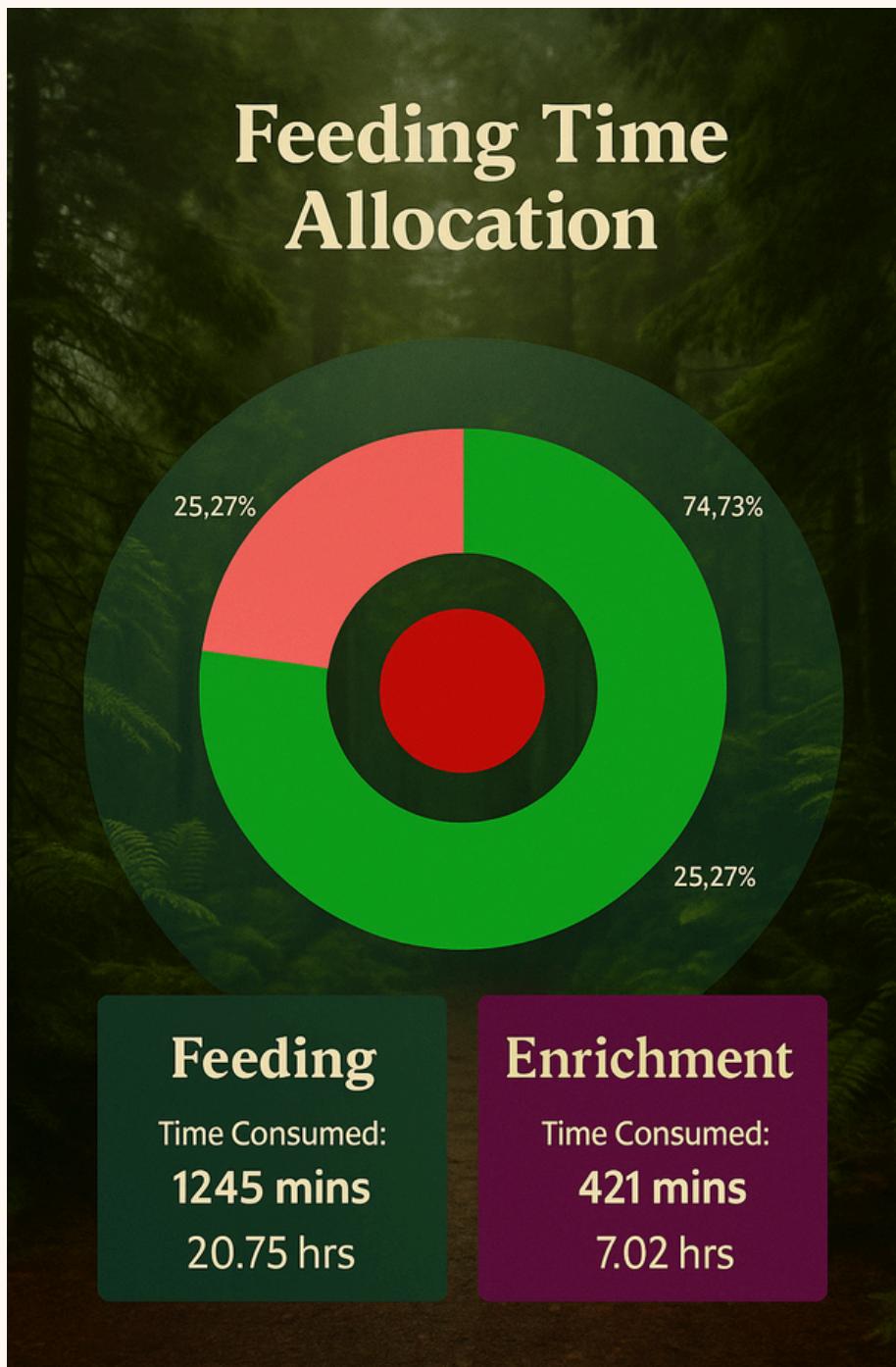


## Benefits:

- Consistent, accurate prep
- Frees up keeper time
- Reduces errors



# RECOMMENDATION 4: IMPROVE FEEDING EFFICIENCY



**Action:** Install automated feeders for small carnivores (e.g., otters).

**Why:** Saves staff time by automating frequent feedings (e.g., noon meal).

**How:** Pilot with a timed feeder in the otter exhibit.

### Benefits:

- Reduces keeper presence during feedings
- Frees time for other tasks
- Ensures timely, consistent feeding

## IMPROVE FEEDING EFFICIENCY

### What to Do:

Use automated feeders for small carnivores that don't need to be separated during feeding.

### Why It Helps:

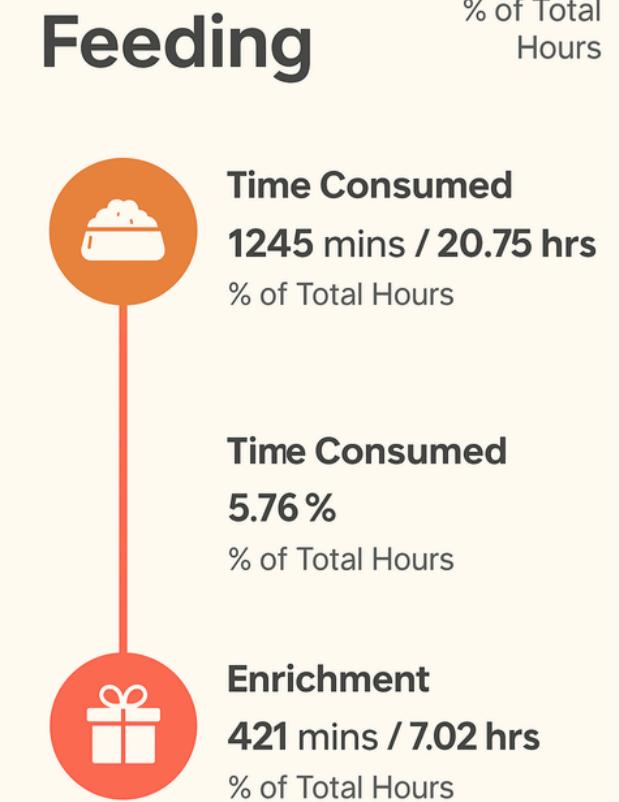
Some animals, like otters, require frequent feeding throughout the day. Instead of having a keeper present each time, a timed feeder can release part of their food at set times, for example at noon, saving staff time.

**How to Start:** Begin by installing a timed feeder in the otter exhibit



### Extra Benefits:

- Reduces the need for keepers to be present during every feeding
- Frees up time for other important tasks
- Ensures animals still receive regular meals on schedule



# RECOMMENDATION 5: STREAMLINE MEETINGS & SCHEDULING

## Action:

Cut down meeting time and frequency.

## Why:

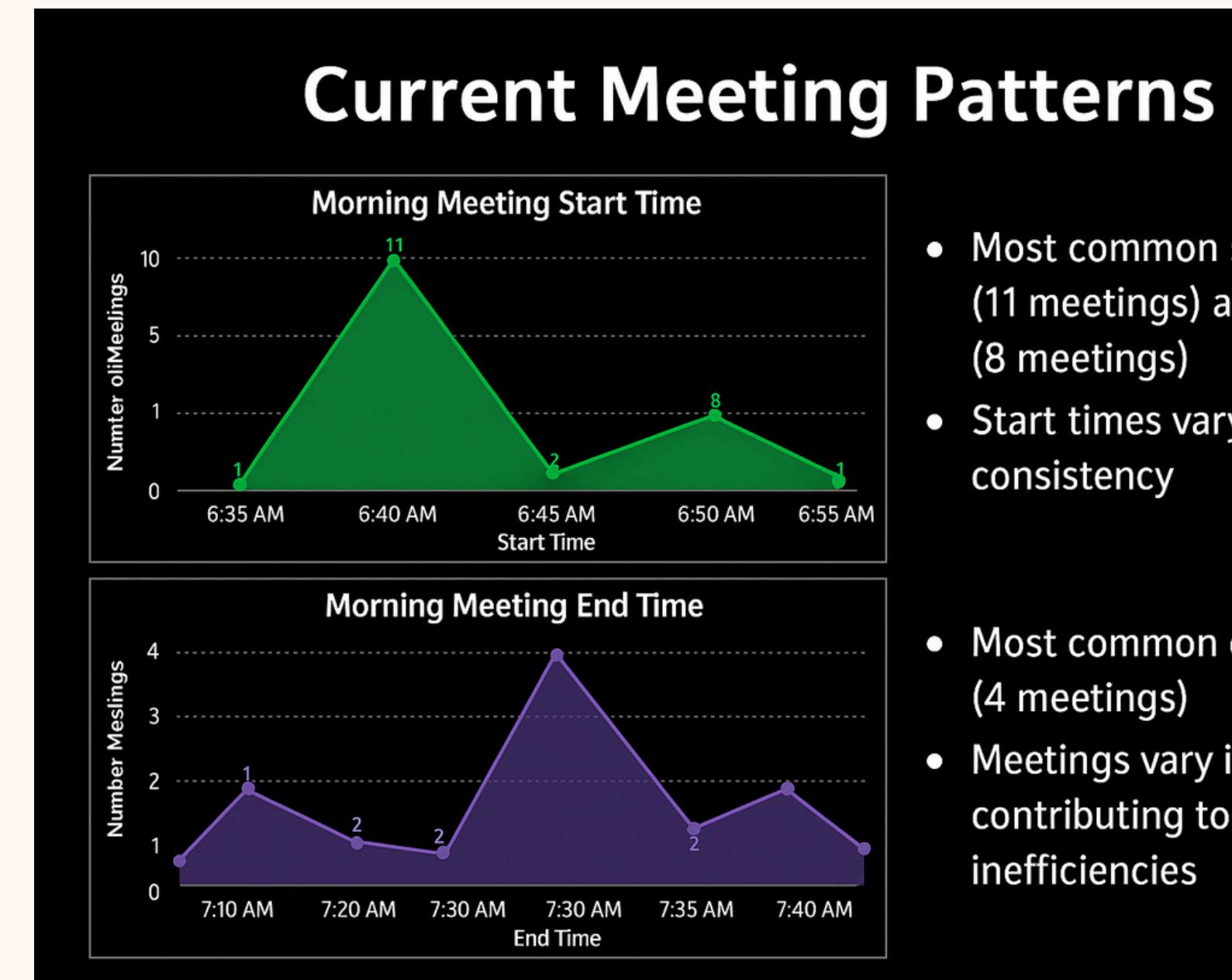
- 9.82% of keeper time is spent in meetings/admin tasks.
- Average morning meeting lasts 43.14 minutes.

## How:

- Replace 40–45 min meetings with 20–30 min stand-ups.
- Stick to a clear, focused agenda.
- Use end-of-day check-ins or rotating leadership when possible.

## Benefits:

- Saving 18 minutes per keeper daily = 1.5 hrs/day saved (5-person team).
- More time for enrichment, training, and welfare checks.
- Reduces meeting fatigue while keeping communication clear.
- Eases pressure during busy morning periods.



- Most common start: 6:40 AM (11 meetings) and 6:45 AM (8 meetings)
- Start times vary, reducing consistency
- Most common end: 7:30 AM (4 meetings)
- Meetings vary in end times, contributing to time inefficiencies

# RECOMMENDATION 6: FLEXIBLE KEEPER SUPPORT & TASK-SHARING

**Action:** Introduce a task-sharing system and assign a “floater” helper during peak hours.

**Why:** Eases pressure during busy shifts and improves cross-team support.

**How:**

- Assign one “floater” keeper/intern each morning with no fixed duties.
- Use group chat (e.g., WhatsApp/Teams) for real-time task sharing
- Offer “time credits” to encourage mutual help

**Benefits:**

- Boosts teamwork & morale
- Reduces stress during peak times
- Encourages flexibility and adaptability
- Supports cross-training across sections
- Builds a strong culture of shared responsibility

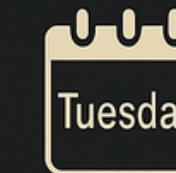


Earn credits for assisting others; redeem them later for help when needed

**EXAMPLE**

- Fairness – help is returned later
- Motivation – encourages support
- Tracking support

**EXAMPLE**



Sarah helps clean tiger yard for 30 minutes → earns 1 time credit



Sarah requests help feeding

# RECOMMENDATION 7: WEEKLY TEAM HUDDLES

**Objective:** Boost morale, trust, and communication through regular, supportive meetings.

**Why:** A strained team dynamic reduces efficiency; morale is key to success.

## Structure:

- 15–20 mins at start of week (e.g., Monday mornings)
- Held in a casual, inclusive setting – no hierarchy, no judgment

## Implementation Tips:

- Stay consistent, even if some are absent
- Rotate facilitators to build ownership
- Use a whiteboard/Post-it wall for anonymous shout-outs

## Benefits:

- Builds emotional resilience & trust
- Aligns goals and improves teamwork
- Encourages recognition and engagement

Before Huddles	After Weekly Huddles
Very Long meetings & Records 	Short in-person check-ins 
Misaligned expectations 	Clear weekly goals 
Low recognition 	Regular shout-outs 
Strained communication 	Collaborative, open culture 
Industry	Uses Huddles for:
 Healthcare	Shift coordination, patient safety
 Aviation	Pre-flight briefings, crew alignment
 Emergency	Incident response & team roles

# RECOMMENDATION 8: ENHANCING BUGGY ACCESS

## ♂ Current Situation:

- 4–5 minute walk each way to Lions and Red Pandas from Carnivore Office.
- Carnivore team only accesses buggy after lunch

## ⚡ With Buggy Access:

- Travel time reduced to 1–2 minutes
- Saves ~13 minutes/day per keeper
- Adds up to 6–7 hours/month time that could be reinvested in enrichment, training, and welfare monitoring and record keeping.

## ⌚ What Can Be Improved?

Allocate buggy access for full-day use – especially during:

- Morning rounds, when setup demands are highest
- End-of-day checks, when energy is lowest and restocking is common

For sharing across teams, implement a priority schedule:

- Carnivore Team gets first access during peak travel windows (e.g., 7–10am and 3–4pm)
- Use digital sign-up system or daily booking sheet for smooth coordination between teams



# NEXT STEPS

## Short-Term Goals

Assign Volunteers – Prep food, clean tools, rake enclosures

Introduce Buggies – Reduce walking time for distant exhibits

Use Timed Feeders – Start with otters to reduce feeding trips

Shorten Meetings – Replace long ones with 10–15 min stand-ups

Adjust Start/Break Times – Balance workload peaks

Create Task-Sharing Chat – Use group chat to request/offer help



## Long-Term Goals

Formal Volunteer Program – With training and task checklists

Cross-Train Keepers – Cover cleaning, feeding, enrichment

Hire Casual Keepers – 1–2 part-time staff for busy periods

Follow-up Time Study – Re-measure impact of improvements

Weekly Team Huddles – Improve morale and team bonding

Share Learnings Zoo-Wide – Expand success across teams

# THANK YOU

A heartfelt thank you to the  
Taronga Carnivore Team  
for your time, trust, and incredible care.

We're grateful to have learned from you!

